Social Media's Influence on Adolescent Social Relations: A Longitudinal Study

Wijaya [1], Godlif Sianipar [2], Claudia Monique Pattiruhu [3], Aria Pranatha [4], Zahrotul Uyun [5]

[1] Universitas Islam Negeri Raden Fatah Palembang, Indonesia
[2] Universitas Katolik Santo Thomas, Indonesia
[3] Institut Agama Kristen Negeri Ambon, Indonesia
[4] Universitas Bhakti Husada Indonesia, Indonesia
[5] Universitas Muhammadiyah Surakarta, Indonesia

Corresponding Author: Wijaya   E-mail; wijaya_uin@radenfatah.ac.id

	ABSTRACT
	Social media has become an important part of everyday life, especially for teenagers. Instagram, Facebook, Twitter and TikTok are not only communication platforms but also places where social identities are built and maintained. Previous studies have shown that social media can impact in various ways, both positive and negative, on teens' social relationships. This research was conducted with the aim of measuring how social media has changed the number and types of social interactions compared to conventional face-to-face interactions. Apart from that, it is also to see how personality, level of social media use, and family social support can influence teenagers' social media. The method used by researchers in researching the Influence of Social Media on Adolescent Social Relationships: A Longitudinal Study is to use a quantitative method. The data obtained by researchers was obtained from the results of distributing questionnaires. The distribution of questionnaires carried out by researchers was carried out online using Google From software. The results of data acquisition will also be tested again using the SPSS application. From the research results, it can be seen that this research is expected to be a basis for further research on the relationship between technology and social development in the digital era. Additionally, the results can help parents, educators, and policymakers make better plans to help teens use social media in healthier and more beneficial ways. From this research, researchers can conclude that longitudinal studies show that the impact of social media on teenagers' social relationships is very diverse and complex, so it requires a more considered approach, both the benefits and risks of the influence of social media on teenagers' social relationships.

Keywords: *Longitudinal Study, Social Media, Social Relations* |

INTRODUCTION

Information and Communication Technology (ICT) is developing so rapidly as if it is eliminating distances of time and space. This impacts the ability to connect with the global community anywhere and at any time to share ideas and information (Chong et al., 2020). Because there are many social networks such as Facebook, Twitter, Instagram, and others, you can form networks and contacts quickly and easily (Zhu & Kouhizadeh, 2019). Social media is growing rapidly along with advances in the internet and telephones, so that it can clearly cause social media to have many new effects on life today (Al-Rahmi et al., 2020). So in most parts of Indonesia, on average, social media is not only used by adults, but many teenagers in Indonesia already use social media (T. (Carol) Li & Chan, 2019).

Adolescence is also referred to as a transition period or transition period. Adolescence is also known as a very sensitive, vulnerable and difficult period because teenagers struggle to adapt to the changes that occur to them, which have an impact on their attitudes and behavior (Boontarig & Srisawatsakul, 2023). Because teenagers are very susceptible to change, especially in the increasingly rapid development of technology, teenagers need to consider the significant role that technology plays in their daily lives (Royant-Parola et al., 2018). Social media is very easy to shape teenagers' identities, trends, influencers, and the content they consume often influence teenagers (Surkyn et al., 2023). A person's view of themselves and the world around them can be influenced by exposure to various perspectives and lifestyles in the present moment (Molas-Castells et al., 2022).

Social media is a website where someone can create a website personally so that they can connect with other people who are members of social media to communicate and share information (Fletcher & Nielsen, 2018). Social media allows people to participate by commenting, giving feedback, and sharing information in a fast and unlimited time (L. Li et al., 2020). In social activities, social relationships are a requirement. Increasingly sophisticated communication equipment allows everyone to access the various information they want and communicate easily without considering time (Naeem, 2021). In the current era of globalization, teenagers often use the internet to browse, search for entertainment, and connect with friends on their social media (Stier et al., 2018).

Teenagers often use social media as a place to compare themselves with others, so this can damage good self-confidence (Liu et al., 2021). Many teenagers today feel insecure when they see other people's styles on social media. Based on these conditions, it can have a negative impact on the use of social media by teenagers, so they will compete in a style to look perfect on social media (Cao & Sun, 2018). And this condition becomes worse when teenagers consider negative events on social media as

normal and consider playing on social media as a place for comparison. If this continues to be justified, it may lead to more serious problems (Ozbay & Alatas, 2020).

Instagram, Snapchat, YouTube, Telegram, and Tik-tok are the five most popular social media platforms among teenagers today (Simpson & Donaldson, 2022). Based on this, it can be seen that individuals or teenagers aged between 12 and 18 years on average spend hours using social media every day (Reuter & Kaufhold, 2018). The use of social media can indeed help teenagers, both for teaching social skills, building relationships, and just having fun. But constant use of these social media platforms can also be dangerous, especially on teenagers' mental health (Mai et al., 2018). To prevent the negative effects of social media use by teenagers, it starts with informing them about the dangers that social media offers. One of the most effective ways is also to ensure that teenagers' use of social media has a positive impact on their lives (Colicev et al., 2018).

Teenagers who spend more time on social media tend to experience various kinds of conflicts such as less time spent with family (Y. Li & Xie, 2020). Interactions on social media, such as misunderstandings or feelings of isolation when seeing other people's posts, will cause conflicts with friends in some teenagers (Jennings et al., 2021). This, of course, can make teenagers' social relationships less good and unpleasant. Therefore, guidance and understanding is needed so that teenagers are more conducive to using social media as a tool that is more useful when used (Arora et al., 2019). Likewise, if used wisely and in a balanced manner, social media can be beneficial for teenagers. This longitudinal study will further emphasize the importance of understanding the influence of social media and encouraging actions that can support the social and psychological well-being of adolescents (Zhong et al., 2021).

Longitudinal studies can help in understanding how social media affects teenagers' social relationships such as, can help teenagers in creating better solutions to reduce the negative effects of social media (Islam et al., 2020). One example is an educational program or policy that teaches teenagers about healthy and balanced use of social media (Dhir et al., 2018). This study also helps adolescents in finding moderator variables (such as social skills, personality, or social support) and mediators (such as changes in self-perception or online interactions) that influence the relationship between social media use and the quality of social relationships (Escobar-Viera et al., 2018). Even though the challenges of the influence of social media are very big for teenagers, they must maintain a balance between online and offline life by being careful in using social media, so that teenagers' social relationships become more conducive (Zhuravskaya et al., 2020).

