Social Anxiety and Social Networking Service Addiction Proneness in University Students: The Mediating Effects of Experiential Avoidance and Interpersonal Problems

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Objective This study examined the mediating effects of experiential avoidance and interpersonal problems on the relationship between social anxiety and social networking service (SNS) addiction proneness.

Methods An online survey was conducted on 400 university students in their 20s across Republic of Korea. The scales used in the study were the Social Interaction Anxiety Scale (SIAS), Korean Acceptance-Action Questionnaire-II (K-AAQ-II), Short form of the Korean Inventory of Interpersonal Problems Circumplex Scale (KIIP-SC), and SNS addiction proneness scale for university students. For data analysis, structural equation modeling was conducted, and phantom variables were used to verify the significance of individual indirect effects of the multiple mediation model.

Results Social anxiety had no direct effect on SNS addiction proneness. Experiential avoidance and interpersonal problems completely mediate the relationship between social anxiety and SNS addiction proneness sequentially.

Conclusion Our result suggests that experiential avoidance leads to interpersonal problems and SNS addiction proneness. In other words, it is important to alleviate experiential avoidance in treating or preventing interpersonal problems and SNS addiction proneness among university students with social anxiety.

Keywords Social anxiety; Social networking; Mediating; Universities.

INTRODUCTION

Social networking service (SNS) refers to an online service established for the purpose of sharing specific interests or activities by forming social relationships based on a wide human network online.¹ The use of SNS is rapidly increasing among all generations, and the use rate of university students (95.9%) is the highest.² The university student period emphasizes social relationships and has the developmental task of forming close interpersonal relationships.³ The active use of SNS by university students can be understood as a natural phenomenon in that the use of SNS can help form close interpersonal relationships.⁴ Although the use of SNS provides convenience to people, there are also dysfunctional aspects. As the use of SNS gradually rises, the problem of SNS addiction also increases.⁵ Currently, at a time when the concept of SNS addiction has not been clearly established,⁶ Jung and Kim⁷ proposed the term ‘SNS addiction proneness’ to indicate that excessive preoccupation with online interpersonal relationships causes tolerance and withdrawal, and interferes with daily life.

In previous studies, SNS addiction proneness was explained by focusing on psychological factors such as social anxiety, depression, and loneliness.⁶,⁹ However, it is not clear how psychological factors lead to SNS addiction proneness. Shaffer et al.¹⁰ explained the process of initiation and change in addiction with the addiction syndrome model. The theory explains the addiction process from a comprehensive perspective by elucidating the interaction between distal antecedent factors (e.g., psychosocial factors, underlying vulnerability factors) and proximal antecedent factors (e.g., negative events) that affect the development of addiction.¹⁰
According to the addiction syndrome model, psychosocial factors are essential for explaining addiction behavior. Psychosocial factors include psychopathology, such as anxiety. In this study, social anxiety was noted as a psychosocial factor that refers to a marked and persistent fear of being exposed, observed, and evaluated by strangers in social situations, and fear of showing shameful and embarrassing behavior that may result in a negative evaluation in these situations. University students are more likely to experience social anxiety than other age groups, and university students with social anxiety avoid interpersonal contact due to fear of negative evaluation despite the desire for social interaction. In SNS, threatening stimuli that cause anxiety, such as visual and verbal reactions of others, are very limited. Therefore, people with social anxiety can show themselves more easily on SNS. In actual face-to-face interaction situations, people with social anxiety predict that they will be negatively evaluated and rejected by others, so they can immerse themselves in social media to avoid these situations. Previous studies have shown that social anxiety has a positive effect on SNS addiction proneness.

In the addiction syndrome model, it is assumed that the underlying vulnerability factors for substance and behavioral addiction are the same. In this study, experiential avoidance was selected as the underlying vulnerability factor that induces SNS addiction proneness. Experiential avoidance refers to the process of excessive negative evaluation of unwanted physical sensations, emotions, thoughts, and memories that cause psychological distress and try to control or avoid them. Previous studies have reported that experiential avoidance plays a key role in generating and maintaining addiction as a psychological vulnerability factor. Hormes et al. reported that people with high experiential avoidance use SNS to disperse and alleviate negative thoughts or emotions such as anxiety, sadness, or loneliness. Previous studies have found that experiential avoidance is positively related to SNS addiction proneness.

