

DOES COMMUNICATION NETWORK HETEROGENEITY MODERATED BY ACADEMIC LEVEL PREDICT STUDENT SUBJECTIVE WELL-BEING?

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Abstract

After the pandemic, students are still facing issues related to subjective well-being. Student behavior in communicating online with social media with various people with diverse backgrounds and also demographic factors such as academic level are factors that are thought to be able to predict student subjective well-being. The purpose of this study is to empirically ascertain whether communication network heterogeneity moderated by academic level has an effect on student subjective well-being. The participants of this study were 437 students in the Jakarta Greater area. Theoretical models are made to fit with empirical models. The results showed that academic level did not have a significant role in moderating the effect of communication network heterogeneity on student subjective well-being. That is, communication network heterogeneity itself is quite strong in predicting student subjective well-being. Other results are discussed later.

Keywords: *student subjective well-being, communication network heterogeneity, academic level, students*

Abstrak

Selepas pandemi, mahasiswa masih menghadapi isu terkait subjective well-being. Perilaku mahasiswa dalam berkomunikasi secara online dengan media sosial dengan berbagai orang dengan latar belakang yang beragam dan juga faktor demografis seperti jenjang akademik menjadi faktor-faktor yang diduga dapat memprediksi student subjective well-being. Tujuan penelitian ini adalah memastikan secara empiris apakah communication network heterogeneity yang dimoderatori jenjang akademik berpengaruh terhadap student subjective well-being. Partisipan penelitian ini adalah 437 mahasiswa di area Jabodetabek. Model teoretis dibuat untuk dicocokkan dengan model empiris. Hasil penelitian menunjukkan bahwa jenjang akademis tidak memiliki peran signifikan dalam menjadi moderator pengaruh communication network heterogeneity terhadap student subjective well-being. Artinya, communication network heterogeneity sendiri cukup kuat dalam memprediksi student subjective well-being. Hasil-hasil lainnya didiskusikan kemudian.

Kata kunci: *student subjective well-being, communication network heterogeneity, academic level, students*

INTRODUCTION

One of the issues that often arise in student life is the problem of mental health. In an academic context, students often have

problems with their subjective well-being.

Starting from the basic concept of subjective well-being which is referred to as the level of satisfaction one feels towards life and

important aspects of life (Diener, 2000; Diener & Ryan, 2009), students subjective well-being is a positive assessment of personal satisfaction related to academic or school context as perceived by individuals (Renshaw & Chenier, 2016).

Students' failure to achieve well-being can result in personal stress and a decrease in academic achievement (Bailey & Phillips, 2015; Bucker et al., 2018; Denovan & Macaskill, 2016). This can happen because of various problems that arise during pandemics and post-pandemic times (Bhakat & Das, 2023). Some of the negative determinants of student subjective well-being include loneliness, academic pressures, poor academic adjustment, poor social relations with lecturers, parents, dissatisfaction with peers, and unfulfilled psychological needs (Bailey & Phillips, 2015; Ozdogan, 2021; Stang-Rabrig et al., 2022).

Meanwhile, the pandemic moment has left individual habits, especially students who establish social relationships online with their peers who come from the same or different colleges, both in an academic or non-academic context. This interesting thing is called communication network heterogeneity or interactions carried out with other people with different backgrounds using social media (Kim, Hsu, & Zuniga, 2013; Kim & Kim, 2017). This is motivated by the need for individuals to maintain social relations and be connected with many people regardless of the conditions.

Social media itself helps many individuals to engage in online communities, as well as maintain and expand friendship networks (Brusilovskiy et al., 2016; Ellison, Steinfield, & Lampe, 2007; Kim & Kim, 2017). Friendship itself is said to have an important role in student subjective well-being (Ngamaba, 2017). These online social relations then provide many positive benefits such as reducing social anxiety and personal stress, as well as increasing subjective well-being (Indian & Grieve, 2014; Shakya & Christakis, 2017; Zhou & Zhang, 2019; Zolkepli & Kamarulzaman, 2015). This happens because in online social relations, there are emotional expressions that often get positive feedback as one of the social supports that influence and increase individual subjective well-being (Liu et al., 2015; Nabi, Prestin, & So, 2013; Pang, 2018).

