ORIGINAL RESEARCH

Psychological well-being of social media users: A structural equation modelling analysis

Ririn Nasriati[1] ✉, Dian Laila Purwaningroom[2], Eky Okviana Armyati[3], Sugeng Mashudi[4]

[1,2,3,4] Universitas Muhammadiyah Ponorogo, Ponorogo, East Java, Indonesia

✉ yieyien.nasriati@gmail.com

Abstract

Social media, as part of human life, has positive and negative impacts. Even though negative impacts have been identified, positive impacts are rarely studied. The identification of positive impacts will be useful for social media users and can be a source of information and prevention of health problems for social media users. This study used a cross-sectional design with a purposive sampling method. The research was conducted on people who live in Ponorogo and use social media. The results showed psychological well-being on social media users at normal levels and mild stress. The influencing factors are gender and education. Education to the public needs to be provided about the positive effects of social media on psychological wellbeing, especially at stress levels so that the risk of increasing mental disorders can be minimized.

Keywords: social media; psychological well-being; mental health nurses; nursing assessment; community practice

1. Introduction

Restlessness, tension and difficulty sleeping are the main signs of psychological distress (Casagrande et al., 2020; McGinty et al., 2020). Individuals feel confused (Trowell, 2018), feel worried (Beard et al., 2020) with the consequences of the conditions at hand and have difficulty concentrating (Viertiö et al., 2019). The stage of growth and development of adolescence as a clinical condition related to psychological distress (Bernstein & Pfefferbaum, 2018). Various causes of psychological distress include situational crises (Barbe & Pennington-Gray, 2018), threats to self-concept (Roddy et al., 2018), fear of failure (Horton, 2020), dysfunction of the family system (Panganiban-Corales & Medina, 2011) and less exposure to social media information (Asibong et al., 2020). Various efforts can be made to reduce psychological distress including relaxation therapy (Dumbala et al., 2020), group support counseling (Shechter et al., 2020) and reduction of psychological distress through social media (Keles et al., 2020; McFerran et al., 2018). However, the reduction of psychological distress through social media is still rarely discussed. Excessive use of social media every day has a negative effect on a person's psychological condition which makes him more vulnerable to anxiety, depression, and other psychological disorders, especially at the age of 18-25 years which is a transition period from adolescence to adulthood. A study found that students and college students who checked their Facebook account every 15 minutes during their study time had lower achievement (Rosen et al., 2011). Social media is a medium that allows everyone to interact and socialize and communicate without being hindered by space and time. Social media invites anyone who is interested to participate by contributing and giving feedback openly, commenting, and sharing information in a fast and unlimited time (Kaplan & Haenlein, 2010).

Social networking sites such as Facebook and Instagram have implemented screening and intervention procedures when users show signs of emotional distress or risk of suicide. Social media also presents an unprecedented opportunity to increase mental health awareness, and social media-based health promotion efforts have been tested for a variety of mental health and behavioral problems (Nesi, 2020). Merchantid's research can predict disease conditions from social media users. These include diabetes and mental health conditions including

anxiety, depression, and psychosis (Merchantid et al., 2019). People's personalities, mental states, and health behaviors are all reflected on social media, and all have a huge impact on health. The research is since language on Facebook can predict diagnoses in people's health records, revealing new opportunities to personalize care and understand how patients' daily lives relate to their health. The purpose of this study is to explain the reduction of psychological distress using social media.

2. Method

This study used a cross sectional design approach. The study was conducted in June-July 2020 with a total of 110 respondents. The technique of side purposive sampling with the criteria of people living in Ponorogo, using social media in the last 1 year. Collecting psychological distress data to measure stress levels using Depression, Anxiety, Stress Scale 42 (DASS 42) Lovibond and Lovibond measuring instruments in 1995 which have been translated and used by Damanik. Damanik using the internal validity technique found 41 valid items and 1 invalid item where the value was reliable ($\alpha = 0.9483$). Psychological stress scores include Normal = 0-14, mild stress = 15-18, moderate stress = 19-25, severe stress = 26-33, very heavy stress = 34 (Lovibond & Lovibond, 1995). Univariate analysis for respondent characteristics uses percentages while bivariate analysis to determine the effect of social media on psychological distress of social media users uses inferential analysis using Structural Equation Modeling (SEM) based on variance which is often called Partial Least Squere (PLS).