Experiential avoidance attitude is one of the core clinical characteristics of the diagnostic criteria for social anxiety disorder. People with social anxiety negatively evaluate situations in which they interact with others and try to avoid these social situations or reduce anxiety through attention diversion. This means that higher social anxiety can lead to experiential avoidance. In fact, in previous studies, social anxiety positively predicted experiential avoidance.

In the addiction syndrome model, proximal antecedent factors related to distal antecedent factors of addiction influence the development of addiction. In this study, interpersonal problems were selected as the proximal antecedent factors. Interpersonal problems mean experiencing difficulties in forming and maintaining positive interpersonal relationships. Interpersonal problems, which are negative events, are closely related to social anxiety, which is a distal antecedent factor of addiction. People with social anxiety have a fear of negative evaluations and are more likely to have difficulties interacting with others. Wenzel stated that people with social anxiety have low emotional and social intimacy with others and experience interpersonal problems. Previous studies have also shown that social anxiety positively predicts interpersonal problems. As such, people who experience interpersonal problems do not get satisfaction from interpersonal relationships, so they can explore and immerse themselves in behaviors that can satisfy their interpersonal needs.

According to the social compensation hypothesis that explains the SNS addiction proneness, individuals who have difficulties in forming interpersonal relationships or experience a lot of interpersonal problems become more engrossed in compensatory SNS activities. SNS fulfills the basic human desire for belonging and connectivity by activating interpersonal interactions that appear online. Therefore, people who experience interpersonal problems may view SNS as a functional alternative for interpersonal relationship formation and can use it excessively. In fact, in previous studies, interpersonal problems were positively associated with SNS addiction proneness.

The addiction syndrome model explains that the interaction of distal antecedent factors and proximal antecedent factors can influence the development of addiction. Based on this model, social anxiety, which is a psychosocial factor, can influence SNS addiction proneness through experiential avoidance, which is an underlying vulnerability factor, and interpersonal problems, which are proximal antecedent factors. Unlike the simple mediation model, the multiple mediation model can simultaneously identify multiple mechanisms ranging from independent variables to dependent variables, which can provide a deeper insight into how social anxiety influences SNS addiction proneness.

In addition, in previous studies, experiential avoidance was found to be an important risk factor for interpersonal problems. People with experiential avoidance do not have the opportunity to establish and maintain interpersonal relationships or experience meaningful relationships, so it is difficult to experience close interpersonal relationships. In other words, avoiding interpersonal situations through experiential avoidance can temporarily reduce anxiety and tension, but such avoidant attitudes can lead to disconnection or conflict in interpersonal relationships, leading to maladaptive interpersonal relationships. Based on these previous studies, it can be predicted that the relationship between social anxiety and SNS addiction proneness can be sequentially mediat-
ed by experiential avoidance and interpersonal problems. 
Existing studies have mainly focused on the direct relationship between social anxiety and SNS addiction proneness, and therefore have limitations in explaining the specific mechanism by which SNS addiction proneness occurs. Therefore, in this study, we try to explain the detailed mechanism by which social anxiety influences SNS addiction proneness. The hypotheses of this study are as follows (Figure 1).

Hypothesis 1. Social anxiety is positively related to SNS addiction proneness.
Hypothesis 2. Experiential avoidance mediates the relationship between social anxiety and SNS addiction proneness.
Hypothesis 3. Interpersonal problems mediate the relationship between social anxiety and SNS addiction proneness.
Hypothesis 4. Experiential avoidance and interpersonal relationship problems sequentially mediate the relationship between social anxiety and SNS addiction proneness.

**METHODS**

**Participants**
With the approval of the Institutional Review Board of Dankook University, an online self-report questionnaire (Google questionnaire form) was administered to university students in their 20s in Seoul, Gyeonggi-do, Chungcheong-do, and other regions. A total of 400 people agreed to participate in the study, and a prescribed mobile gift card was provided. Of these, 377 questionnaires were used for the final analysis, excluding 23 who did not use SNS or gave insincere responses. Among 377 patients, 169 (44.8%) were male and 208 (55.2%) were female.

