

The Effect of University Students' Dependence on Social Networking Services on a Healthy Lifestyle: Mediating Effect of Social Networks

An, Hyunseo*, B.H.Sc., O.T., Kim, Inhye*, B.H.Sc., O.T.,
Yun, Sohyeon*, B.H.Sc., O.T., Park, Hae Yean**, Ph.D., O.T.

*Dept. of Occupational Therapy, Graduate School of University, Master's Course Student

**Dept. of Occupational Therapy, College of Software Digital Healthcare Convergence,
Yonsei University, Professor

Abstract

Objective : This study investigated the mediating effect of social networks on the relationship between social networking service (SNS) dependence and healthy lifestyle among university students.

Methods : Data from 374 university students were collected via online surveys. Sociodemographic data, SNS dependence, social networks, and healthy lifestyle were assessed. Mediation analysis using bootstrapping was conducted to examine the mediating effect of social networks on the relationship between SNS dependence and healthy lifestyle.

Results : A total of 374 university students participated in this study. The average age of the participants was 21.8 years (standard deviation = 2.1), and 70.3% were females. Mediation analysis revealed that SNS dependence had a direct effect on healthy lifestyle ($\beta = -.078$, standard error [SE] = .052, $p = .128$), which was not statistically significant. However, a statistically significant indirect effect was observed through social networks ($\beta = -.052$, SE = .020, $p = .011$). The total effect of SNS dependence on a healthy lifestyle was significant ($\beta = -.130$, SE = .053, $p = .014$).

Conclusion : Social networks play a critical role in promoting a healthy lifestyle. Health professionals should prioritize interventions to address SNS dependence and leverage social networks to encourage healthier behaviors.

Keywords : Health promotion, Lifestyle, Social networking service (SNS), Social networks, University students

I. Introduction

Lifestyle choices affect approximately 60% of an individual's health-related quality of life (Farhud, 2015). These choices are shaped by routine actions, habits, and interactions with social, economic, and living conditions (Beard et al., 2016). Recent studies have focused on specific lifestyle aspects, such as eating habits and leisure activities (Hyun, 2020; Kim, 2009). However, a comprehensive view of the effects of these factors on health is lacking. Thus, a multifaceted understanding of lifestyles is necessary (Park & Park, 2020). Social interaction significantly affects lifestyle by providing emotional stability and a sense of belonging, which are crucial to mental health (Antonucci et al., 2014; Cohen & Wills, 1985). University life is a critical period for developing social networks and achieving economic and emotional independence (Lee & Park, 2022). Students can enhance interpersonal skills that are essential for postgraduation life through academic and extracurricular activities (Pascarella & Terenzini, 2005). In the modern era, social networking services (SNS) are vital for maintaining these relationships (Ellison et al., 2007).

The prevalence of the Internet and increasing dependence on SNSs fulfill social connection needs (Education Policy Network Information Center, 2015). SNSs expand networks and relationships (Bowman, 2010; Hong, 2015; Kim & Kim, 2017). However, excessive use can lead to negative effects, such as addiction, which is characterized by an overwhelming desire to stay online, thereby disrupting life (Brailovskaia & Teichert, 2020). A 2022 survey revealed that young people, especially those in their 20s (31.3%), are more vulnerable to smartphone

overuse (National Information Society Agency, 2023). Over 90% of university students use SNSs, with the highest rates among millennials (83.5%) and Generation Z (72.6%) (Korea Information Society Development Institute, 2023). Additionally, Generation Z shows high usage for more than 3 hours daily (13.5%). University life has been reported to promote SNS use for maintaining relationships and staying updated with trends (Choi & You, 2015; Yoon & Park, 2014). However, the focus on SNSs has shifted from socializing and viewing others' posts to focusing more on personal life updates (National Information Society Agency, 2023). Furthermore, excessive SNS dependence disrupts the balance between online and offline lives, negatively affecting sleep, exercise, dietary habits, and overall lifestyle (Ann et al., 2020; Hong & Jeon, 2017).

Social networks, formed through group interactions, provide emotional stability and a sense of belonging, thereby mitigating psychological problems such as depression (Jun & Kim, 2015). Weak social networks can reduce communication opportunities and emotional support, thereby negatively affecting social health (Yun & Lim, 2023). Previous studies have focused on the direct relationship between SNS dependence and healthy lifestyle choices (Ellison et al., 2007; Goodyear et al., 2021). However, no study has examined how social networks mediate these effects.