3. Results

The following is the detail of our findings during the study process. The data is presented reflecting the demographic data as presented in **Table 1**. The results showed that almost all of the respondents (77.3%) were female, the average age was 17-25 years(85%), almost all of them had high school education (72.7%) and half of their stress levels were in the normal range (50%).

Table 1. Demographic Data

Variables	Percentage (%)
Sex	
Female	77.3
Male	22.7
Age (Years)	
12-16	1.8
17-25	85.0
26-35	9.0
36-45	2.7
46-55	0.9
Education	
Elementary School	0.9
Junior High School	3.7
Senior High School	72.7
Bachelor	22.7
Stress Level	
Normal	50.0
Mild	20.0
Moderate	19.1
Severe	10.9

Furthermore, the statistical analysis of the variable and demographic data are presented in **Figure 1** and **Figure 2**, respectively. The results showed that demographic factors had no effect on psychological distress. However, the researchers found that respondents in the category of psychological distress were good. This can be proven from the results of measuring the stress level of the respondent's half (50%) in the normal category and (20%) in the mild stress level. Stress is not a disease, individuals who experience mild stress can experience increased motivation and

performance. The influencing demographic variables are gender and education level of respondents. The gender of the respondents is almost entirely (77.3%) female, the age is in the late adolescence category (85%) and almost all of the respondents' education (72.7%) is high school (Hakim, 2020).
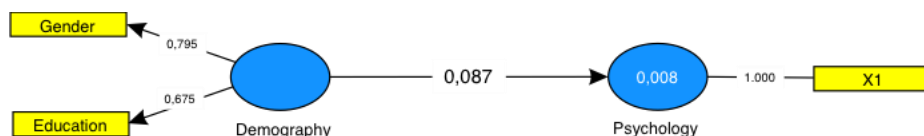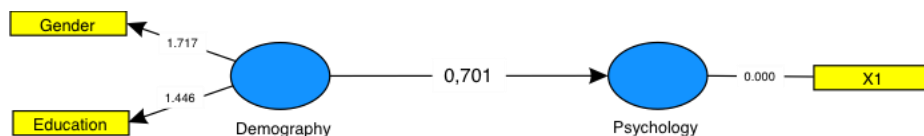

Figure 1. Statistical analysis of the variables

Figure 2. Demographic data and psychological well-being

4. Discussion

Social media has a significant influence on people's lives in general. Some of the most popular social media sites currently used by teenagers include YouTube (85%), Instagram (72%), Snapchat (69%), and Facebook (51%). There is a new social media site platform that has been introduced recently, TikTok, which is quickly gaining traction among young people. Adolescents in this stage of development are very dependent and influenced by their peers. This is because an important developmental task for adolescents is the formation of intimate peer relationships, increased independence from adults, and the formation of self-identity. The achievement of adolescent developmental tasks can be fulfilled and assisted with the existence of social media. This is because in social media there are features and contexts to help adolescents achieve these developmental tasks such as friends who are always available, personal information is displayed publicly and permanently, and there is feedback from colleagues that can be measured instantly given in the form of "likes" (Nesi, 2020).

The level of mild stress found in this study is in line with several previous studies as revealed by Wood, et al. (2016) that the presence of friends on social media has a positive impact on adolescent mental health During adolescence, peer friendships become more prominent and more complex and are usually characterized by similarities with their peers and the importance of social status. Positive adjustment during adolescence is influenced by the possession of broad social skills and the social acceptance one acquires (eg, status and power) (Brown & Larson, 2009). These findings highlight the importance of social circles and opportunities for learning and the provision of positive friendships experienced at different developmental periods. The quality of friendship has the ability to protect adolescents from negative influences. In addition, adolescents who use social media tend to have lower levels of loneliness and higher social adjustment (Yang & Brown, 2013). Other researchers state that social media can improve relationships and social well-being, as well as increase self-disclosure (Valkenburg & Peter, 2009). These findings are supported by Dolev-Cohen dan Barak (2013) that sending electronic messages in online conversations, is a means of channeling emotions to cause emotional relief through conversations with peers and this can contribute to the psychological well-being of adolescents. Another factor that contributes to the level of stress in social media users who are mostly in the adolescent age range is the feeling of well-being when presenting themselves on social media for self-presentation purposes (J. Kim & Lee, 2011; Qiu et al., 2012). Through this self-presentation, you will get feedback from fellow social media users so that it has an impact on the formation of a positive self-identity in adolescents (Valkenburg & Peter, 2009). Adolescents who are spared from an identity crisis will avoid prolonged stress.