In the distribution by age, 211 (56%) were aged 19 to 22, 142 (37.6%) were aged 23 to 26, and 24 (6.4%) were aged 27 to 29, with an average age of 22.42 (standard deviation=2.35). The distribution by grade was 66 freshmen (17.5%), 107 sophomores (28.4%), 90 juniors (23.9%), and 114 seniors (30.2%). Demographic characteristics of the participants are presented in Table 1.

![Figure 1. Research model. SNS, social networking service.](image)

| Table 1. Demographic characteristic of the participants (N=377) |
| Variables | Values |
|-----------|--------|
| Sex       |        |
| Male      | 169 (44.8) |
| Female    | 208 (55.2) |
| Grade     |        |
| Freshman  | 66 (17.5) |
| Sophomore | 107 (28.4) |
| Junior    | 90 (23.9) |
| Senior    | 114 (30.2) |
| Age (yr)  |        |
| 19–22     | 211 (56) |
| 23–26     | 142 (37.6) |
| 27–29     | 24 (6.4) |
| SNS usage period | |
| <1 mon    | 4 (1.1) |
| <6 mon    | 20 (5.3) |
| 6 mon ≥, <1 yr | 39 (10.3) |
| 1 yr ≥, <2 yr | 27 (7.2) |
| 2 yr ≥    | 287 (76.1) |
| Daily SNS usage hours | |
| <1 hr     | 79 (21) |
| 1 hr ≥, <2 hr | 125 (33.1) |
| 2 hr ≥, <3 hr | 85 (22.6) |
| 3 hr ≥, <4 hr | 55 (14.5) |
| 4 hr ≥    | 33 (8.8) |
| SNS usage frequency | |
| 1–2 times a week | 41 (10.9) |
| 3–4 times a week | 9 (2.4) |
| 1–2 times a day | 31 (8.2) |
| 3–4 times a day | 91 (24.1) |
| 5 or more times a day | 205 (54.4) |

Values are presented as N (%). * duplicate responses were allowed.
SNS, social networking service

**Measurements**

**Social anxiety**
Social anxiety was measured using the Social Interaction Anxiety Scale (SIAS) developed by Mattick and Clarke and translated into Korean and validated by Kim. This scale consists of 19 items (e.g., “I am worried about expressing myself...”).

![Figure 1. Research model. SNS, social networking service.](image)
because I might look weird; “I’m often worried because I don’t know what to say in social situations”), and each item is rated on a 5-point Likert scale ranging from ‘strongly disagree’ (1 point) to ‘strongly agree’ (5 points). The higher the score, the higher the level of anxiety experienced in social interactions. In the study of Kim, Cronbach’s α was 0.92, and in this study, Cronbach’s α was 0.93.

**Experiential avoidance**

Experiential avoidance was measured using the Korean Acceptance-Action Questionnaire-II (K-AAQ-II), originally developed by Bond et al. and translated into Korean and validated by Heo et al. This scale consists of 8 items (e.g., “I’m afraid to feel my emotions,” “Emotions cause problems in my daily life”), and each item is rated on a 7-point Likert scale ranging from ‘strongly disagree’ (1 point) to ‘strongly agree’ (7 points). A higher score indicates a higher level of experiential avoidance. In the study of Heo et al., Cronbach’s α was 0.85, and in this study, Cronbach’s α was 0.90.

**Interpersonal problems**

Interpersonal problems were measured using the Short form of the Korean Inventory of Interpersonal Problems Circumplex Scale (KIIP-SC), which was developed by Horowitz et al. and reconstructed by Alden et al. and standardized by Hong et al. This scale consists of eight sub-factors: exploitable (e.g., “It’s hard to make my argument because I’m afraid of hurting other people’s feelings”), nonassertive (e.g., “It’s hard to make my argument”), domineering (e.g., “Ofentimes, there are conflicts with others due to arbitrary judgment and decision-making”), vindictive (e.g., “Difficulty supporting the argument of others”), intrusive (e.g., “Watching what others are doing makes me want to meddle”), cold (e.g., “Difficulty feeling close to others”), and socially avoidant (e.g., “Difficulty getting along with people”). This scale consists of 40 items, and each item is rated on a 5-point Likert scale ranging from ‘strongly disagree’ (1 point) to ‘strongly agree’ (5 points). Higher scores indicated more difficulties in interpersonal relationships. In this study, Horney’s theory was applied, and interpersonal problems were divided into three areas. The first area, “moving toward people,” includes nonassertive, exploitable, and overly nurturant. The second area, “Moving against people,” includes domineering, vindictive, and intrusive. Finally, the third area, “Moving away from people,” includes cold and socially avoidant. In the study of Hong et al., Cronbach’s α was 0.89, and in this study, Cronbach’s α was 0.96.