Strong social networks are particularly important for university students as they can alleviate psychological and emotional issues, such as depression, and support healthy lifestyle choices (Cohen & Wills, 1985). Enhanced social connectivity promotes mutual support and healthy habits, thus improving the overall quality of life (Antonucci et al., 2014). However, high SNS dependence does not necessarily enhance social networks. Individuals

with social anxiety may use SNSs to avoid real-life interactions, which can exacerbate their issues (Kim, 2014). Excessive SNS use can negatively affect sleep, physical activity, and dietary habits (Goodyear et al., 2021). Thus, analyzing how social networks mediate these effects is necessary. Furthermore, understanding the effects and relationships between these key variables is crucial to addressing the negative effects of excessive SNS use and promoting healthier lifestyle choices among university students. Therefore, investigating whether increased SNS use improves the quality of social networks and how social networks mediate the negative effect of SNS dependence on healthy lifestyles is necessary.

This study hypothesized that social networks mediate the relationship between SNS dependence and healthy lifestyles among university students and that although high SNS dependence negatively affects healthy lifestyle choices, strong social networks can mitigate these negative effects and promote healthier lifestyle behaviors. Therefore, this study aimed to analyze the mediating effect of social networks on the relationship between SNS dependence and healthy lifestyles by investigating the sociodemographic characteristics, SNS dependence, social networks, and healthy lifestyles of university students.

II. Methods

1. Study design and participants

This was a cross-sectional study. Data were collected via an online Google Forms survey over a 1-week period starting from May 18, 2023. A self-administered questionnaire was distributed to

all university students nationwide through university student communities, student unions, clubs, and on-campus dormitory communities. The inclusion criteria were university students and voluntary agreement to participate in the study. The required sample size was calculated based on a significance level (α) of .05, power ($1-\beta$) of .95, and medium effect size of .25. An analysis using G*Power 3.1 revealed that a minimum sample size of 280 participants was required (Faul et al., 2009).

All participants were informed about the study's purpose and procedures. Furthermore, they were informed that they could withdraw from the study at any time and that the data collected were only for research purposes and will be properly disposed of after completing the study. The study protocol was approved by the Institutional Review Board of our institution. Informed consent was obtained from all participants.

2. Measures

Sociodemographic data were collected, including gender, grade, university region, major, and disease (not only diagnoses but also recently experienced diseases). SNS dependence was the independent variable (X). SNS dependence was measured using the SNS Addiction Self-Assessment Scale (Lee, 2013). The SNS Addiction Self-Assessment Scale is a 10-item scale. Each item is scored on a 5-point scale from 1 (strongly disagree) to 5 (strongly agree), with a total score of 50. Scores are categorized as follows: ≤ 25 indicating "normal", 26~30 indicating "potential risk of addiction shortly", 31~35 indicating "mild addiction," and ≥ 36 indicating "addictive stage". In this study, Cronbach's α value for this tool was .86.

Healthy lifestyles were the dependent variable (Y). Healthy lifestyles were assessed using the Health-promoting Lifestyle Profile II (HPLP-II) (Walker et al., 1987). In this study, the tool developed by Hwang (2010) was used to reflect Korean culture. The HPLP-II is a 52-item scale that measures health-promoting behaviors on six subscales: health responsibility, physical activity, nutrition, spiritual growth, interpersonal relationships, and stress management. Each item is scored on a 4-point scale from 1 (never do it) to 4 (do it regularly). The total score ranges from 40 to 160. Higher scores indicate that a healthy lifestyle is more effectively adopted and practiced. Cronbach's α value of the original tool was .94, and that of the Korean version was .92. Cronbach's α value of the HPLP-II in this study was .93.

Social networks were the mediating variable (M). Social networks were measured using the Korean version of the Lubben Social Network Scale (LSNS). The LSNS was developed by Lubben and Gironde (2017) and culturally adapted and translated into Korean (Lim et al., 2013). The LSNS is a 12-item scale that measures network size, closeness, and frequency of contacts. It includes two subscales: family members (6 items) and friends (6 items). Each item is scored on a 6-point scale from 0 to 5. The total score ranges from 0 to 60. Higher scores indicate stronger social networks. Bae (2023) and Song et al. (2013) used the LSNS to measure the social isolation of young adults aged 18~34 years. Cronbach's α value of the original tool was .92, and Cronbach's α value in this study was .83.

3. Statistical analyses

Descriptive analyses were performed to determine the participants' general characteristics and study variables, including SNS dependence, social networks, and healthy lifestyles. Differences in study variables were identified based on sociodemographic characteristics using independent t-tests and analysis of variance. Post hoc verification was conducted using the Scheffé test. Correlations between the study variables were examined before testing the hypotheses using Pearson's correlation coefficient.