The relationship between education and subjective well-being is interesting to discuss. Diener and Ryan (2009) have explained that there is no correlation between intelligence and subjective well-being. However, intelligence supports individual academic level achievement. Meanwhile, the classic meta-analysis study by Witter et al. (1984) found a correlation between educational level and subjective well-being. This positions academic level as a variable to be considered as a moderator for the relationship between communication network heterogeneity and subjective well-being. Academic level helps individuals develop cognitive

maturity (Fletcher et al., 2021; Lovden et al., 2021). Cognitive maturity will assist individuals in developing heterogeneity communication networks, looking for positive aspects from various perspectives given by people with different backgrounds but related to their studies at university, and getting them well-being in an academic context.

Previously published studies in Indonesia in the context of cyberpsychology involved more negative determinants of subjective well-being such as problematic internet use (Buchori & Qodariah, 2021; Putri, 2013). Meanwhile, another research by Kiswantomo, Rahmani, and Aliifah (2022) actually places subjective well-being as a predictor of the online disinhibition effect. It is important to study and research positive determinant subjective well-being, not only from the perspective of cyberpsychology and involving demographic variables, but also in the post-pandemic moment. Based on the theoretical arguments previously presented, this research aims to empirically ascertain whether there is an effect of communication network heterogeneity on subjective well-being moderated by academic level.

METHODS

The participants of this study were 437 students with a composition of 302 female students and 135 male students. Research participants have academic levels ranging from associate's degree or D3 to master degree or S2 levels. Most participants live in the

Jakarta Greater area with an average age of 21.08 years (SD = 3.33). The participants had given their prior consent to be involved in the research and filled out the questionnaire without coercion.

Student subjective well-being is measured by Renshaw, Long, and Cook's (2015) student subjective well-being scale which consists of four aspects, namely (1) school connected, (2) joy of learning, (3) educational purpose, and (4) academic efficacy. This scale has 16 items. An example of an item is "I enjoy working on class projects and assignments". The response categories on this scale are from Almost Never to Almost Always with a score range of 1-4. The reliability of this scale is $\alpha = 0.896$.

Communication network heterogeneity is measured by the communication network heterogeneity scale (Kim, Hsu, & Zuniga, 2013; Kim & Kim, 2017). This scale has 7 items. Beginning with the sentence "To what extent do you use your social media to communicate with people who are different from you in terms of..." with a choice of gender, opinion, race and ethnicity, nationality, major, geographic residence, and other background (such as culture). The response categories on this scale are Never to Always with a score range of 1-5. The reliability of this scale is $\alpha = 0.817$.

The academic level is known by filling in personal identity. Participants were asked to inform whether they were in the associate's degree (D3), bachelor degree (S1), or master

degree (S2) academic level. This choice will then be converted into a score with a range of 1-3.

The data analysis technique in this study uses regression which takes into account the moderator variable. However, AMOS is used so that the complexity of the information regarding the magnitude of the main influence of the independent and dependent variables, as well as information on which aspects of each variable contribute the most to the variable.

The results of research at the preliminary level show that demographic factors such as age are correlated with communication network heterogeneity. This indicates that the older the students are, the better their ability to establish online communication through social media with people from various backgrounds. Meanwhile, correlation is also seen in the relationship between communication network heterogeneity and student subjective well-being. Complete results can be seen in Table 1.

RESULT AND DISCUSSION

Table 1. Matrix Correlation

Catagories	1	2	3	4
Age				
Academic level	0.235**			
Communication network heterogeneity	-0.074	0.066		
Student subjective well-being	0.101*	0.079	0.273**	
Mean	21.09	1.99	20.43	53.51
SD	3.33	0.27	5.30	6.74

Note: 1 = Age, 2 = Academic level, 3 = Student subjective well-being, 4 = Communication network heterogeneity