**SNS addiction proneness**

SNS addiction proneness was measured using the SNS addiction proneness scale for university students developed and validated by Jung and Kim. The SNS addiction proneness scale for university students consists of four sub-factors: control failure and disturbance of adaptive life (e.g., “I have regretted not being able to reduce my SNS usage time”), preoccupation and tolerance (e.g., “I feel more and more urges to use SNS”), avoidance of negative emotions (e.g., “I use SNS to make me feel good”), and virtual life orientation and withdrawal (e.g., “When I can’t use SNS, I get annoyed”). This scale consists of 24 items, and each item is rated on a 5-point Likert scale ranging from ‘strongly disagree’ (1 point) to ‘strongly agree’ (5 points). The higher the score, the higher the SNS addiction proneness. In the study of Jung and Kim, Cronbach’s α was 0.92, and in this study, Cronbach’s α was 0.95.

**Data analysis**

In this study, the Korean version of IBM SPSS Statistics version 25.0 (IBM Corp., Armonk, NY, USA), and AMOS 22.0 (IBM Corp., Armonk, NY, USA), were used for data analysis. First, a Pearson correlation analysis was conducted to verify the correlation between social anxiety, experiential avoidance, interpersonal problems, and SNS addiction proneness. Skewness and kurtosis were checked to verify whether the multivariate normality assumption was satisfied. Second, according to the two-step analysis method of Anderson and Gerbing, the measurement model was verified in the first step, and the structural model was verified in the second step. Specifically, we verified whether the measurement model was suitable through confirmatory factor analysis. Next, to evaluate the fit of the model, χ² (CMIN) and Root Mean Square Error of Approximation (RMSEA), which are absolute fit indices, and the comparative fit index (CFI) and Tucker-Lewis index (TLI), which are incremental fit indices, were used. Although the χ² value is a representative fit index, it is sensitive to the sample size; thus, by examining TLI and RMSEA considering the simplicity of the model and CFI, which is least affected by the sample size, we evaluated the model fit. In general, RMSEA is evaluated as excellent if it is less than 0.05, good if it is 0.08 or less, and average if it is 0.10. In the case of CFI and TLI, a value of 0.9 or more is considered a good level, and a value of 0.95 is evaluated as excellent. Finally, to verify the significance of individual indirect effects of the multiple mediation model, phantom variables were created, and bootstrapping was performed.

**RESULTS**

**Correlation analysis**

Table 2 presents the descriptive statistics and correlations of study variables. For all variables, the absolute value of skew-
ness did not exceed 2, and the absolute value of kurtosis did not exceed 7, so the multivariate normality assumption was satisfied. Therefore, it is possible to verify the structural equation model. Correlation analysis showed that social anxiety was positively correlated with experiential avoidance ($r=0.764$, $p<0.01$), interpersonal problems ($r=0.813$, $p<0.01$), and SNS addiction proneness ($r=0.771$, $p<0.01$). Experiential avoidance was positively correlated with interpersonal problems ($r=0.797$, $p<0.01$) and SNS addiction proneness ($r=0.808$, $p<0.01$). Lastly, interpersonal problems were positively correlated with SNS addiction proneness ($r=0.794$, $p<0.01$).

**Examination of the measurement model**

The fit index of the measurement model was $\chi^2=102.277$, degrees of freedom (df)=$57$, CFI=0.991, TLI=0.988, RMSEA=0.046 (90% CI=0.031–0.060). The value of $\chi^2$ was rejected ($p<0.05$), but CFI, TLI, and RMSEA all showed excellent levels, indicating that the model fit for the model was acceptable. The factor loadings of the measured variables for each latent variable were statistically significant ($p<0.001$) as follows: social anxiety was 0.90–0.91, experiential avoidance 0.84–0.91, interpersonal problems 0.79–0.91, and SNS addiction proneness 0.86–0.92. Therefore, it is judged that the measurement variables measure the relevant latent variables well.