Almost all the social media users (77.3%) in this study were female. The findings in this study differ from previous studies that adolescent girls, compared to boys, react more emotionally and behaviorally to ambiguous ridicule on Facebook (Barnett et al., 2013). In addition, female students are more likely to become anxious if access to Facebook is not available and report that Facebook causes stress (Thompson & Lougheed, 2012). However, in this study the researcher argues that the level of stress experienced by respondents who use social media is in a mild stage influenced by the ability of women to express their emotions on social media compared to men who tend to be quiet so that it has an impact on the feeling of relief experienced by respondents. This is in line with the findings of (Dolev-Cohen & Barak, 2013) that sending electronic messages in online conversations is a means of channeling emotions to cause emotional relief through conversations with peers and this can contribute to the psychological well-being of

adolescents.

The results showed that the final education level of the respondents was at the high school stage (72.7%). Respondents with high school education are currently studying in college or as students. Bekalu et al. (2019) stated that when compared to individuals with less education or from secondary school, those with college education, and bachelor's and higher degrees reported better social well-being. According to B. Kim & Kim (2017), the use of social media is positively related to the heterogeneity of student communication networks, which in turn is positively related to social capital and psychological well-being so that it has an impact on respondents' mild stress levels. Someone with a higher level of education has a better cognitive ability to deal with stressors (Mandemakers & Monden, 2010). There is an intermediate variable which shows that demographic factors affect psychological distress. Demographic factors indirectly affect psychological distress through social media user variables. It is necessary to examine other variables that directly affect psychological distress.

5. Conclusion

There is no influence of demographics (gender and education) on psychological distress. Social media users can improve psychological distress in adolescents. Education to the public needs to be given about the effects of social media on psychological distress so that the risk of increasing mental disorders can be minimized.

Acknowledgement

References

Asibong, U., Okafor, C. J., Asibong, I., Ayi, E., Omoronyia, O., & Owoidoho, U. (2020). Psychological distress and social media usage: A survey among undergraduates of a university in Calabar, Nigeria. *Nigerian Postgraduate Medical Journal*, *27*(2), 115. https://doi.org/10.4103/npmj.npmj_169_19

Barbe, D., & Pennington-Gray, L. (2018). Using situational crisis communication theory to understand Orlando hotels' Twitter response to three crises in the summer of 2016. *Journal of Hospitality and Tourism Insights*, *1*(3), 258–275. https://doi.org/10.1108/JHTI-02-2018-0009

Barnett, M. A., Nichols, M. B., Sonnentag, T. L., & Wadian, T. W. (2013). Factors associated with early adolescents' anticipated emotional and behavioral responses to ambiguous teases on Facebook. *Computers in Human Behavior*, *29*(6), 2225–2229. https://doi.org/10.1016/j.chb.2013.05.003

Beard, J. S., Beeson, E., MacKay, H., Paternostro, J., Bassett, M., Lin, H., & Harris, M. (2020). P054 What are They Worried About?: Findings From The IBD Distress Scale. *Gastroenterology*, *158*(3), S111. https://doi.org/10.1053/j.gastro.2019.11.257

Bekalu, M. A., McCloud, R. F., & Viswanath, K. (2019). Association of Social Media Use With Social Well-Being, Positive Mental Health, and Self-Rated Health: Disentangling Routine Use From Emotional Connection to Use. *Health Education and Behavior*, *46*(2_suppl), 69–80. https://doi.org/10.1177/1090198119863768