The type of method used in this research is a quantitative method. This method is used so that the final results of the processed data can be known clearly and precisely regarding the Influence of Social Media on Adolescent Social Relationships: A Longitudinal Study (Zhang & Zhou, 2018). The data collection process was obtained by the researcher from the results of the respondents' answers that the researcher had carried out. Researchers created a questionnaire with 10 questions, then distributed it via

Goggle from. After the data is collected, the data will be calculated into a percentage and presented in table form. In processing research data, researchers use SPSS software which aims to make it easier for researchers to process data, and the data results are more relevant. Furthermore, the researcher really hopes that the next researchers will research and study more deeply the Influence of Social Media on Adolescent Social Relationships: A Longitudinal Study.

RESEARCH METHOD

Research Design

In examining research on the Influence of Social Media on Adolescent Social Relationships: A Longitudinal Study using quantitative methods. The aim of using quantitative methods is to collect research data and test the hypotheses that have been formulated (Wong et al., 2020). Then the researchers created a questionnaire created in the Google From application which was distributed online to respondents via the WhatsApp application. The questionnaire contained 20 questions asked by the researcher. To fill out the questionnaire, the researcher has provided four options, namely strongly agree, agree, disagree and disagree. So respondents can respond to the questions asked by the researcher by selecting these four options.

Research Procedure

In this research, researchers investigated the Influence of Social Media on Adolescent Social Relationships: A Longitudinal Study. The aim of the researcher is to investigate this matter so that the researcher can collect, analyze and provide understanding of the data that has been collected (Hansen et al., 2018). In making questions, the researcher used good language that was easy for respondents to understand when filling out the questionnaire distributed by the researcher later. This aims to ensure that respondents who provide responses to questions asked by researchers can be answered quickly. That way, it will be easier for researchers to test the data being investigated regarding the Influence of Social Media on Adolescent Social Relationships: A Longitudinal Study.

Research Subject

In researching the Influence of Social Media on Adolescent Social Relationships: A Longitudinal Study, researchers of course determine the subjects for their research. In this study, the subjects of this research were aimed at teenagers selected by the researcher at random (Dwivedi et al., 2021). Before the questionnaire was distributed by the researcher, the researcher first asked for the respondents' willingness to spend their time filling out the questionnaire that the researcher would distribute. The questionnaire each contains 10 questions that correspond to the research topic regarding the Influence of Social Media on Adolescent Social Relationships: A Longitudinal Study.

Research Ethics

To maintain public trust, ensure scientific validity, and protect the rights of people participating in research, research ethics are very important for researchers to maintain. Research ethics is known as a set of ethical principles that govern how people act and

make decisions during research. The aim of this ethics is to ensure that research is conducted in a way that is fair, responsible, and respects the rights and welfare of all parties involved. In addition, researchers also provide actual information about their research to maintain their commitment (Etter et al., 2019). Researchers do this in order to obtain maximum research results, and remain consistent in developing better research patterns with the research they conduct.

Data Collection and Analysis

This time, the researcher used quantitative methods to collect research data. The researcher also used a T-test as previously mentioned by the researcher. The purpose of collecting this data is to find relationships and become a benchmark between the research object material entitled The Influence of Social Media on Adolescent Social Relationships: A Longitudinal Study. Researchers also carried out tests first using SPSS software to ensure that respondents' responses were very accurate and reliable. Thus, researchers must be very careful when collecting processed data (Shin et al., 2018).

Tabel 1

Categories of Social Media Influence on Adolescents' Social Relationships: A Longitudinal Study

| no	Earning Category	Value interval
1	Agree	35-65%
2	Strongly agree	>90%
3	Disagree	25%-50%
4	Don't agree	0-25%%
Total		100%

Figure 1

Data Collection and Analysis Flow
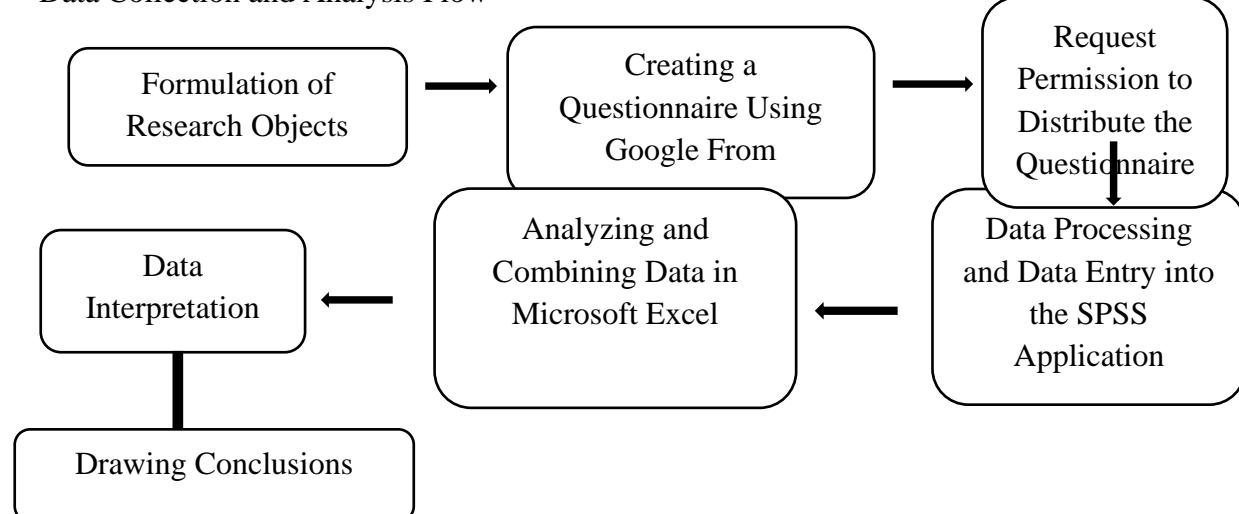
Figure 1 above shows how researchers collect and analyze research data. The results of data acquisition came from respondents' answers to the researcher's questions. Furthermore, in the quantitative research method, the researcher will also test again using the T-test which will be used to enter research data into the SPPS application. The

number of questions asked by the researcher was 20 questions, where each question was divided into ten questions with different questions. Only after the questionnaire is distributed can researchers formulate and draw conclusions from the research object.