**Examination of the structural model**

The value of $\chi^2$ was rejected ($p<0.05$), but CFI, TLI, and RMSEA all showed excellent levels, indicating that the model fit for the model was acceptable (Table 3). Regarding the pathways between variables, social anxiety was positively related to experiential avoidance ($\beta=0.83$, $p<0.001$) and interpersonal problems ($\beta=0.61$, $p<0.001$), but was not significantly related to SNS addiction proneness. Experiential avoidance was positively related to interpersonal problems ($\beta=0.38$, $p<0.001$) and SNS addiction proneness ($\beta=0.48$, $p<0.001$). Finally, interpersonal problems were positively related to SNS addiction proneness ($\beta=0.35$, $p<0.05$) (Figure 2).

**Testing for mediating effect verification**

In this study, a bootstrapping technique using a virtual phantom variable was used to test the individual and sequential mediating effects of experiential avoidance and interpersonal problems. For bootstrapping, 5,000 samples were resampled, and the mediating effects were verified at a 95% confidence interval. Table 4 showed that the indirect effect ($\beta=0.464$, $p<0.01$) of social anxiety on SNS addiction proneness through experiential avoidance was found to be statistically significant, with a 95% confidence interval of 0.269–0.686. Next, the indirect effect ($\beta=0.248$, $p<0.05$) of social anxiety on SNS addiction proneness through interpersonal problems was found to be

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**Table 2. Descriptive statistics and correlations of latent variables (N=377)**

| Social anxiety | Experiential avoidance | Interpersonal problems | SNS addiction proneness |
|----------------|------------------------|------------------------|-------------------------|
| 2.74           | 3.60                   | 2.56                   | 2.72                    |
| Standard deviation | 0.78                 | 1.29                   | 0.78                    |
| Skewness       | -0.058                 | -0.062                 | -0.086                  |
| Kurtosis       | -0.503                 | -0.980                 | -0.740                  |

*p<0.01. SNS, social networking service

**Table 3. Fit index of hypothetical model**

| Hypothetical model | $\chi^2$ | df | CFI  | TLI  | RMSEA (90% CI) |
|--------------------|----------|----|------|------|----------------|
| Hypothetical model | 94.388   | 56 | 0.992| 0.989| 0.043 (0.027–0.057) |

df, degrees of freedom; CFI, comparative fit index; TLI, Tucker-Lewis index; RMSEA, Root Mean Square Error of Approximation; CI, confidence interval

**Table 4. Specific mediating effects on SNS addiction proneness**

| Path                  | $\beta$  | SE  | 95% CI          |
|-----------------------|----------|-----|-----------------|
| SA $\rightarrow$ EA $\rightarrow$ SAP | 0.464*   | 0.105 | 0.269–0.686   |
| SA $\rightarrow$ IP $\rightarrow$ SAP | 0.248*   | 0.129 | 0.028–0.524   |
| SA $\rightarrow$ EA $\rightarrow$ IP $\rightarrow$ SAP | 0.127*   | 0.064 | 0.015–0.267   |

*p<0.05; †p<0.01. SNS, social networking service; SE, standard error; Cl, confidence interval; SA, social anxiety; EA, experiential avoidance; SAP, SNS addiction proneness; IP, interpersonal problems
DISCUSSION

The purpose of this study was to verify whether experiential avoidance and interpersonal problems sequentially exert a mediating effect on the relationship between social anxiety and SNS addiction proneness. The main results of this study are as follows: First, it was found that social anxiety had no direct effect on SNS addiction proneness. This is in contrast to studies that show that social anxiety is directly related to SNS addiction proneness. However, this result is consistent with studies reporting that social anxiety does not have a significant effect on SNS addiction proneness. These results suggest that it is necessary to pay attention to the role of mediating variables acting between two variables rather than social anxiety itself in inducing SNS addiction proneness.