*= .05, **= .01

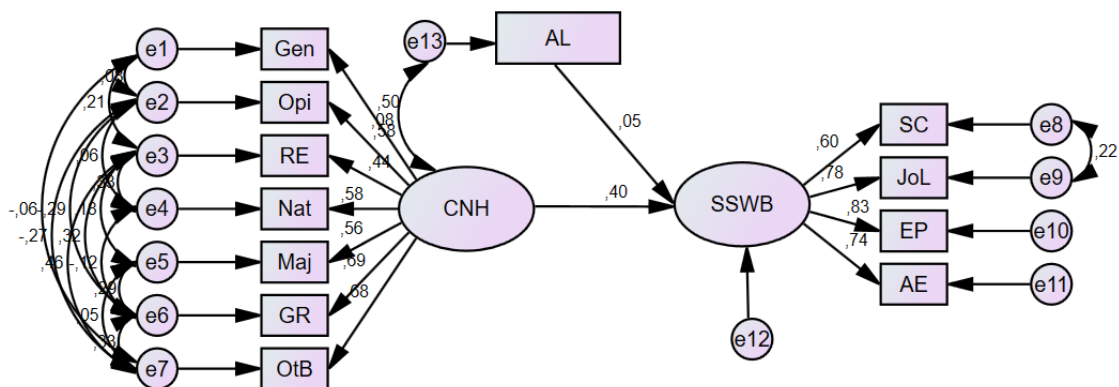


Figure 1. Effect of Communication Network Heterogeneity on Student Subjective Well-Being

Table 2. The Conformity of Cut-off Value and Research Results

Goodness of Fit Index	Cut-Off Value	Indicator Value	Conclusion
Chi-Square (X^2)	Close to 0	54.977	Poor fit
Probabilitas	≥ 0.05	0.029	Marginal fit
NFI	≥ 0.90	0.969	Goodness of fit
IFI	≥ 0.90	0.990	Goodness of fit
TLI	≥ 0.90	0.980	Goodness of fit
CFI	≥ 0.90	0.989	Goodness of fit
RMR	≥ 0.10	0.075	Goodness of fit
RMSEA	≤ 0.10	0.033	Goodness of fit

Based on Figure 1 and Table 2 it appears that although the empirical model in the study is not very strong. The interesting thing that can be seen is that there is indeed a significant positive effect of communication network heterogeneity on student subjective well-being ($\beta = 0.40, p < .00$). The results of the study show that the level of academic education does not have a significant role as a moderator variable. That is, communication network heterogeneity is sufficiently capable of predicting student subjective well-being without being moderated by academic level.

Even though it is done online, interactions with various people from various backgrounds can provide individuals with many new perspectives in looking at problems and life (Kim & Kim, 2017), including providing important understanding to respect the lives and perspectives of other people (Benhabib, 2020; Brezack, Meyer, & Woodward, 2021; Dullstein, 2014). Interacting with many people with different perspectives helps individuals control their emotions and understand the world better (Cote, 2005).

Social interaction will improve individual social communication skills (Salsabila, 2023), including helping to develop good social problem-solving in an academic context (Putri et al, 2000), and encouraging the achievement of subjective well-being (Cooper, Okamura, & Gurka, 1992; Lee et al., 2023; Nezlek et al., 2002; Sandstorm & Dunn, 2014).

Because this communication network heterogeneity is based on social media, individuals have a great opportunity to meet very diverse people where the social relations that are formed help individuals understand their emotional status and validate their psychological status (Ellison, Steinfield, & Lampe, 2007; Kim & Kim, 2017; Liu et al., 2015). In social relations, there is always the possibility of individuals meeting wiser people with more diverse perspectives in looking at various issues. At this point, potential individuals get positive feedback which affects their self-esteem (Valkenburg, Peter, & Schouten, 2006) and makes them more optimistic in facing of various academic

pressures (Mamoon-Al-Bashir, Kabir, & Rahman, 2016; Peifer et al. al., 2020).

Another interesting finding from this research is that academic level has no effect on student subjective well-being, as well as failing to become a moderator variable. One reason is that each academic level has relatively the same academic pressure conditions. Individuals who are at a high academic level and of a more mature age usually have better emotional and cognitive regulation (Santos et al., 2021), but their life problems can also be more complex (Thornton, Paterson, & Yeung, 2012). That is, at a lower academic level, problems of daily life may dominate (Doygun & Gulec, 2012), but at a higher level, other problems such as family problems are no less complicated (Amni & Suwarjo, 2020; Darawsha, 2018; Lasode & Awotedu, 2104; Yasmin, Saeed, & Ahmad, 2018).

Based on the findings of this research, it also appears that the geographical residences aspect is the strongest aspect in explaining communication network heterogeneity, while the weakest aspect in explaining communication network heterogeneity is race and ethnicity. This explains that differences in the location of residence may be considered as the difference with the least risk of conflict in social relations. On the other hand, differences in terms of race and ethnicity are things to avoid in heterogeneous communication networks. This is possibly caused by differences in race and ethnicity that

emphasize in-group and out-group issues (Carment, 1993; Levin, van Laar, & Sidanius, 2003), and have the potential to create conflict in social relations due to differences in values and cultural roots (Esteban, Mayoral, & Ray, 2012; Suharno, 2006; Williams, 1994). If this aspect can minimize its negative effects, then there will be a lot of goodness as a consequence. Success in reducing the potential for conflict in communication and social relations due to differences in race and ethnicity will increase social integration (Barger & Uchino, 2017).