RESULTS

The Influence of Social Media on Adolescents' Social Relationships: A Longitudinal Study

Social media, or often also referred to as social media, is a digital platform that allows each user to interact or share content in the form of writing, photos and videos. Apart from that, this digital platform provides the opportunity for every user to carry out social activities. Social media is also a means to socialize with each other and interact online, which allows people to interact without being limited by time or space. Social media allows people to socialize online and interact with other people without being limited by space and time, share experiences, ideas and information with other people, used to promote themselves, goods or services as well as to discover, share and carry out sales transactions. buy.

Table 2

Summary of Percentage Results from Respondents' Answers

No.	Question	Strongly Agree	Agree	Disagree	Don't agree
1	Teenagers' use of social media can influence their social behavior, including the way they interact with other people.	40%	45%	10%	5%
2	Social media allows teens to share experiences and information with others, expand social networks, and increase interaction.	45%	55%	0%	0%
3	The use of social media can influence adolescent behavior patterns, such as how to communicate, behave and think.	40%	52%	5%	3%
4	Social media allows teens to interact with people from various backgrounds and expand their social networks.	62%	23%	10%	5%
5	The use of social media can affect the quality of life and psychological well-being of teenagers, especially in terms of physical interactions.	50%	40%	5%	5%
6	Social media can influence teenagers' behavior in interacting with their parents and peers.	45%	40%	12%	3%

7	The use of social media can influence the way teenagers think and behave in interacting with other people.	30%	50%	10%	10%
8	Social media allows teens to share experiences and information with others, expand social networks, and increase interaction.	45%	40%	10%	5%
9	The use of social media can influence the way teenagers communicate with other people, including the way they talk, share and interact.	30%	60%	8%	2%
10	Social media allows teens to interact with people from various backgrounds and expand their social networks.	40%	40%	10%	10%

Table 2 above shows the distribution of questionnaires that have been carried out by researchers. This questionnaire contains ten questions about the influence of social media on teenagers' social relationships: a longitudinal study. In addition, during the distribution of the questionnaire, researchers have provided a percentage of each response from the respondents. Therefore, respondents can choose to answer the researcher's questions by providing options such as strongly agree, agree, disagree, or disagree. And it can also be seen from the first question asked by researchers regarding the use of social media by teenagers can influence their social behavior, including how to interact with other people, getting the highest score of 45% agree option.

The second question about social media allows teenagers to share experiences and information with others, expand social networks, and increase interaction, getting a percentage result of 0% less agree. The third question regarding the use of social media can influence adolescent behavior patterns, such as how to communicate, behave and think, received a score of 52% agree. The fourth question about social media allows teenagers to interact with people from various backgrounds and expand their social networks, getting a percentage gain of 23% agreeing. Next, the fifth question: The use of social media can affect the quality of life and psychological well-being of teenagers, especially in terms of physical interaction, there are as many as 50% of the strongly agree option. Furthermore, the sixth regarding social media can influence teenagers' behavior in interacting with parents and peers, as many as 12% disagree.

The seventh question, that the use of social media can influence the way teenagers think and behave in interacting with other people, received a percentage result of 50% of the agree option. In the eighth question, social media allows teenagers to share experiences and information with other people, expand social networks, and increase interaction. This is also found in the agree option of 40%. The ninth question regarding the use of social media can influence the way teenagers communicate with other people, including how to talk, share and interact, obtained a percentage result of 60% who

agreed. For the last question regarding social media allowing teenagers to interact with people from various backgrounds and expand their social networks, they obtained a percentage gain of 40% in the strongly agree option.

Table 3
Summary of Percentage Results from Respondents' Answers

No.	Question	Strongly Agree	Agree	Disagree	Don't agree
1	The use of social media can affect the quality of life and psychological well-being of teenagers, especially in terms of physical interactions.	45%	45%	8%	2%
2	Social media can influence teenagers' behavior in interacting with their parents and peers.	50%	40%	4%	6%
3	The use of social media can influence the way teenagers think and behave in interacting with other people.	35%	55%	5%	5%
4	Social media allows teens to share experiences and information with others, expand social networks, and increase interaction.	65%	35%	0%	0%
5	The use of social media can influence the way teenagers communicate with other people, including the way they talk, share and interact.	50%	50%	0%	0%
6	Social media allows teens to interact with people from various backgrounds and expand their social networks.	40%	55%	2%	3%
7	The use of social media can affect the quality of life and psychological well-being of teenagers, especially in terms of physical interactions.	32%	63%	2%	3%
8	Social media can influence teenagers' behavior in interacting with their parents and peers.	42%	53%	2%	3%
9	The use of social media can influence the way teenagers think and behave in interacting with other people.	35%	55%	8%	2%

10	Social media allows teens to share experiences and information with others, expand social networks, and increase interaction.	55%	32%	10%	3%
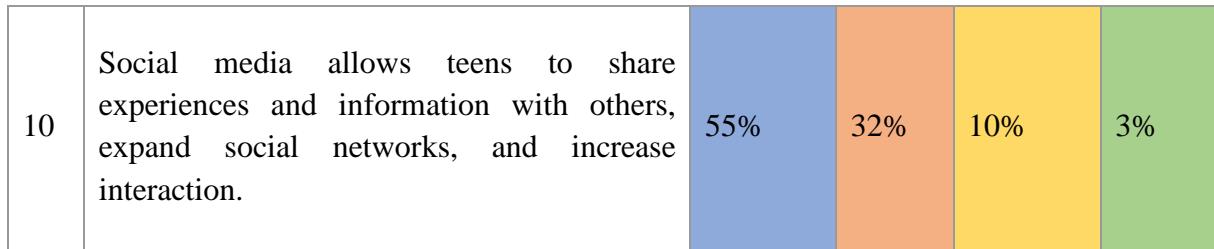
In the statement in table 3 above, the researcher has also created ten questions. Which can be seen from the first question regarding the use of social media can affect the quality of life and psychological well-being of teenagers, especially in terms of physical interaction, getting a percentage result of 45% of the agree options. Next, question number two about social media can influence teenagers' behavior in interacting with their parents and peers, got a percentage score for the strongly agree option of 50%. The third question, that the use of social media can influence the way teenagers think and behave in interacting with other people, received a percentage score of 35% strongly agree.