Mediation analysis was performed to determine the mediating effect of social networks on the relationship between SNS dependence and healthy lifestyles. The study hypotheses were tested using the bootstrapping method outlined by Hayes (2017). This method assesses whether individual pathways are statistically significant in determining indirect effects. A statistically significant mediating effect was confirmed when the 95% confidence interval (CI) excluded the null value. Data preprocessing and descriptive statistics were performed using SAS version 9.4 (SAS 9.4: SAS Institute Inc., Cary, North Carolina, USA). Mediation analysis was performed using Mplus version 8.6 (Mplus 8.6: Muthén & Muthén, Los Angeles, California, USA)

III. Results

1. Sociodemographic characteristics of the participants

A total of 374 university students were included in this study. Of the 374 participants, 111 (29.7%)

were men, and 263 (70.3%) were women. The average age of the participants was 21.8 ± 2.1 years. The participants were from 13 different regions (Gangwon, Chungcheong, Seoul, Daegu, Busan, Gyeonggi, Gyeongsang, Daejeon, Jeonlla, Jeju, Incheon, Ulsan, and Sejong-si). Table 1 shows the sociodemographic characteristics of the participants. Of the 374 students, 77 (20.6%), 74 (19.8%), 96 (25.7%), and 108 (28.9%) were first-, second-, third-, and fourth-year students, respectively. Additionally, 19 students (5%) were on leave of absence. The majors of the students were humanities and arts (60, 16.0%), science and engineering (74, 19.8%), and medical and healthcare students (240, 64.2%). The top four

reported health conditions were obesity (90, 24.1%), eye problem (31, 8.3%), depression (62, 16.6%), and anxiety (20, 5.4%). Furthermore, 171 students (45.6%) reported none of the four conditions. Table Appendix 1 in the Online Appendix shows differences in SNS dependence, social networks, and healthy lifestyles according to sociodemographic characteristics.

2. Descriptive statistics and correlations among the study variables

Table Appendix 2 in the Online Appendix shows detailed descriptive statistics, including the skewness and kurtosis distributions for the subdomains of the three study variables. The assumption of variable normality was verified based on the finding that the skewness and kurtosis values were < 2 and 4 , respectively (Hong et al., 2003). The mean scores for SNS dependence and social networks were 24.89 ± 8.21 and 34.61 ± 8.99 , respectively. The friend network showed higher scores than the family network. The average score for healthy lifestyles was 2.55 ± 0.44 . Interpersonal relationships showed the highest scores, followed by spiritual growth, stress management, nutrition, physical activity, and health responsibility.

Table 2 shows the mean, standard deviation, and correlation of the study variables. A significant correlation was observed between SNS dependence, social networks, and healthy lifestyles. Additionally, a significant correlation was observed between SNS dependence and social networks ($r = -.138, p = .007$) and healthy lifestyles ($r = -.130, p = .012$). Social networks correlated significantly positively with healthy lifestyles ($r = .384, p < .001$). Further confirmation was conducted using regression analysis.

Table 1. Sociodemographic Characteristics of the Study Participants (N = 374)

Variable	<i>n</i> (%) or Mean \pm <i>SD</i>
Age (year)	21.8 \pm 2.1
Sex	
Male	111 (29.7)
Female	263 (70.3)
Grade	
1st	77 (20.6)
2nd	74 (19.8)
3rd	96 (25.7)
4th	108 (28.9)
Academic leave	19 (5.0)
Major	
Humanity and arts	60 (16.0)
Science and engineering	74 (19.8)
Medical and healthcare	240 (64.2)
Diseases	
Obesity	90 (24.1)
Eye problem	31 (8.3)
Depression	62 (16.6)
Anxiety	20 (5.4)
None of them	171 (45.6)

The sum of the percentages does not equal 100% because of rounding.

Values are presented as number (%) or Mean \pm Standard Deviation (*SD*).

Table 2. Descriptive Statistics and Correlations for the Study Variables

Variable	<i>M</i>	<i>SD</i>	Pearson's correlations		
			1	2	3
1. SNS dependence	24.89	8.21	-		
2. Social networks	34.61	8.99	-.138**	-	
3. Healthy lifestyles	2.55	0.44	-.130*	.384***	-

M = Mean; *SD* = Standard Deviation.

p* < .05, *p* < .01, and ****p* < .001.

Table 3. Mediation Analysis Results

Effect	Estimate (Standardized)	Standard error	95% CI lower	95% CI upper	<i>p</i> -value
Direct effect (SNS dependence → Healthy lifestyles)	-.078	.052	-.174	.023	.128
Indirect effect (SNS dependence → Social networks → Healthy lifestyles)	-.052	.020	-.094	-.012	.011
Total effect (SNS dependence → Healthy lifestyles)	-.130	.053	-.227	-.026	.014

3. Mediation analysis

Table 3 and Figure 1 show the results of the mediation analysis. The results showed that SNS dependence had a negative direct effect on healthy lifestyles ($\beta = -.078$, standard error [SE] = .052). However, this effect was not significant ($p = .128$). Furthermore, SNS dependence had a significant negative total effect, including direct and indirect effects, on healthy lifestyles ($\beta = -.130$, SE = .053, $p = .014$).