As for the student subjective well-being variable, it can be seen that the aspect that is most powerful in explaining it is educational purpose, and the aspect that is not very strong in explaining it is school connected. Educational purpose is a student's feeling that the academic tasks that must be done are something important and meaningful (Renshaw, Long, & Cook, 2015). Several studies confirm this statement (Datu & King, 2018; Ling et al., 2022). This indicates that students' attachment to academic assignments, especially when they are able to complete academic assignments and loads well, this will be a source of well-being (Yangdon et al., 2021). This is reasonable considering that when academic demands are met, academic stress will also be reduced so that students become happier and mentally healthy (Andriani et al., 2021; Hernandez-Torrano et al., 2020; Silva & Figueiredo-Braga, 2018).

Meanwhile, school connectedness is referred to as a feeling of being cared for and having good relationships with people on campus (Renshaw, Long, & Cook, 2015). This explains that after the pandemic, many social relations among students have been formed and are stable within the scope of online relations (Tang, Lau, & Chau, 2022; Vania, Yudiana, & Susanto, 2022). Even though adjustments are still being made (Javier & Rahayu, 2022), they are not too attached to their peers physically on campus (Rochmaniyah & Tantiani, 2022). The pandemic itself creates social distancing and makes many people, including students, physically distant and intimate (Song, Vicman, & Doan, 2022).

CONCLUSION

Student subjective well-being can be predicted from how well students develop social relations through online communication with various people from various backgrounds. Understanding and developing the ability to communicate with other people from different backgrounds can provide different perspectives and help students to survive various academic demands and gain well-being. Meanwhile, the communication network heterogeneity in students can be further improved in terms of racial and ethnic differences.

REFERENCES

- Andriani, I., Qomariyah, N., Salve, H. R., & Indryawati, R. (2021). Is college students' happiness during online learning affected by academic stress and technology-overload perception? *Advances in Social Science, Education and Humanities Research, 655*, 1633-1637.
- Amni, S. S., & Suwarjo, S. (2020). Undergraduate students' marriage (a case study of problematic of college students who get married during their study). *Jurnal Bimbingan dan Konseling Islam, 10*(2), 218-226.
- Bailey, T. H., & Phillips, L. J. (2015). The influence of motivation and adaptation on students' subjective well-being, meaning in life and academic performance. *Higher Education Research & Development, 35*(2), 201-216. doi: 10.1080/07294360.2015.1087474
- Barger, S. D., & Uchino, B. N. (2017). Racial and ethnic variation in the association of social integration with mortality: Ten-year prospective population-based US study. *Scientific Reports, 7*(1), 43874. doi: 10.1038/srep43874
- Benhabib, S. (1992). *Situating the Self: Gender, community, and postmodernism in contemporary ethics*. New York: Psychology Press. <https://doi.org/10.4324/9781003059516>
- Bhakat, P., & Das, K. (2023). Status of mental health among college and university students during first and second wave of COVID-19 outbreak in India: A cross-