The fourth question about social media allows teenagers to share experiences and information with others, expand social networks, and increase interaction, getting as much as 35% of the percentage score in the agree option. The fifth question about the use of social media can influence the way teenagers communicate with other people, including how to talk, share and interact, got as many as 50% of the options strongly agree. Question six Social media allows teenagers to interact with people from various backgrounds and expand their social networks, also getting a percentage gain of 55% in the agree option.

Furthermore, the seventh regarding the use of social media can affect the quality of life and psychological well-being of teenagers, especially in terms of physical interaction, getting a percentage score of 32% strongly agree. The eighth question about social media can influence teenagers' behavior in interacting with parents and peers, obtained a percentage of 42% who strongly agreed. In question number nine, that the use of social media can influence the way teenagers think and behave in interacting with other people, there was also the highest number of options agreeing with 55%. The final question about social media allows teens to share experiences and information with others, expand social networks, and increase interaction, getting as much as 55% of the strongly agree options.

Diagram 1
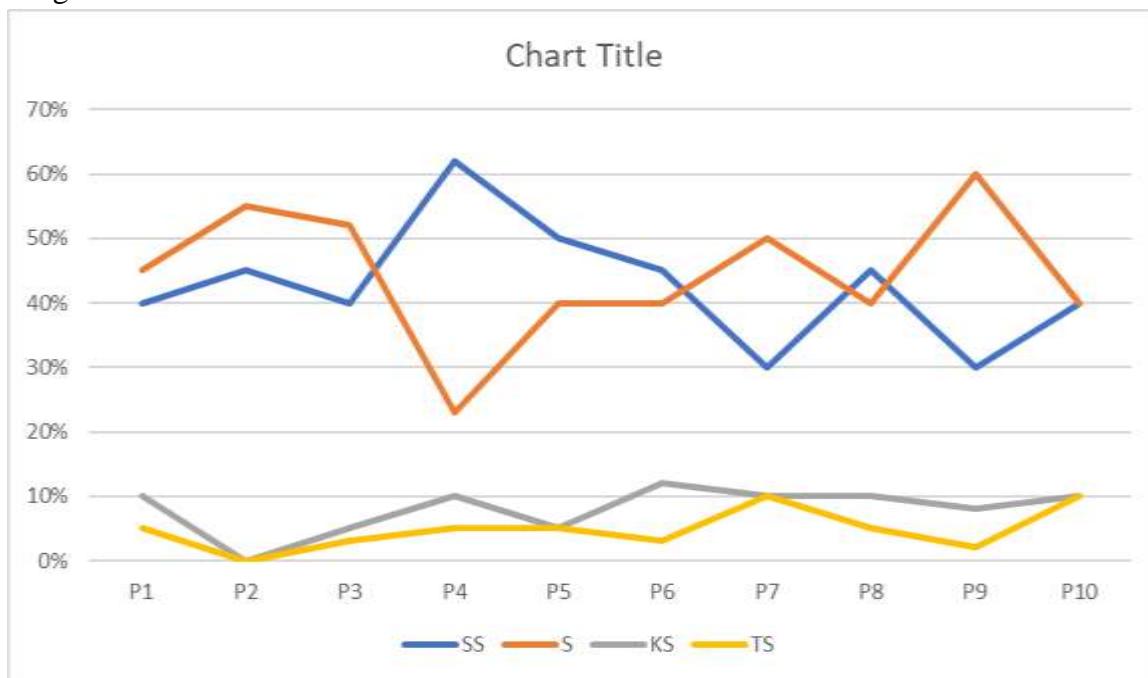
Diagram 2
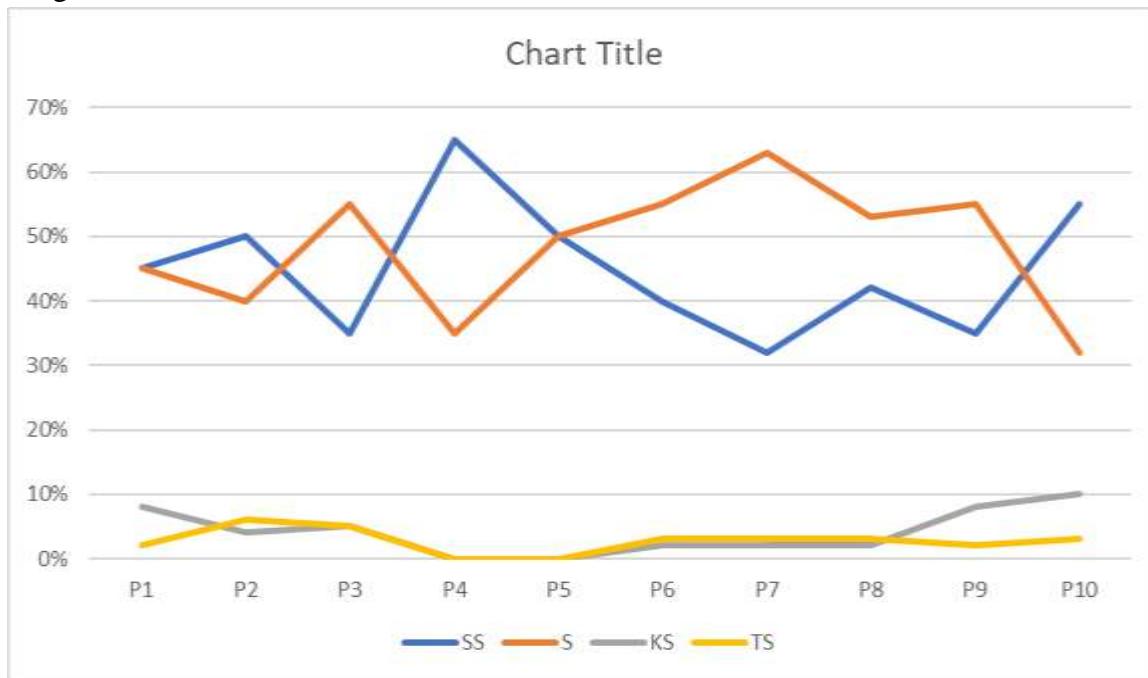
Table 3