The bootstrapping method with 1,000 samples was used to test the significance of the indirect effects of SNS dependence on healthy lifestyles. The results showed that SNS dependence had a significant indirect effect on healthy lifestyles ($\beta = -.052$, SE = .020, $p = .011$, 95% CI = -.094 to -.012). The indirect effect accounted for 40% of the total effect, whereas the direct effect explained the remaining 60%.

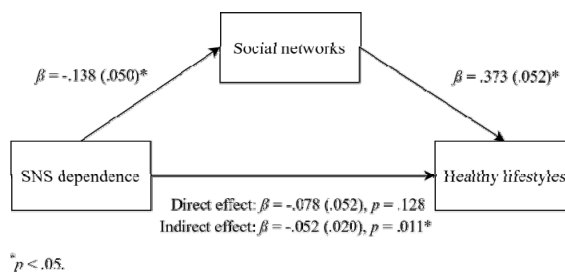


Figure 1. Mediation Model of Social Networks Between SNS Dependence and Healthy Lifestyles. Standardized Coefficients (Standard Errors).

IV. Discussion

This study investigated the mediating effect of social networks on the relationship between SNS dependence and healthy lifestyles among university students. The mediation analysis revealed that social networks primarily mediated the relationship between SNS dependence and healthy lifestyles among university students. The direct effect of SNS dependence on healthy lifestyles was negative. However, it was not statistically significant. This finding indicates that SNS dependence, on its own,

did not strongly affect healthy lifestyles. However, the significant indirect effect through social networks indicates that the effect of SNS dependence on healthy lifestyles is channeled through the quality and extent of social networks. This finding highlights the importance of social networks in mitigating the potential negative effects of SNS dependence. Additionally, these findings indicate that fostering strong social networks can play a crucial role in promoting healthier lifestyle choices among students.

The results of this study showed that the direct negative effect of SNS dependence on healthy lifestyles was not significant. These findings are consistent with those of previous studies on the effects of SNS use on health and well-being. Previous studies have discussed various terminologies, such as SNS addiction and problematic SNS use, and have shown that excessive SNS use can result in negative outcomes, such as increased stress and reduced physical activity (Shahnawaz & Rehman, 2020). In this study, although the results similarly indicated negative effects, these effects were not statistically significant.

This study showed that SNS dependence significantly affected healthy lifestyles only through social networks, emphasizing the mediating role of social networks, which has been less explored in earlier studies. SNS dependence had a significantly negative effect on social networks among university students, which contradicts the view that increased SNS usage generally has a positive effect on social network formation. This finding is supported by Kang (2013), who showed that SNS addiction tendencies negatively affected the level of perceived social support among university students, which positively affected their interpersonal relationships.

Additionally, Davies and Cranston (2008) reported that engagement in online social networking may hinder face-to-face interactions and other activities.

This study showed a crucial finding in the relationship between the three variables. SNS dependence did not have a significant direct effect on students healthy lifestyles. Instead, social networks are key factors in this relationship. Enhanced social connectivity has been reported to positively affect healthy lifestyle adoption, as supportive behaviors developed through social interactions lead to mutual benefits and promote healthy habits, improving quality of life (Antonucci et al., 2014). Furthermore, a previous study showed that social support and community can enhance motivation for healthy behaviors and provide necessary emotional and practical resources (Cohen & Wills, 1985). The findings of this study indicate that strong social networks consistently foster healthier lifestyles, potentially counteracting the negative effects of SNS dependence.

Several studies involving university students have primarily used social support as a mediating and moderating variable (Hong & Jeon, 2017; Kim & Kim, 2013). However, only a few studies have analyzed the quantitative aspects, such as the social network size and contact frequency. This study confirms the ability to analyze the mediating effect by comprehensively considering qualitative and quantitative aspects of social relationships, which constitutes the theoretical contribution of this research. In summary, although previous studies have documented the negative effects of excessive SNS use, this study demonstrated that these negative effects on healthy lifestyles are mediated by the strength of social networks. This highlights the importance of interventions aimed at

strengthening social networks to promote healthier lifestyles among university students.

The findings of this study have several practical implications for promoting healthy lifestyles among university students. First, health professionals should design interventions to reduce SNS dependence by educating students about its negative effects on physical and mental health and incorporating strategies such as digital detox, time management, and offline social interactions (Panova & Lleras, 2016). Second, social networks play a significant role in promoting healthy lifestyles. Thus, strengthening social networks is essential. Health professionals and educators should prioritize initiatives that foster strong, supportive social networks. Individuals should engage in health-promoting behaviors through interactions that offer mutual support and benefits, which can improve their quality of life (Antonucci & Kahn, 2012). Social support and healthy behaviors can be enhanced by initiatives such as group physical activities and community-building events (Berkman & Glass, 2000). Third, comprehensive lifestyle programs, including workshops, seminars, and online courses on physical activity, healthy eating, and stress management, should be developed in collaboration with universities. The Korean Mindfulness-Based Stress Reduction program has been reported to effectively reduce depression and anxiety among students, highlighting the need for practical, emotion-regulating methods (Bae & Chang, 2006). These strategies can significantly improve students overall well-being by fostering healthy habits and enhancing social networks.