Second, it was found that experiential avoidance fully mediated the relationship between social anxiety and SNS addiction proneness. These results are consistent with previous studies that social anxiety has a positive impact on experiential avoidance, and previous studies have shown that experiential avoidance has a positive influence on SNS addiction proneness. People with social anxiety negatively evaluate situations in which they interact with others and try to avoid these social situations or reduce anxiety through attention diversion. In other words, the greater the anxiety or fear of social interaction, the greater the desire to avoid the experience related to it, and this means that such avoidance behavior can induce SNS addiction proneness.

Third, it was found that interpersonal problems fully mediate the relationship between social anxiety and SNS addiction proneness. This supports the findings of a previous study that interpersonal problems mediate the relationship between social anxiety and SNS addiction proneness. People with social anxiety are more likely to experience interpersonal problems and people who experience interpersonal problems search for and immerse themselves in alternative behaviors that can satisfy their interpersonal needs. According to the social compensation hypothesis, individuals who have difficulties in interpersonal relationships become more engaged in SNS activities to receive compensation.

Finally, it was found that experiential avoidance and interpersonal problems completely mediate the relationship between social anxiety and SNS addiction proneness sequentially. Individuals with social anxiety have a negative interpretation bias, which negatively interprets social situations. As a result, most social situations are perceived as threatening, and they try to reduce their anxiety through avoidance responses. However, repeated experiential avoidance leads to maladaptive interpersonal relationships and eventually leads to interpersonal problems. People who suffer from these interpersonal problems do not get satisfaction from interpersonal relationships, so they can focus on using SNS as an alternative action that can satisfy their interpersonal needs.
is necessary to develop a model that comprehensively considers neurobiological and psychosocial factors in relation to SNS addiction proneness. Third, since this study used a cross-sectional design, there is a limit to the assumption of causal relationships between variables. Therefore, in future studies, it will be necessary to revalidate the model of this study through a longitudinal design.

Availability of Data and Material
The datasets generated or analyzed during the study are available from the corresponding author on reasonable request.

Conflicts of Interest
The authors have no potential conflicts of interest to disclose.

Author Contributions
Conceptualization: Sung-Su Kim, Sung-Man Bae. Data curation: Sung-Su Kim, Sung-Man Bae. Formal analysis: Sung-Su Kim. Investigation: Sung-Man Bae. Validation: Sung-Man Bae. Supervision: Sung-Man Bae. Writing—Original Draft: Sung-Su Kim. Writing—Review & Editing: Sung-Man Bae.