- sectional study. *Journal of Affective Disorders Report*, 12, 100494. <https://doi.org/10.1016/j.jadr.2023.100494>
- Brezack, N., Meyer, M., & Woodward, A. L. (2021). Three-year-olds' perspective-taking in social interactions: Relations with socio-cognitive skills. *Journal of Cognition and Development*, 22(4), 537-560. doi: 10.1080/15248372.2021.190171
- Brusilovskiy, E., Townley, G., Snethen, G., & Salzer, M. S. (2016). Social media use, community participation and psychological well-being among individuals with serious mental illnesses. *Computers in Human Behavior*, 65, 232-240. doi: 10.1016/j.chb.2016.08.036
- Buchori, Z. S., & Qodariah, S. (2021). Hubungan problematic internet use dengan subjective well-being pada mahasiswa di kota Bandung. *Spesia*, 7(2), 562-565. <http://dx.doi.org/10.29313/v0i0.28475>
- Bucker, S., Nuraydin, S., Simonsmeier, B. A., Schneider, M., & Luhmann, M. (2018). Subjective well-being and academic achievement: A meta-analysis. *Journal of Research in Personality*, 74, 83-94. doi: 10.1016/j.jrp.2018.02.007
- Carment, D. (1993). The international dimensions of ethnic conflict: Concepts, indicators, and theory. *Journal of Peace Research*, 30(2), 137-150. <https://doi.org/10.1177/0022343393030002002>
- Cooper, H., Okamura, L., & Gurka, V. (1992). Social activity and subjective well-being. *Personality and Individual Differences*, 13(5), 573-583. doi: 10.1016/0191-8869(92)90198-x
- Cote, S. (2005). A social interaction model of the effects of emotion regulation on work strain. *The Academy of Management Review*, 30(3), 509-530.
- Darawsha, N. A. H. (2018). The reality of the challenges faced by graduate students in the faculties of educational sciences in Jordanian universities. *Journal of Institutional Research South East Asia*, 16(2), 123-140.
- Datu, J. A. D., & King, R. B. (2018). Subjective well-being is reciprocally associated with academic engagement: A two-wave longitudinal study. *Journal of School Psychology*, 69, 100-110. doi: 10.1016/j.jsp.2018.05.007
- Denovan, A., & Macaskill, A. (2016). Stress and subjective well-being among first year UK undergraduate students. *Journal of Happiness Studies*, 18(2), 505-525. doi: 10.1007/s10902-016-9736-y
- Diener, E. (2000). Subjective well-being: The science of happiness and a proposal for a national index. *American Psychologist*, 55(1), 34-43. doi: 10.1037/0003-066x.55.1.34
- Diener, E., & Ryan, K. (2009). Subjective well-being: A general overview. *South African Journal of Psychology*, 39(4), 391-406. <https://doi.org/10.1177/0081246309039004>

- Doygun, O., & Gulec, S. (2012). The problems faced by university students and proposals for solution. *Procedia Social and Behavioral Sciences*, 47, 1115-1123. doi: 10.1016/j.sbspro.2012.06.788
- Dullstein, M. (2014). Understanding others in social interactions. *Philosophical Topics*, 42(1), 303-319. <http://www.jstor.org/stable/43932728>
- Ellison, N. B., Steinfield, C., & Lampe, C. (2007). The benefits of Facebook “friends”: Social capital and college students’ use of online social network sites. *Journal of Computer-Mediated Communication*, 12(4), 1143-1168. doi: 10.1111/j.1083-6101.2007.00367.x
- Esteban, J., Mayoral, L., & Ray, D. (2012). Ethnicity and conflict: An empirical study. *The American Economic Review*, 102(4), 1310-1342.
- Fletcher, J., Topping, M., Zheng, F., & Lu, Q. (2021). The effects of education on cognition in older age: Evidence from genotyped siblings. *Social Science & Medicine*, 280, 114044. doi: 10.1016/j.socscimed.2021.114044
- Hernández-Torrano, D., Ibrayeva, L., Sparks, J., Lim, N., Clementi, A., Almukhambetova, A., Nurtayev, Y., & Muratkyzy, A. (2020). Mental health and well-being of university students: A bibliometric mapping of the literature. *Frontiers in Psychology*, 11, 1226. doi: 10.3389/fpsyg.2020.01226
- Indian, M., & Grieve, R. (2014). When Facebook is easier than face-to-face: Social support derived from Facebook in socially anxious individuals. *Personality and Individual Differences*, 59, 102-106. doi: 10.1016/j.paid.2013.11.016
- Javier, R., & Rahayu, M. N. M. (2022). Peer attachment dan penyesuaian diri mahasiswa baru fakultas psikologi di masa pandemi COVID-19. *Psikoborneo: Jurnal Ilmiah Psikologi*, 10(3), 497-506. <http://dx.doi.org/10.30872/psikoborneo.v10i3>
- Kim, Y., Hsu, S. H., & de Zuniga, H. G. (2013). Influence of social media use on discussion network heterogeneity and civic engagement: The moderating role of personality traits. *Journal of Communication*, 63(3), 498-516. doi: 10.1111/jcom.12034
- 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. doi: 10.1016/j.chb.2017.03.033
- Kiswantomo, H., Rahmani, K., & Aliifah, D. N. (2022). Subjective well-being sebagai prediktor online disinhibition effect pada mahasiswa. *Jurnal Psikologi*, 15(2), 269-283 <https://doi.org/10.35760/psi.2022.v15i2.6249>
- Lasode, A. O., & Awote, M. F. (2014). Challenges faced by married university undergraduate female students in Ogun State, Nigeria. *Procedia Social and*