This study has some limitations. First, there is potential uncertainty regarding the validity of the online survey responses, as participant authenticity

cannot be guaranteed. Second, SNS addiction or dependence is not clearly defined. Various studies have used different terminologies, such as SNS addiction, problematic SNS use, and compulsive SNS use, to indicate excessive SNS use (Shahnawaz & Rehman, 2020). Although many SNS platforms tend to have similar features, each platform has unique functionalities (Boyd & Ellison, 2007), leading to varied perceptions and responses from the respondents. Therefore, further studies are needed to establish a precise definition of the scope of SNSs and diagnostic criteria for SNS addiction. Third, the proportion of medical and healthcare college students among the participants was high, which may limit the generalizability of the results to the nationwide population of university students. Additionally, 70.3% of the study population were males. This gender imbalance may affect the generalizability of the findings. Thus, further studies with a more balanced sample in terms of gender and academic disciplines are needed to enhance the robustness and applicability of the findings. Finally, this was a cross-sectional survey study. Therefore, a causal link between SNS dependence, social networks, and healthy lifestyles could not be inferred. Addiction-related variables and lifestyles change over time (Buizza et al., 2022; Zhao, 2023). Thus, further studies are needed to examine causal relationships through experimental or longitudinal studies.

V. Conclusion

This study examined the mediating effect of social networks on the relationship between SNS dependence and healthy lifestyles among university students. The

results showed that the direct effect of SNS dependence on healthy lifestyles was not statistically significant, whereas the total effect, including both direct and indirect effects, was significant. Furthermore, the significant indirect effect through social networks accounted for 40% of the total effect, highlighting the importance of social networks in mediating this relationship. The findings suggest that interventions should focus on reducing SNS dependence and fostering strong social networks to enhance healthy lifestyles. Health professionals should design programs that promote supportive social networks and comprehensive lifestyle initiatives to encourage students to adopt healthier behaviors.

Conflicts of interest

No potential conflict of interest relevant to this article was reported.

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References

- Ann, J. E., Woo, D. H., Sung, H. A., & Bae, S. M. (2020). The effects of SNS use motivation and self-regulation on SNS addiction tendency in college students. *Journal of Social Science*, *31*(1), 227-243. <https://doi.org/10.16881/jss.2020.01.31.1.227>
- Antonucci, T. C., Ajrouch, K. J., & Birditt, K. S. (2014). The convoy model: Explaining social relations from a multidisciplinary perspective. *The Gerontologist*, *54*(1), 82-92. <https://doi.org/10.1093/geront/gnt118>
- Antonucci, T. C., & Kahn, R. L. (2012, May). Affordable housing, health and productivity activity: A field experiment. *Presentation at the MacArthur Foundation Conference on How Housing Matters*, Chicago, IL, United States.
- Bae, J. H., & Chang, H. K. (2006). The effect of MBSR-K program on emotional response of college students. *Korean Journal of Health Psychology*, *11*(4), 673-688.
- Bae, S. M. (2023). The association between adverse childhood and adulthood experiences, social isolation, loneliness, and depression among young adults in South Korea. *International Journal of Environmental Research and Public Health*, *20*(19), 6900. <https://doi.org/10.3390/ijerph20196900>
- Beard, J. R., Officer, A., de Carvalho, I. A., Sadana, R., Pot, A. M., Michel, J. P., Lloyd-Sherlock, P., Epping-Jordan, J. E., Peeters, G. M. E. E., Mahanani, W. R., Thiyagarajan, J. A., & Chatterji, S. (2016). The world report on ageing and health: A policy framework for healthy ageing. *Lancet*, *387*(10033), 2145-2154. [https://doi.org/10.1016/S0140-6736\(15\)00516-4](https://doi.org/10.1016/S0140-6736(15)00516-4)
- Berkman, L. F., & Glass, T. (2000). Social integration, social networks, social support, and health. In L. F. Berkman & I. Kawachi (Eds.), *Social epidemiology* (pp. 137-173). Oxford University Press.
- Bowman, N. A. (2010). College diversity experiences and cognitive development: A meta-analysis. *Review of Educational Research*, *80*(1), 4-33. <https://doi.org/10.3102/0034654309352495>
- Boyd, D. M., & Ellison, N. B. (2007). Social network sites: Definition, history, and scholarship. *Journal of Computer-Mediated Communication*, *13*(1), 210-230. <https://doi.org/10.1111/j.1083-6101.2007.00393.x>
- Brailovskaia, J., & Teichert, T. (2020). 'I like it' and 'I need it': Relationship between implicit associations, flow, and addictive social media use. *Computers in Human Behavior*, *113*, 106509. <https://doi.org/10.1016/j.chb.2020.106509>
- Buizza, C., Bazzoli, L., & Ghilardi, A. (2022). Changes in college students mental health and lifestyle during the COVID-19 pandemic: A systematic review of longitudinal studies. *Adolescent Research Review*, *7*(4), 537-550.