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REFERENCES
1. National Information Society Agency. Internet usage survey of Korea 2019; 2020. Available at: https://www.nia.or.kr/site/nia_kor/ex/lbsbs/View.do?cbId=99870&cbId=21930&parentSeq=21930. Accessed October 14, 2020.
2. National Information Society Agency. The survey on smartphone over-dependence 2019; 2020. Available at: https://www.nia.or.kr/site/nia_kor/ex/lbsbs/View.do?cbId=65914&cbId=21930&parentSeq=21930. Accessed October 14, 2020.
3. Erikson EH. Childhood and society. New York: W.W. Norton & Company; 1963.
4. Shin KY, Yang SJ. A study on relationship between adult attachment anxiety and SNS addiction proneness of college students: the mediating effects of emotional dysregulation and interpersonal problems. Korean J Hum Behav 2019;26:149-171.
5. Andreassen CS, Torsheim T, Brunborg GS, Pallesen S. Development of a Facebook addiction scale. Psychol Rep 2012;110:501-517.
6. Kuss DJ, Griffiths MD. Online social networking and addiction—a review of the psychological literature. Int J Environ Res Public Health 2011; 8:3528-3552.
7. Jung SY, Kim JN. Development and validation of SNS addiction proneness scale for college students. Korean J Psychol Health 2014;19:147-166.
8. Ryu HS, Lee YH. The relationship between social anxiety, motives for Facebook use and psychological problems related to Facebook use. J Hum Underst Couns 2016;37:87-100.
9. Yoon MS, Park WK. Psycho-social factors influencing to the SNS (social networking service) addiction tendency among university students. Ment Health Soc Work 2014;42:208-236.
10. Shaffer HJ, LaPlante DA, LaBrie RA, Kidman RC, Donato AN, Stanton MV. Toward a syndrome model of addiction: multiple expressions, common etiology. Harv Rev Psychiatry 2004;12:367-374.
11. American Psychiatric Association. Diagnostic and statistical manual of mental disorders: DSM-5. Kwon JH, Kim JJ, Namkoong K, Park WM, Shin MS, Yu BE et al., trans. Seoul: Hakjisa; 2015.
12. Park FY, Yang NM. The relation between socially prescribed perfectionism and social anxiety of college students: the mediator effects of social support and fear of negative evaluation. Korean J Counsel Psychotherapy 2014;26:363-386.
13. Kashdan TB, Elhai JD, Breen WE. Social anxiety and disinhibition: an analysis of curiosity and social rank appraisals, approach-avoidance conflicts, and disruptive risk-taking behavior. J Anxiety Disord 2008; 22:925-939.
14. Kim HS. The influence of interpersonal relation tendency on SNS commitment among college students: the mediating effect of social anxiety. J Hum Underst Couns 2014;35:11-26.
15. Ando R, Sakamoto A. The effect of cyber-friends on loneliness and social anxiety: differences between high and low self-evaluated physical attractiveness groups. Comput Hum Behav 2008;24:993-1009.
16. Koo HJ, Yang EJ, Kwon JH. The relationships between social anxiety and social capital: double-mediating effects of online-offline self-discrepancy and communication competence. Korean J Sch Psychol 2014:11:377-402.
17. Di Blasi M, Cavan P, Pavia L, Lo Baido R, La Grutta S, Schimm menti A. The relationship between self-Image and social anxiety in adolescence. Child Adolesc Ment Health 2015;50:74-80.
18. Hwang HE, Kim HS. Influences of self-esteem, social anxiety and interpersonal relation orientation on the tendency of social network service addiction of middle school students. Korean J Youth Stud 2015;22:233-253.
19. Jeong M. Relationship between covert narcissism and SNS addiction proneness in college students: mediation model of cognitive distortion and social anxiety. J Soc Sci 2019;30:101-115.
20. Lee-Won RJ, Herzog L, Park SG. Hooked on Facebook: the role of social anxiety and need for social assurance in problematic use of Facebook. Cyberpsychol Behav Soc Netw 2015;18:567-574.
21. Hayes SC, Luoma JB, Bond FW, Masuda A, Lillis J. Acceptance and commitment therapy: model, processes and outcomes. Behav Res Ther 2006;44:1-25.
22. Forsyth JP, Parker JD, Finlay CG. Anxiety sensitivity, controllability, and experiential avoidance and their relation to drug of choice and addiction severity in a residential sample of substance-abusing veterans. Addict Behav 2003;28:851-870.
23. Garcia-Oliva C, Piqueras JA. Experiential avoidance and technological addictions in adolescents. J Behav Addict 2016;5:293-303.
24. Kashdan TB, Barrios V, Forsyth JP, Steger MF. Experiential avoidance as a generalized psychological vulnerability: comparisons with coping and emotion regulation strategies. Behav Res Ther 2006;44:1301-1320.
25. Kim YJ, Shin HC, Won SD, Han CW. The relationship between post-traumatic stress and alcohol dependence: the mediating effect of experiential avoidance. Korean J Couns 2013;14:1647-1662.
26. Hormes JM, Kearsn B, Timko CA. Craving Facebook? Behavioral addiction to online social networking and its association with emotion regulation deficits. Addiction 2014;109:2079-2088.