Bernstein, M., & Pfefferbaum, B. (2018). Posttraumatic growth as a response to natural disasters in children and adolescents. *Current Psychiatry Reports*, *20*(5), 1–10. https://doi.org/10.1007/s11920-018-0900-4

Brown, B. B., & Larson, J. (2009). Peer Relationships in Adolescence. In *Handbook of Adolescent Psychology*. John Wiley & Sons, Inc. https://doi.org/10.1002/9780470479193.adlpsy002004

Casagrande, M., Favieri, F., Tambelli, R., & Forte, G. (2020). The enemy who sealed the world: effects quarantine due to the COVID-19 on sleep quality, anxiety, and psychological distress in the Italian population. *Sleep Medicine*, *75*, 12–20. https://doi.org/10.4103/ijoy.IJOY_34_19

Dolev-Cohen, M., & Barak, A. (2013). Adolescents' use of Instant Messaging as a means of emotional relief. *Computers in Human Behavior*, *29*(1), 58–63. https://doi.org/10.1016/j.chb.2012.07.016

Dumbala, S., Bhargav, H., Satyanarayana, V., Arasappa, R., Varambally, S., Desai, G., & Bangalore, G. N. (2020). Effect of yoga on psychological distress among women receiving treatment for infertility. *International Journal of Yoga*, *13*(2), 115–119. https://doi.org/10.4103/ijoy.IJOY_34_19

Hakim, L. N. (2020). Urgensi Revisi Undang-Undang tentang Kesejahteraan Lanjut Usia. *Aspirasi: Jurnal Masalah-Masalah Sosial*, *11*(1), 43–55. https://doi.org/10.46807/aspirasi.v11i1.1589

Horton, J. (2020). Failure failure failure failure failure failure: six types of failure within the neoliberal academy.

Emotion, Space and Society, *35*, 100672. https://doi.org/10.1016/j.emospa.2020.100672

Kaplan, A. M., & Haenlein, M. (2010). Users of the world, unite! The challenges and opportunities of Social Media. *Business Horizons*, *53*(1), 59–68. https://doi.org/10.1016/j.bushor.2009.09.003

Keles, B., McCrae, N., & Grealish, A. (2020). A systematic review: the influence of social media on depression, anxiety and psychological distress in adolescents. *International Journal of Adolescence and Youth*, *25*(1), 79–93. https://doi.org/10.1080/02673843.2019.1590851

Kim, B., & Kim, Y. (2017). College students' social media use and communication network heterogeneity: Implications for social capital and subjective well-being. *Computers in Human Behavior*, *73*, 620–628. https://doi.org/10.1016/j.chb.2017.03.033

Kim, J., & Lee, J. E. R. (2011). The facebook paths to happiness: Effects of the number of Facebook friends and self-presentation on subjective well-being. *Cyberpsychology, Behavior, and Social Networking*, *14*(6), 359–364. https://doi.org/10.1089/cyber.2010.0374

Lovibond, P. F., & Lovibond, S. H. (1995). The structure of negative emotional states: Comparison of the Depression Anxiety Stress Scales (DASS) with the Beck Depression and Anxiety Inventories. *Behaviour Research and Therapy*, *33*(3), 335–343. https://doi.org/10.1016/0005-7967(94)00075-U

Mandemakers, J. J., & Monden, C. W. S. (2010). Does education buffer the impact of disability on psychological distress? *Social Science & Medicine*, *71*(2), 288–297. https://doi.org/10.1016/J.SOCSCIMED.2010.04.004

McFerran, K. S., Hense, C., Koike, A., & Rickwood, D. (2018). Intentional music use to reduce psychological distress in adolescents accessing primary mental health care. *Clinical Child Psychology and Psychiatry*, *23*(4), 567–581. https://doi.org/10.1177/1359104518767231

McGinty, E. E., Presskreischer, R., Han, H., & Barry, C. L. (2020). Psychological distress and loneliness reported by US adults in 2018 and April 2020. *Jama*, *324*(1), 93–94. https://doi.org/10.1001/jama.2020.9740