- <https://doi.org/10.1007/s40894-022-00192-7>
- Choi, Y. J., & You, S. S. (2015). The phenomenological study about the use of Facebook for college students. *Korean Journal of Advertising*, 26(6), 185-211. <https://doi.org/10.14377/KJA.2015.8.31.185>
- Cohen, S., & Wills, T. A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin*, 98(2), 310-357. <https://doi.org/10.1037/0033-2909.98.2.310>
- Davies, T., & Cranston, P. (2008). *Youth work and social networking final research report*. National Youth Agency.
- Education Policy Network Information Center. (2015). *Case studies on the use of social media in the UK education sector*. <https://edpolicy.kedi.re.kr/frt/boardView.do?strCurMenuId=10104&nTbBoardArticleSeq=240466>
- 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. <https://doi.org/10.1111/j.1083-6101.2007.00367.x>
- Farhud, D. D. (2015). Impact of lifestyle on health. *Iranian Journal of Public Health*, 44(11), 1442-1444.
- Faul, F., Erdfelder, E., Buchner, A., & Lang, A. G. (2009). Statistical power analyses using G*Power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods*, 41(4), 1149-1160. <https://doi.org/10.3758/BRM.41.4.1149>
- Goodyear, V. A., Boardley, I., Chiou, S. Y., Fenton, S. A. M., Makopoulou, K., Stathi, A., Wallis, G. A., Veldhuijzen van Zanten, J. J. C. S., & Thompson, J. L. (2021). Social media use informing behaviours related to physical activity, diet and quality of life during COVID-19: A mixed methods study. *BMC Public Health*, 21(1), 1333. <https://doi.org/10.1186/s12889-021-11398-0>
- Hayes, A. F. (2017). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. Guilford Publications.
- Hong, K. P., & Jeon, H. S. (2017). The relationship between college students' SNS addiction tendency and their interpersonal problems: Focused on the moderating effect of social support. *Health and Social Welfare Review*, 37(1), 34-67. <https://doi.org/10.15709/hswr.2017.37.1.34>
- Hong, S. Y. (2015). *Effects of SNS use features and ego-identity on SNS addiction proneness of college students* (Master's thesis). Myongji University.
- Hong, S., Malik, M. L., & Lee, M. K. (2003). Testing configural, metric, scalar, and latent mean invariance across genders in sociotropy and autonomy using a non-western sample. *Educational and Psychological Measurement*, 63(4), 636-654. <https://doi.org/10.1177/0013164403251332>
- Hwang, W. (2010). *Cardiovascular disease in Korean blue-collar workers: Actual risk, risk perception, and risk reduction behavior* (Doctoral dissertation). University of California.
- Hyun, D. H. (2020). *A study on sugar intakes by food-related lifestyle and consumption value of university students in Jeju* (Doctoral dissertation). Jeju University.
- Jun, H. J., & Kim, M. Y. (2015). The influence of internet use on satisfaction with social relationships and depression among older adults living alone in Seoul. *Korean Journal of Social Welfare Research*, 43, 73-98.
- Kang, H. (2013). A study on the SNS addiction tendency of students and the relationship between perceived social support, loneliness, perceived health status, interpersonal relationship and the application of therapeutic recreation through physical activity. *The Korean Journal of Sports Science*, 22(1), 121-133.
- 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, H. S. (2014). The influence of interpersonal relation tendency on SNS commitment among college students: The mediating effect of social anxiety. *Journal of Human Understanding and Counseling*, 35, 11-26.
- Kim, J. H. (2009). *Analysis on lifestyle differences to the type participating in leisure sports of college students* (Master's thesis). Yong-In University.
- Kim, N. M., & Kim, S. S. (2013). Mediation effects of social support and resilience between life stress and psychological well-being among Korean college students. *Korea Journal of Counseling*, 14(2), 1125-1144.
- Korea Information Society Development Institute. (2023). *Social Network Service (SNS) usage behavior by generation*. <https://www.kisdi.re.kr/report/view.do?key=m2101113025790&masterId=4333447&arrMasterId=4333447&artId=659156>
- Lee, C. Y., & Park, Y. J. (2022). The effect of lifestyle and