T-test Regarding the Influence of Social Media on Adolescents' Social Relationships: A Longitudinal Study

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	PRE TEST	43.8000	20	9.63328	2.15407
	POST TEST	46.4000	20	10.13280	2.26576

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	PRE TEST & POST TEST	20	-.816	.000

Paired Samples Test

		Paired Differences				
					95% Confidence Interval Difference	
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper
Pair 1	PRE TEST - POST TEST	-2.60000	18.83558	4.21176	-11.41532	6.21532

Based on the results of table 3 above, it is a T-test using the SPSS application. From the research results, the researcher can conclude that the T-test in the first output section explains the mean as the average. In the Pre Test the average number produced was 43,8000, while in the Post Test section the result was 46,4000. Based on these results, it can be formulated that there are differences in the results of the respondents' answers. Next, in the Paired Samples Correlations section, you get a correlation of -.816, and the sign size is 000. Next, in the Paired Samples Test section, we obtained a result of 18.83558 in the Std section. Deviation, while in the Std. Mean Error obtained a result of 4.21176. Based on these results, regarding the influence of social media on adolescents' social relationships: a longitudinal study.

Table 4
T-test Regarding the Influence of Social Media on Adolescents' Social Relationships: A Longitudinal Study

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	PRE TEST	6.0500	20	4.01936	.89876

POST TEST	3.7500	20	2.76967	.61932

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	PRE TEST & POST TEST	20	.554	.011

Paired Samples Test

		Paired Differences				
				Std. Error Mean	95% Confidence Interval Difference	
		Mean	Std. Deviation		Lower	Upper
Pair 1	PRE TEST - POST TEST	2.30000	3.38884	.75777	.71398	3.88602

Furthermore, in table 4, there are also the results of research using the T-test. It can be seen in the first output section that the Pre Test results were 6.0500, and the Post Test results were 3.7500. In the Paired Samples Correlations section, we obtained a correlation of .554, with a sign result of .011. Meanwhile, in the Paired Samples Test section, the results were 3.38884 in the Std section. Diviation, and Std. The mean error is .75777. Based on the results of this research, it can be seen between each question asked by researchers regarding the influence of social media on teenagers' social relationships: a longitudinal study.

DISCUSSION

Social media is very important for society because it allows many people to interact with each other, expands relationships, time and distance, and allows the dissemination of information quickly and cheaply (Levy, 2021). However, social media also has negative effects, such as distancing teenagers from people they are close to and disrupting social balance (Kubin & Von Sikorski, 2021). In some cases, social media can increase the risk of mental disorders in teenagers, especially if used excessively (Zhao & Zhou, 2020). Therefore, it is very important to be careful when using social media and ensure that the resulting influence will have a positive impact on life (Chakraborty et al., 2020).

Social media has a significant influence on teenagers' social relationships because it allows them to expand their social networks and interact with people from various backgrounds (Weismueller et al., 2020). However, excessive use of social media can have detrimental effects, such as alienating people close to them and disrupting social balance (Chen et al., 2020). Social media allows teenagers to interact with many people,

increase their social relationships, and reduce time and space constraints (Coyne et al., 2020). Teenagers can interact with people from various backgrounds because social media allows them to have many connections and networks (Ghani et al., 2019).

Social media allows teens to create content, share and express themselves more easily. Excessive use of social media can distance close people and disrupt social balance, make teenagers addicted to the internet, and reduce face-to-face interactions (Zafar et al., 2021). Excessive use of social media can also have a negative impact on teenagers' mental health, such as spreading misinformation, decreasing privacy, and increasing levels of internet addiction (Su et al., 2020). Social media has a very complex impact on teenagers' social relationships (Tajvidi & Karami, 2021).

Although social media allows teenagers to interact with many people and expand their social networks, excessive use of social media can disrupt social balance and mental health (Shen et al., 2019). Therefore, it is important to use social media smartly and ensure use has a positive impact on life (Martí et al., 2019). Long-term studies involve repeated observations of the same variables over a period of time (M. Liu et al., 2020). Collects data over a period of time and usually observes a subject repeatedly over a period of time (Patel et al., 2020). The goal is to understand how certain variables change over time (Mahala, 2020). This allows researchers to understand the processes that occur in the objects or variables under study, as well as the relationship between the two (Zhan et al., 2020).

Social media has become an important part of teenagers' lives in this era of computers and the internet (Pop et al., 2022). Platforms like Instagram, Facebook, and Twitter allow teens to easily connect with friends, family, and other people. However, there is much debate about the impact of social media on teenagers' social relationships (Hou et al., 2019). Teenagers can make friends with peers who have different interests and backgrounds (Lednicky et al., 2018). Strengthens existing relationships teens can stay connected with friends and family who live far away and feel connected to online communities who share similar interests (Blanchard Rohner et al., 2019). Teenagers have the ability to express creatively and share their ideas and opinions with others (Hellevik, 2019).

Social media can also negatively influence teens' social relationships (Cauberghe et al., 2021). This can lead to teens possibly spending less time interacting in person, and they may compare themselves to others they see on social media, which can lead to anxiety and self-dissatisfaction (Drouin et al., 2020). Teenagers are more vulnerable to online harassment on social media (Thorisdottir et al., 2019). Excessive use of social media can cause addiction and dependence, which can interfere with daily activities (Valenzuela et al., 2019). Excessive use of social media can harm teenagers' psychological well-being, but regular use of social media can reduce these negative effects (Ghermandi & Sinclair, 2019).

CONCLUSION

The use of social media for teenagers' social relationships varies depending on how often they use it. Moderate and responsible use of social media can have positive impacts, but excessive use of social media can have negative impacts. It is important for parents and educators to understand the benefits and risks of social media and how to use it in a healthy way. It is important to remember that every teenager is different and will react to social media in different ways. Parents and educators must work together to help teens develop a healthy relationship with social media.

Longitudinal studies of the influence of social media on adolescents' social relationships provide important insights into long-term development. This research reveals that moderate social media use can increase teenagers' social connectivity and enable them to interact and build new relationships; these interactions can have a positive impact on the development of their social skills and communication abilities. But Longdinatul's study also shows that excessive or irresponsible use of social media can have negative impacts.