Merchantid, R. M., Asch, D. A., Crutchleyid, P., Ungar, L. H., Guntukuid, S. C., Eichstaedt, J. C., Hill, S., Padrez, K., Smithid, R. J., & Schwartz, H. A. (2019). Evaluating the predictability of medical conditions from social media posts. *PLOS ONE*, *14*(6), 1–12. https://doi.org/10.1371/journal.pone.0215476

Nesi, J. (2020). The Impact of Social Media on Youth Mental Health: Challenges and Opportunities. *North Carolina Medical Journal*, *81*(2), 116–121. https://doi.org/10.18043/ncm.81.2.116

Panganiban-Corales, A. T., & Medina, M. F. (2011). Family resources study: Part 1: Family resources, family function and caregiver strain in childhood cancer. *Asia Pacific Family Medicine*, *10*(1), 14. https://doi.org/10.1186/1447-056X-10-14

Qiu, L., Lin, H., Ka Yee LEUNG, A., Tov, W., Ka Yee, A., & Leung, A. K. (2012). Putting their Best Foot Forward: Emotional Disclosure on Facebook. *Cyberpsychology, Behavior, and Social Networking*, *15*(10), 569–572. https://doi.org/10.1089/cyber.2012.0200

Roddy, C., Rickard, N., Tamplin, J., Lee, Y.-E. C., & Baker, F. A. (2018). Exploring self-concept, wellbeing and distress in therapeutic songwriting participants following acquired brain injury: a case series analysis. *Neuropsychological Rehabilitation*, *30*(2), 166–186. https://doi.org/10.1080/09602011.2018.1448288

Rosen, L. D., Lim, A. F., Carrier, L. M., & Cheever, N. A. (2011). *An Empirical Examination of the Educational Impact of Text Message-Induced Task Switching in the Classroom: Educational Implications and Strategies to Enhance Learning Un Estudio Empírico del Efecto de los Cambios de Tarea en el Aula Inducidos por los Mensajes de Texto: Implicaciones para la Enseñanza y Estrategias para la Mejora del Aprendizaje*. *17*, 2011–2163. https://doi.org/10.5093/ed2011v17n2a4

Shechter, A., Diaz, F., Moise, N., Anstey, D. E., Ye, S., Agarwal, S., Birk, L., Brodie, D., Cannone, D. E., Chang, B., Claassen, J., Cornelius, T., Derby, L., Dong, M., Givens, R. C., Hochman, B., Homma, S., Kronish, I. M., Lee, S. A. J., … Shaw, K. (2020). Psychological distress, coping behaviors, and preferences for support among New York healthcare workers during the COVID-19 pandemic. *General Hospital Psychiatry*, *66*(June), 1–8. https://doi.org/10.1016/j.genhosppsych.2020.06.007

Thompson, S. H., & Lougheed, E. (2012). Frazzled by Facebook? An Exploratory Study of Gender Differences in Social Network Communication among Undergraduate Men and Women. *College Student Journal*, *46*(1), 88–98.

Trowell, J. (2018). The wider applications of infant observation. In *The Legacy of Winnicott* (pp. 79–88). Routledge.

Valkenburg, P. M., & Peter, J. (2009). Social consequences of the Internet for adolescents: A decade of research. *Current Directions in Psychological Science*, *18*(1), 1–5. https://doi.org/10.1111/j.1467-8721.2009.01595.x

Viertiö, S., Kiviruusu, O., Piirtola, M., Kaprio, J., Korhonen, T., Marttunen, M., & Suvisaari, J. (2019). Gender and psychological distress: contribution of work-family balance. *European Journal of Public Health*,

29(Supplement_4), ckz187.116. https://doi.org/10.1093/eurpub/ckz187.116

Wood, M. A., Bukowski, W. M., & Lis, E. (2016). The Digital Self: How Social Media Serves as a Setting that Shapes Youth's Emotional Experiences. In *Adolescent Research Review* (Vol. 1, Issue 2, pp. 163–173). Springer. https://doi.org/10.1007/s40894-015-0014-8

Yang, C. chen, & Brown, B. B. (2013). Motives for Using Facebook, Patterns of Facebook Activities, and Late Adolescents' Social Adjustment to College. *Journal of Youth and Adolescence*, *42*(3), 403–416. https://doi.org/10.1007/s10964-012-9836-x