- time management on self-efficacy and quality of life in college students. *Journal of the Korea Entertainment Industry Association*, 16(4), 285-295. <https://doi.org/10.21184/jkeia.2022.6.16.4.285>
- Lee, S. H. (2013). A study on the policy implication on the addiction of social media service user: Focusing on the proposal of Korean SNS addiction Index (KSAI). *Journal of Digital Convergence*, 11(1), 255-265. <https://doi.org/10.14400/JDPM.2013.11.1.255>
- Lim, J. T., Park, J. H., Lee, J. S., Oh, J., & Kim, Y. (2013). The relationship between the social network of community-living elders and their health-related quality of life in Korean province. *Journal of Preventive Medicine and Public Health*, 46(1), 28-38. <https://doi.org/10.3961/jpmph.2013.46.1.28>
- Lubben, J., & Gironde, M. (2017). Measuring social networks and assessing their benefits. In G. Allan & C. Phillipson (Eds.), *Social networks and social exclusion: Sociological and policy perspectives* (pp. 20-34). Taylor & Francis.
- National Information Society Agency. (2023). *Survey on the internet usage*. https://www.nia.or.kr/site/nia_kor/ex/bbs/View.do;jsessionid=0ACF87D48C054F9C03104FC2F7E8044E.2313f137729c06361105?cbIdx=99870&bcIdx=25521
- Panova, T., & Lleras, A. (2016). Avoidance or boredom: Negative mental health outcomes associated with use of information and communication technologies depend on users' motivations. *Computers in Human Behavior*, 58, 249-258. <https://doi.org/10.1016/j.chb.2015.12.062>
- Park, K. H., & Park, J. H. (2020). Development of an elderly lifestyle profile: A Delphi survey of multidisciplinary health-care experts. *Plos One*, 15(6), Article e0233565. <https://doi.org/10.1371/journal.pone.0233565>
- Pascarella, E. T., & Terenzini, P. T. (2005). *How college affects students: A third decade of research*. Jossey-Bass. <https://doi.org/10.14426/jsaa.v2i2.80>
- Shahnawaz, M. G., & Rehman, U. (2020). Social networking addiction scale. *Cogent Psychology*, 7(1), 1832032. <https://doi.org/10.1080/23311908.2020.1832032>
- Song, S. H., Lee, H. K., Kim, J. W., & Lee, K. (2013). Social support according to temperament and character in college students. *Journal of Korean Neuropsychiatric Association*, 52(3), 157-162. <https://doi.org/10.4306/jknpa.2013.52.3.157>
- Walker, S. N., Sechrist, K. R., & Pender, N. J. (1987). The health-promoting lifestyle profile: Development and psychometric characteristics. *Nursing Research*, 32(2), 76-81. <https://doi.org/10.1097/00006199-198703000-00002>
- Yoon, M., & Park, W. (2014). Psychosocial factors influencing the SNS (social networking service) addiction tendency among university students. *Mental Health & Social Work*, 42, 208-236.
- Yun, S., & Lim, Y. M. (2023). A pilot study of applying intervention strategies to form a healthy lifestyle in the elderly. *Korea Gerontological Society*, 43(4), 615-627. <https://doi.org/10.31888/JKGS.2023.43.4.615>
- Zhao, L. (2023). Social media addiction and its impact on college students' academic performance: The mediating role of stress. *The Asia-Pacific Education Researcher*, 32(1), 81-90. <https://doi.org/10.1007/s40299-021-00635-0>

대학생의 소셜 네트워킹 서비스 의존도가 건강한 라이프스타일에 미치는 효과: 사회적 관계망의 매개효과

안현서*, 김인혜*, 윤소현*, 박혜연**

*연세대학교 일반대학원 작업치료학과 석사과정 학생

**연세대학교 소프트웨어디지털헬스케어융합대학 작업치료학과 교수

목적 : 본 연구는 대학생의 소셜 네트워킹 서비스(Social Network Service: SNS) 의존도와 건강한 라이프스타일 간의 관계에서 사회적 관계망의 매개효과를 조사하였다.

연구방법 : 374명의 대학생을 대상으로 온라인 설문조사를 통해 자료를 수집하였다. 인구통계학적 데이터, SNS 의존도, 사회적 관계망, 건강한 라이프스타일을 평가하였다. 부트스트래핑을 사용한 매개분석을 통해 SNS 의존도와 건강한 라이프스타일 간의 관계에서 사회적 관계망의 매개효과를 조사하였다.

결과 : 대상자의 평균 연령은 21.8세(standard deviation = 2.1)였으며, 70.3%가 여성이었다. 매개분석 결과, SNS 의존도의 건강한 라이프스타일에 대한 직접 효과는 통계적으로 유의하지 않았다($\beta = -.078$, standard error [SE] = .052, $p = .128$). 그러나, 사회적 관계망을 통한 간접 효과는 통계적으로 유의한 것으로 나타났다($\beta = -.052$, SE = .020, $p = .011$). SNS 의존도가 건강한 라이프스타일에 미치는 총 효과는 유의미했다($\beta = -.130$, SE = .053, $p = .014$).