Teens who engage too much in social media tend to have poorer interpersonal relationships in the real world and may even experience social isolation or conflict. This shows how important it is for parents and educators to monitor and help teenagers manage social media use. In this context, kongdinatul studies are very important to take a comprehensive approach to teenagers' social media use. Parents and educators must actively educate teens about safe ways to use social media and the importance of maintaining a balance between online and offline life so they can build strong social relationships.

REFERENCES

Al-Rahmi, W. M., Alzahrani, A. I., Yahaya, N., Alalwan, N., & Kamin, Y. B. (2020). Digital Communication: Information and Communication Technology (ICT) Usage for Education Sustainability. *Sustainability*, *12*(12), 5052. https://doi.org/10.3390/su12125052

Arora, A., Bansal, S., Kandpal, C., Aswani, R., & Dwivedi, Y. (2019). Measuring social media influencer index- insights from facebook, Twitter and Instagram. *Journal of Retailing and Consumer Services*, *49*, 86–101. https://doi.org/10.1016/j.jretconser.2019.03.012

Blanchard Rohner, G., Chatzis, O., Chinwangso, P., Rohr, M., Grillet, S., Salomon, C., Lemaître, B., Boonrak, P., Lawpoolsri, S., Clutterbuck, E., Poredi, I. K., Wijagkanalan, W., Spiegel, J., Pham, H. T., Viviani, S., & Siegrist, C.-A. (2019). Boosting Teenagers With Acellular Pertussis Vaccines Containing Recombinant or Chemically Inactivated Pertussis Toxin: A Randomized Clinical Trial. *Clinical Infectious Diseases*, *68*(7), 1213–1222. https://doi.org/10.1093/cid/ciy594

Boontarig, W., & Srisawatsakul, C. (2023). *Social Media Banking Adoption among Teenagers: A Case Study of Northeast Thailand* (02). ICIC International 学会. https://doi.org/10.24507/icicel.17.02.245

Cao, X., & Sun, J. (2018). Exploring the effect of overload on the discontinuous intention of social media users: An S-O-R perspective. *Computers in Human Behavior*, *81*, 10–18. https://doi.org/10.1016/j.chb.2017.11.035

Cauberghe, V., Van Wesenbeeck, I., De Jans, S., Hudders, L., & Ponnet, K. (2021). How Adolescents Use Social Media to Cope with Feelings of Loneliness and Anxiety During COVID-19 Lockdown. *Cyberpsychology, Behavior, and Social Networking*, *24*(4), 250–257. https://doi.org/10.1089/cyber.2020.0478

Chakraborty, K., Bhatia, S., Bhattacharyya, S., Platos, J., Bag, R., & Hassanien, A. E. (2020). Sentiment Analysis of COVID-19 tweets by Deep Learning Classifiers—A study to show how popularity is affecting accuracy in social media. *Applied Soft Computing*, *97*, 106754. https://doi.org/10.1016/j.asoc.2020.106754

Chen, Q., Min, C., Zhang, W., Wang, G., Ma, X., & Evans, R. (2020). Unpacking the black box: How to promote citizen engagement through government social media during the COVID-19 crisis. *Computers in Human Behavior*, *110*, 106380. https://doi.org/10.1016/j.chb.2020.106380

Chong, A., Gonzalez-Navarro, M., Karlan, D., & Valdivia, M. (2020). Do Information Technologies Improve Teenagers' Sexual Education? Evidence from a Randomized Evaluation in Colombia. *The World Bank Economic Review*, *34*(2), 371–392. https://doi.org/10.1093/wber/lhy031

Colicev, A., Malshe, A., Pauwels, K., & O'Connor, P. (2018). Improving Consumer Mindset Metrics and Shareholder Value through Social Media: The Different Roles of Owned and Earned Media. *Journal of Marketing*, *82*(1), 37–56. https://doi.org/10.1509/jm.16.0055

Coyne, S. M., Rogers, A. A., Zurcher, J. D., Stockdale, L., & Booth, M. (2020). Does time spent using social media impact mental health?: An eight year longitudinal study. *Computers in Human Behavior*, *104*, 106160. https://doi.org/10.1016/j.chb.2019.106160

Dhir, A., Yossatorn, Y., Kaur, P., & Chen, S. (2018). Online social media fatigue and psychological wellbeing—A study of compulsive use, fear of missing out, fatigue, anxiety and depression. *International Journal of Information Management*, *40*, 141–152. https://doi.org/10.1016/j.ijinfomgt.2018.01.012

Drouin, M., McDaniel, B. T., Pater, J., & Toscos, T. (2020). How Parents and Their Children Used Social Media and Technology at the Beginning of the COVID-19 Pandemic and Associations with Anxiety. *Cyberpsychology, Behavior, and Social Networking*, *23*(11), 727–736. https://doi.org/10.1089/cyber.2020.0284

Dwivedi, Y. K., Ismagilova, E., Hughes, D. L., Carlson, J., Filieri, R., Jacobson, J., Jain, V., Karjaluoto, H., Kefi, H., Krishen, A. S., Kumar, V., Rahman, M. M., Raman, R., Rauschnabel, P. A., Rowley, J., Salo, J., Tran, G. A., & Wang, Y. (2021). Setting the future of digital and social media marketing research: Perspectives and research propositions. *International Journal of Information Management*, *59*, 102168. https://doi.org/10.1016/j.ijinfomgt.2020.102168

Escobar-Viera, C. G., Shensa, A., Bowman, N. D., Sidani, J. E., Knight, J., James, A. E., & Primack, B. A. (2018). Passive and Active Social Media Use and Depressive Symptoms Among United States Adults. *Cyberpsychology, Behavior, and Social Networking*, *21*(7), 437–443. https://doi.org/10.1089/cyber.2017.0668

Etter, M., Ravasi, D., & Colleoni, E. (2019). Social Media and the Formation of Organizational Reputation. *Academy of Management Review*, *44*(1), 28–52. https://doi.org/10.5465/amr.2014.0280

Fletcher, R., & Nielsen, R. K. (2018). Are people incidentally exposed to news on social media? A comparative analysis. *New Media & Society*, *20*(7), 2450–2468. https://doi.org/10.1177/1461444817724170

Ghani, N. A., Hamid, S., Targio Hashem, I. A., & Ahmed, E. (2019). Social media big data analytics: A survey. *Computers in Human Behavior*, *101*, 417–428. https://doi.org/10.1016/j.chb.2018.08.039