- Behavioral Sciences*, 112, 102-113. doi: 10.1016/j.sbspro.2014.01.1144
- Lee, S. S., Shim, Y., Choi, J., & Choi, I. (2023). Paradoxical impacts of social relationships on well-being during the COVID-19 pandemic. *Journal of Happiness Studies*, 24, 745-767. <https://doi.org/10.1007/s10902-022-00614-2>
- Levin, S., van Laar, C., & Sidanius, J. (2003). The effects of ingroup and outgroup friendships on ethnic attitudes in college: A longitudinal study. *Group Processes & Intergroup Relations*, 6(1), 76-92. <https://doi.org/10.1177/1368430203006001013>
- Ling, X., Chen, J., Chow, D. H. K., Xu, W., & Li, Y. (2022). The “trade-off” of student well-being and academic achievement: A perspective of multidimensional student well-being. *Frontiers in Psychology*, 13, 772653. doi: 10.3389/fpsyg.2022.772653
- Liu, P., Tov, W., Kosinski, M., Stillwell, D. J., & Qiu, L. (2015). Do Facebook status updates reflect subjective well-being? *Cyberpsychology, Behavior, and Social Networking*, 18(7), 373-379. doi: 10.1089/cyber.2015.0022
- Lovden, M., Fratiglioni, L., Glymour, M. M., Lindenberger, U., & Tucker-Drob, E. M. (2020). Education and cognitive functioning across the life span. *Psychological Science in the Public Interest*, 21(1), 6-41. doi: 10.1177/1529100620920576
- Peifer, C., Schönfeld, P., Wolters, G., Aust, F., & Margraf, J. (2020). Well done! Effects of positive feedback on perceived self-efficacy, flow and performance in a mental arithmetic task. *Frontiers in Psychology*, 11, 1008. doi: 10.3389/fpsyg.2020.01008
- Putri, D. E., Rahardjo, W., Qomariyah, N., Rini, Q. K., & Pranandari, K. (2020). Social problem-solving in freshmen: The role of emotional stability, secure attachment, communication skill, and self-esteem. *Humaniora*, 12(2), 141-149. [10.21512/humaniora.v12i2.7002](https://doi.org/10.21512/humaniora.v12i2.7002)
- Putri, N. A. (2013). Subjektive well-being mahasiswa yang menggunakan internet secara berlebihan. *Calyptra*, 2(1), 1-16.
- Mamoon-Al-Bashir, M., Kabir, M. R., & Rahman, I. (2016). The value and effectiveness of feedback in improving students’ learning and professionalizing teaching in higher education. *Journal of Education and Practice*, 7(16), 38-41.
- Nabi, R. L., Prestin, A., & So, J. (2013). Facebook friends with (health) benefits? Exploring social network site use and perceptions of social support, stress, and well-Being. *Cyberpsychology, Behavior, and Social Networking*, 16(10), 721-727. doi: 10.1089/cyber.2012.0521
- Nezlek, J. B., Richardson, D. S., Green, L. G., & Schatten-Jones, E. C. (2002). Psychological well-being and day-to-day social interaction among older adults. *Personal Relationships*, 9, 57-71.