결론 : 대학생의 사회적 관계망은 건강한 라이프스타일을 촉진하는 데 중요한 역할을 한다. 건강 전문가들은 SNS 의존을 해결하고 사회적 관계망을 활용하여 더 건강한 행동을 장려하는 개입에 중점을 두어야 한다.

주제어 : 건강증진, 대학생, 라이프스타일, 사회적 관계망, 소셜 네트워킹 서비스(SNS)

Appendices

Table Appendix 1. Differences in Study Variables by Sociodemographic Characteristics of Participants

Variable	SNS dependence		Social network		Healthy lifestyle	
	<i>M</i> ± <i>SD</i>	<i>t/F</i> (<i>p</i>)	<i>M</i> ± <i>SD</i>	<i>t/F</i> (<i>p</i>)	<i>M</i> ± <i>SD</i>	<i>t/F</i> (<i>p</i>)
Gender						
Male	21.77 ± 7.68	-4.92***	33.16 ± 9.19	-2.04*	136.20 ± 22.35	2.04*
Female	26.21 ± 8.08	(< 0.001)	35.23 ± 8.85	(0.04)	130.90 ± 23.25	(0.04)
Grade						
1st	25.31 ± 8.52		25.31 ± 8.52		132.92 ± 23.94	
2nd	25.47 ± 8.17		25.47 ± 8.17		131.05 ± 26.33	
3rd	24.05 ± 8.29	0.39 (0.81)	24.05 ± 8.29	.39 (0.81)	134.32 ± 20.75	0.28 (0.89)
4th	24.93 ± 8.18		24.93 ± 8.18		131.45 ± 22.47	
Academic leave	24.89 ± 7.29		24.89 ± 7.28		132.32 ± 22.55	
Major						
Humanity and Arts	24.07 ± 8.75		33.87 ± 9.61		130.55 ± 22.61	
Science and Engineering	25.47 ± 8.27	0.49 (0.61)	33.66 ± 9.80	1.01 (0.36)	131.58 ± 19.34	0.38 (0.68)
Medical and Health care	24.91 ± 8.07		35.11 ± 8.56		133.20 ± 24.28	
Diseases						
Obesity ^a	26.76 ± 8.16		33.77 ± 8.09		127.49 ± 23.73	
Eye problem ^b	23.74 ± 7.35		36.00 ± 10.29		127.84 ± 19.05	3.04*
Depression ^c	23.61 ± 9.37	1.77 (0.14)	35.68 ± 8.31	0.89 (0.47)	130.58 ± 23.07	(0.02)
Anxiety ^d	24.95 ± 8.71		32.45 ± 7.72		130.90 ± 20.13	a < e
None of theme	24.58 ± 7.80		34.68 ± 9.55		136.77 ± 23.18	

M = Mean; *SD* = Standard Deviation.

^a Obesity; ^b Eye problem; ^c Depression; ^d Anxiety; ^e None of them.

p* < .05, *p* < .01, and ****p* < .001.

Table Appendix 2. Descriptive Statistics of Study Variables

Variables	<i>M</i>	<i>SD</i>	Skewness	Kurtosis
SNS dependence	24.89	8.21	0.10	-0.65
I spend significant time planning to use or using SNS.	3.43	1.14	-0.58	-0.38
I dedicate more than 30 minutes daily solely to using SNS.	3.72	1.28	-0.79	-0.45
I have neglected work, studies, or household responsibilities because of SNS.	2.56	1.26	0.21	-1.21
Even during important tasks, I often think about SNS update.	2.01	1.16	0.95	-0.19
I feel anxious, restless, or irritable when I cannot access SNS.	1.79	0.98	1.22	0.94
I constantly feel the urge to check reactions to my posts or profile on SNS.	2.63	1.32	0.17	-1.23
I have been overly excited by posts or comments from others on SNS.	1.77	1.06	1.22	0.38
I use SNS as a distraction from my personal problems.	2.36	1.35	0.45	-1.22
I have attempted to quit using SNS but failed.	2.14	1.29	0.75	-0.76
I struggle to control the amount of time I spend on SNS.	2.48	1.35	0.40	-1.16
Social network	34.61	8.99	-0.10	0.10
Family network	15.70	6.32	-0.57	-0.08
Friend network	18.92	5.28	-0.53	0.74
Healthy lifestyle	2.55	0.44	0.26	0.05
Health responsibility	2.27	0.63	0.17	-0.45
Physical activity	2.38	0.68	0.19	-0.51
Nutrition	2.43	0.53	-0.05	-0.18
Spiritual growth	2.72	0.63	-0.19	-0.45
Interpersonal relationship	2.90	0.51	-0.37	-0.05
Stress management	2.58	0.54	0.16	-0.05

M = Mean; *SD* = Standard Deviation.