Ghermandi, A., & Sinclair, M. (2019). Passive crowdsourcing of social media in environmental research: A systematic map. *Global Environmental Change*, *55*, 36–47. https://doi.org/10.1016/j.gloenvcha.2019.02.003

Hansen, J. M., Saridakis, G., & Benson, V. (2018). Risk, trust, and the interaction of perceived ease of use and behavioral control in predicting consumers' use of social media for transactions. *Computers in Human Behavior*, *80*, 197–206. https://doi.org/10.1016/j.chb.2017.11.010

Hellevik, P. M. (2019). Teenagers' personal accounts of experiences with digital intimate partner violence and abuse. *Computers in Human Behavior*, *92*, 178–187. https://doi.org/10.1016/j.chb.2018.11.019

Hou, Y., Xiong, D., Jiang, T., Song, L., & Wang, Q. (2019). Social media addiction: Its impact, mediation, and intervention. *Cyberpsychology: Journal of Psychosocial Research on Cyberspace*, *13*(1). https://doi.org/10.5817/CP2019-1-4

Islam, A. K. M. N., Laato, S., Talukder, S., & Sutinen, E. (2020). Misinformation sharing and social media fatigue during COVID-19: An affordance and cognitive load perspective. *Technological Forecasting and Social Change*, *159*, 120201. https://doi.org/10.1016/j.techfore.2020.120201

Jennings, W., Stoker, G., Bunting, H., Valgarðsson, V. O., Gaskell, J., Devine, D., McKay, L., & Mills, M. C. (2021). Lack of Trust, Conspiracy Beliefs, and Social Media Use Predict COVID-19 Vaccine Hesitancy. *Vaccines*, *9*(6), 593. https://doi.org/10.3390/vaccines9060593

Kubin, E., & Von Sikorski, C. (2021). The role of (social) media in political polarization: A systematic review. *Annals of the International Communication Association*, *45*(3), 188–206. https://doi.org/10.1080/23808985.2021.1976070

Lednicky, J. A., White, S. K., Stephenson, C. J., Cherabuddi, K., Loeb, J. C., Moussatche, N., Lednicky, A., & Morris, J. G. (2018). Keystone Virus Isolated From a Florida Teenager With Rash and Subjective Fever: Another Endemic Arbovirus in the Southeastern United States? *Clinical Infectious Diseases*. https://doi.org/10.1093/cid/ciy485

Levy, R. (2021). Social Media, News Consumption, and Polarization: Evidence from a Field Experiment. *American Economic Review*, *111*(3), 831–870. https://doi.org/10.1257/aer.20191777

Li, L., Zhang, Q., Wang, X., Zhang, J., Wang, T., Gao, T.-L., Duan, W., Tsoi, K. K., & Wang, F.-Y. (2020). Characterizing the Propagation of Situational Information in Social Media During COVID-19 Epidemic: A Case Study on Weibo. *IEEE Transactions on Computational Social Systems*, *7*(2), 556–562. https://doi.org/10.1109/TCSS.2020.2980007

Li, T. (Carol), & Chan, Y. E. (2019). Dynamic information technology capability: Concept definition and framework development. *The Journal of Strategic Information Systems*, *28*(4), 101575. https://doi.org/10.1016/j.jsis.2019.101575

Li, Y., & Xie, Y. (2020). Is a Picture Worth a Thousand Words? An Empirical Study of Image Content and Social Media Engagement. *Journal of Marketing Research*, *57*(1), 1–19. https://doi.org/10.1177/0022243719881113

Liu, M., Han, G., & Zhang, Q. (2020). Effects of agricultural abandonment on soil aggregation, soil organic carbon storage and stabilization: Results from observation in a small karst catchment, Southwest China. *Agriculture, Ecosystems & Environment*, *288*, 106719. https://doi.org/10.1016/j.agee.2019.106719

Liu, X., Shin, H., & Burns, A. C. (2021). Examining the impact of luxury brand's social media marketing on customer engagement: Using big data analytics and natural language processing. *Journal of Business Research*, *125*, 815–826. https://doi.org/10.1016/j.jbusres.2019.04.042

Mahala, A. (2020). The significance of morphometric analysis to understand the hydrological and morphological characteristics in two different morpho-climatic settings. *Applied Water Science*, *10*(1), 33. https://doi.org/10.1007/s13201-019-1118-2

Mai, F., Shan, Z., Bai, Q., Wang, X. (Shane), & Chiang, R. H. L. (2018). How Does Social Media Impact Bitcoin Value? A Test of the Silent Majority Hypothesis. *Journal of Management Information Systems*, *35*(1), 19–52. https://doi.org/10.1080/07421222.2018.1440774

Martí, P., Serrano-Estrada, L., & Nolasco-Cirugeda, A. (2019). Social Media data: Challenges, opportunities and limitations in urban studies. *Computers, Environment and Urban Systems*, *74*, 161–174. https://doi.org/10.1016/j.compenvurbsys.2018.11.001

Molas-Castells, N., Fuertes-Alpiste, M., Quintana Albalat, J., & Herreros Navarro, M. (2022). Publicaciones en medios sociales de adolescentes y jóvenes: Implicaciones para las actividades de creación de Relatos Digitales Personales. *Revista de Educación a Distancia (RED)*, *22*(70). https://doi.org/10.6018/red.524161

Naeem, M. (2021). Do social media platforms develop consumer panic buying during the fear of Covid-19 pandemic. *Journal of Retailing and Consumer Services*, *58*, 102226. https://doi.org/10.1016/j.jretconser.2020.102226

Ozbay, F. A., & Alatas, B. (2020). Fake news detection within online social media using supervised artificial intelligence algorithms. *Physica A: Statistical Mechanics and Its Applications*, *540*, 123174. https://doi.org/10.1016/j.physa.2019.123174

Patel, B. V., Arachchillage, D. J., Ridge, C. A., Bianchi, P., Doyle, J. F., Garfield, B., Ledot, S., Morgan, C., Passariello, M., Price, S., Singh, S., Thakuria, L., Trenfield, S., Trimlett, R., Weaver, C., Wort, S. J., Xu, T., Padley, S. P. G., Devaraj, A., & Desai, S. R. (2020). Pulmonary Angiopathy in Severe COVID-19: Physiologic, Imaging, and Hematologic Observations. *American Journal of Respiratory and Critical Care Medicine*, *202*(5), 690–699. https://doi.org/10.1164/rccm.202004-1412OC