- Ngamaba, K. H. (2017). Determinants of subjective well-being in representatives samples of nations. *European Journal of Public Health, 27*(2), 377-382. <https://doi.org/10.1093/eurpub/ckw103>
- Ozdogan, A. C. (2021). Subjective well-being and social-motional loneliness of university students: The mediating effect of the meaning of life. *Journal of Pedagogical Research, 5*(1), 18-30. <http://dx.doi.org/10.33902/JPR.2021066865>
- Pang, H. (2018). How does time spent on WeChat bolster subjective well-being through social integration and social capital? *Telematics and Informatics, 35*, 2147-2156. doi: 10.1016/j.tele.2018.07.015
- Renshaw, T. L., & Chenier, J. S. (2016). Further validation of the Student Subjective Wellbeing Questionnaire: Comparing first-order and second-order factor effects on actual school outcomes. *Journal of Psychoeducational Assessment, 36*(4), 392-397. doi: 10.1177/0734282916678494
- Renshaw, T. L., Long, A. C. J., & Cook, C. R. (2015). Assessing adolescents' positive psychological functioning at school: Development and validation of the Student Subjective Well-Being Questionnaire. *School Psychology Quarterly, 30*(4), 534-552. <http://dx.doi.org/10.1037/spq0000088>
- Rochmaniyah, K., & Tantiani, F. F. (2022). Hubungan peer attachment dengan school connectedness pada mahasiswa angkatan 2020 di kota Malang pada masa pandemi COVID-19. *Jurnal Flourishing, 2*(4), 229-238. doi: 10.17977/10.17977/um070v2i42022p229-238
- Salsabila, N. Y. (2023). The relationship between social interaction and interpersonal communication in class X-XI students at UPGRIS Laboratory High School. *Formosa Journal of Applied Sciences, 2*(6), 1245-1270. <https://doi.org/10.55927/fjas.v2i6.4639>
- Sandstrom, G. M., & Dunn, E. W. (2014). Social interactions and well-being. *Personality and Social Psychology Bulletin, 40*(7), 910-922. doi: 10.1177/0146167214529799
- Santos, A. C., Simões, C., Cefai, C., Freitas, E., & Arriaga, P. (2021). Emotion regulation and student engagement: Age and gender differences during adolescence. *International Journal of Educational Research, 109*, 101830. doi: 10.1016/j.ijer.2021.101830
- Shakya, H. B., & Christakis, N. A. (2017). Association of Facebook use with compromised well-being: A longitudinal study. *American Journal of Epidemiology, 185*(3), 203-211. doi: 10.1093/aje/kww189
- Silva, R. G., & Figueiredo-Braga, M. (2018). Evaluation of the relationships among happiness, stress, anxiety, and depression in pharmacy students. *Currents in Pharmacy Teaching and Learning, 10*(7), 903-910. doi: 10.1016/j.cptl.2018.04.002
- Song, Q., Vicman, J. M., & Doan, S. N. (2022). Changes in attachment to parents and peers and relations with mental health during the

- COVID-19 pandemic. *Emerging Adulthood*, 10(4), 1048-1060. doi: 10.1177/21676968221097167
- Stang-Rabrig, J., Schwerter, J., Witmer, M., & McElvany, N. (2022). Beneficial and negative factors for the development of students' well-being in educational context. *Current Psychology*. <https://doi.org/10.1007/s12144-022-04067-x>
- Suharno, S. (2006). Konflik, etnisitas dan integrasi sosial. *Jurnal Civics*, 3(2), 78-91.
- Thornton, W. L., Paterson, T. S. E., & Yeung, S. E. (2012). Age differences in everyday problem solving. *International Journal of Behavioral Development*, 37(1), 13-20. doi: 10.1177/0165025412454028
- Valkenburg, P. M., Peter, J., & Schouten, A. P. (2006). Friend networking sites and their relationship to adolescents' well-being and social self-esteem. *CyberPsychology & Behavior*, 9(5), 584-590. doi: 10.1089/cpb.2006.9.584
- Vania, I. G., Yudiana, W., & Susanto, H. (2022). Does online-form peer relationship affect academic motivation during online learning? *Journal of Educational, Health, and Community*, 11(1), 72-91.
- Williams, R. M. Jr. (1994). The sociology of ethnic conflicts: Comparative international perspectives. *Annual Review of Sociology*, 20, 49-79.
- Witter, R. A., Okun, M. A., Stock, W. A., & Haring, M. J. (1984). Education and subjective well-being: A meta-analysis. *Educational Evaluation and Policy Analysis*, 6(2), 165-173. doi: 10.3102/01623737006002165
- Yangdon, K., Sherab, K., Choezom, P., Passang, S., & Deki, S. (2021). Well-being and academy workload: Perceptions of science and technology students. *Educational Research and Reviews*, 16(11), 418-427. doi: 10.5897/ERR2021.4197
- Yasmin, F., Saeed, M., & Ahmad, N. (2018). Challenges faces by postgraduate students: A case study of a private university in Pakistan. *Journal of Education and Human Development*, 7(1), 109-116. doi: 10.15640/jehd.v7n1a13
- Zhou, M., & Zhang, X. (2019). Online social networking and subjective well-being: Mediating effects of envy and fatigue. *Computers & Education*, 140, 103598. doi: 10.1016/j.compedu.2019.103598
- Zolkepli, I. A., & Kamarulzaman, Y. (2015). Social media adoption: The role of media needs and innovation characteristics. *Computers in Human Behavior*, 43, 189-209. doi: 10.1016/j.chb.2014.10.050