Pop, R.-A., Săplăcan, Z., Dabija, D.-C., & Alt, M.-A. (2022). The impact of social media influencers on travel decisions: The role of trust in consumer decision

journey. *Current Issues in Tourism*, *25*(5), 823–843. https://doi.org/10.1080/13683500.2021.1895729

Reuter, C., & Kaufhold, M. (2018). Fifteen years of social media in emergencies: A retrospective review and future directions for crisis Informatics. *Journal of Contingencies and Crisis Management*, *26*(1), 41–57. https://doi.org/10.1111/1468-5973.12196

Royant-Parola, S., Londe, V., Tréhout, S., & Hartley, S. (2018). Nouveaux médias sociaux, nouveaux comportements de sommeil chez les adolescents. *L'Encéphale*, *44*(4), 321–328. https://doi.org/10.1016/j.encep.2017.03.009

Shen, C., Min Chen, & Wang, C. (2019). Analyzing the trend of O2O commerce by bilingual text mining on social media. *Computers in Human Behavior*, *101*, 474–483. https://doi.org/10.1016/j.chb.2018.09.031

Shin, J., Jian, L., Driscoll, K., & Bar, F. (2018). The diffusion of misinformation on social media: Temporal pattern, message, and source. *Computers in Human Behavior*, *83*, 278–287. https://doi.org/10.1016/j.chb.2018.02.008

Simpson, C., & Donaldson, J. (2022). TikTok, Tomatoes, and Teenagers: Using New Social Media Apps to Connect Extension Education with Younger Audiences. *Journal of Extension*, *60*(3). https://doi.org/10.34068/joe.60.03.09

Stier, S., Bleier, A., Lietz, H., & Strohmaier, M. (2018). Election Campaigning on Social Media: Politicians, Audiences, and the Mediation of Political Communication on Facebook and Twitter. *Political Communication*, *35*(1), 50–74. https://doi.org/10.1080/10584609.2017.1334728

Su, W., Han, X., Yu, H., Wu, Y., & Potenza, M. N. (2020). Do men become addicted to internet gaming and women to social media? A meta-analysis examining gender-related differences in specific internet addiction. *Computers in Human Behavior*, *113*, 106480. https://doi.org/10.1016/j.chb.2020.106480

Surkyn, H., Sandra, D., & Vandekerckhove, R. (2023). When correct spelling hardly matters: Teenagers' production and perception of spelling error corrections in Dutch social media writing. *European Journal of Applied Linguistics*, *0*(0). https://doi.org/10.1515/eujal-2022-0028

Tajvidi, R., & Karami, A. (2021). The effect of social media on firm performance. *Computers in Human Behavior*, *115*, 105174. https://doi.org/10.1016/j.chb.2017.09.026

Thorisdottir, I. E., Sigurvinsdottir, R., Asgeirsdottir, B. B., Allegrante, J. P., & Sigfusdottir, I. D. (2019). Active and Passive Social Media Use and Symptoms of Anxiety and Depressed Mood Among Icelandic Adolescents. *Cyberpsychology, Behavior, and Social Networking*, *22*(8), 535–542. https://doi.org/10.1089/cyber.2019.0079

Valenzuela, S., Halpern, D., Katz, J. E., & Miranda, J. P. (2019). The Paradox of Participation Versus Misinformation: Social Media, Political Engagement, and the Spread of Misinformation. *Digital Journalism*, *7*(6), 802–823. https://doi.org/10.1080/21670811.2019.1623701

Weismueller, J., Harrigan, P., Wang, S., & Soutar, G. N. (2020). Influencer Endorsements: How Advertising Disclosure and Source Credibility Affect Consumer Purchase Intention on Social Media. *Australasian Marketing Journal*, *28*(4), 160–170. https://doi.org/10.1016/j.ausmj.2020.03.002

Wong, H. Y., Mo, H. Y., Potenza, M. N., Chan, M. N. M., Lau, W. M., Chui, T. K., Pakpour, A. H., & Lin, C.-Y. (2020). Relationships between Severity of Internet

Gaming Disorder, Severity of Problematic Social Media Use, Sleep Quality and Psychological Distress. *International Journal of Environmental Research and Public Health*, *17*(6), 1879. https://doi.org/10.3390/ijerph17061879

Zafar, A. U., Qiu, J., Li, Y., Wang, J., & Shahzad, M. (2021). The impact of social media celebrities' posts and contextual interactions on impulse buying in social commerce. *Computers in Human Behavior*, *115*, 106178. https://doi.org/10.1016/j.chb.2019.106178

Zhan, Q., Wang, W., & De Haan, G. (2020). Analysis of CNN-based remote-PPG to understand limitations and sensitivities. *Biomedical Optics Express*, *11*(3), 1268. https://doi.org/10.1364/BOE.382637

Zhang, S., & Zhou, W. (2018). Recreational visits to urban parks and factors affecting park visits: Evidence from geotagged social media data. *Landscape and Urban Planning*, *180*, 27–35. https://doi.org/10.1016/j.landurbplan.2018.08.004

Zhao, N., & Zhou, G. (2020). Social Media Use and Mental Health during the COVID-19 Pandemic: Moderator Role of Disaster Stressor and Mediator Role of Negative Affect. *Applied Psychology: Health and Well-Being*, *12*(4), 1019–1038. https://doi.org/10.1111/aphw.12226

Zhong, B., Huang, Y., & Liu, Q. (2021a). Mental health toll from the coronavirus: Social media usage reveals Wuhan residents' depression and secondary trauma in the COVID-19 outbreak. *Computers in Human Behavior*, *114*, 106524. https://doi.org/10.1016/j.chb.2020.106524

Zhu, Q., & Kouhizadeh, M. (2019). Blockchain Technology, Supply Chain Information, and Strategic Product Deletion Management. *IEEE Engineering Management Review*, *47*(1), 36–44. https://doi.org/10.1109/EMR.2019.2898178

Zhuravskaya, E., Petrova, M., & Enikolopov, R. (2020). Political Effects of the Internet and Social Media. *Annual Review of Economics*, *12*(1), 415–438. https://doi.org/10.1146/annurev-economics-081919-050239