27. Go A, Lee K. The Mediating effects of experiential avoidance in the relationship between adult attachment and social media addiction. J Educ Inf Media 2018;24:593-619.
28. Kim SM, Suh KH. Relationships between covert narcissism and SNS addiction proneness: focus on the mediating effects of experiential avoidance. Korean J Psychol Health 2015;20:587-603.
29. Seong Y, Hyun MH. The mediating effect of experiential avoidance on the relationship between undergraduate student's motives for using SNS and SNS addiction tendency: focused on Facebook. Korean J Stress Res 2016;24:257-263.
30. Park EH, Yoon HY, Kwon JH. Assessment of behavioral characteristics and impressions of social phobics in social interaction. Korean J Cogn Behav Ther 2011;11:53-73.
31. Son YJ, Hyun MH. The effects of uncertainty on avoidance bias in socially anxious individuals. Korean J Clin Psychol 2020;39:287-295.
32. Noh SH, Cho HJ. The effect of social anxiety on depression: the mediating effect of distress tolerance and avoidance coping. Korean J Counsel Psychotherapy 2017;29:429-449.
33. Asher M, Hofmann SG, Aderka IM. I'm not feeling it: momentary experiential avoidance and social anxiety among individuals with social anxiety disorder. Behav Ther 2021;52:183-194.
34. Buckner JD, Zvolensky MJ, Farris SG, Hogan J. Social anxiety and coping motives for cannabis use: the impact of experiential avoidance. Psychol Addict Behav 2014;28:568-574.
35. Kang SY, Han YJ. The relationship between perfectionistic self-presentation and SNS addiction proneness of university students: the moderating effect of experiential avoidance through social anxiety. Korean J Hum Ecol 2020;29:879-887.
36. Choi HJ, Sim HS. The influences of internalized shame and anger expression on interpersonal problems of college students. Korean J Counsel Psychotherapy 2010;22:479-492.
37. Schry AR, Roberson-Nay R, White SW. Measuring social anxiety in college students: a comprehensive evaluation of the psychometric properties of the SPAI-23. Psychol Assess 2012;24:846-854.
38. Wenzel A. Characteristics of close relationships in individuals with social phobia: a preliminary comparison with nonanxious individuals. In: Harvey JH, Wenzel A, editors. A clinician's guide to maintaining and enhancing close relationships. Mahwah: Lawrence Erlbaum Associates, 2002, p.199-213.
39. Kwahk CH, Hong HY. The influence of public self-consciousness on SNS addiction of university students: the mediating effects of social anxiety and interpersonal problem. Korean J Youth Stud 2018;25:33-62.
40. Tonge NA, Lim MH, Piccirillo ML, Fernandez KC, Langer JK, Rodebaugh TL. Interpersonal problems in social anxiety disorder across different relational contexts. J Anxiety Disord 2020;75:102275.
41. Kwon JY, Kim JN. The influence of perceived parental dependency-oriented psychological control on middle school students' SNS addiction proneness: the mediating effects of basic psychological need and fear of missing out. Korean J Youth Stud 2020;27:31-59.
42. Valkenburg PM, Schouten AP, Peter J. Adolescents’ identity experiments on the internet. New Media Soc 2005;7:383-402.
43. Hong KP, Jeon HS. The relationship between college students' SNS addiction tendency and their interpersonal problems: focused on the moderating effect of social support. Health Soc Well Rev 2017;37:34-67.
44. Lee YE, Park HJ, Heo CG. The mediating roles of interpersonal problems between narcissism and SNS addiction tendency. Korean J Soc Personal Psychol 2016;30:63-80.
45. Park SK, Chang HH. The mediating effects of depression and interpersonal problems on the relationship between self-esteem and SNS addiction tendency of college students. Forum For Youth Culture 2019;58:87-113.
46. Hayes AE. Introduction to mediation, moderation, and conditional process analysis: a regression-based approach. New York: Guilford Press; 2013.
47. Ahn JY, Kim JN. The relations between adolescence social isolation experience and early adulthood interpersonal problem: the mediating effect of ambivalence over emotional expressiveness and experiential avoidance. Korean J Youth Stud 2017;24:89-119.
48. Kim JS, Lee SY. The effect of covert narcissism on depression in college students: the mediating effect of experiential avoidance and problems in the interpersonal relationship. Korean J Youth Couns 2018;26:365-383.
49. Kwon BS, Kim WI. The mediating effects of experiential avoidance in the relationship between irrational beliefs and interpersonal relationship ability of high school students. Korean J Youth Stud 2017;24:209-228.
50. Mattick RP, Clarke JC. Development and validation of measures of social phobia scrutiny fear and social interaction anxiety. Behav Res Ther 1988;36:455-470.
51. Kim HS. Memory bias in subtypes of social phobia [dissertation]. Seoul: Seoul National University; 2001.
52. Bond FW, Hayes SC, Baer RA, Carpenter KM, Guenole N, Orcutt HK, et al. Preliminary psychometric properties of the acceptance and action questionnaire-II: a revised measure of psychological inflexibility and experiential avoidance. Behav Ther 2011;42:676-688.
53. Heo JH, Choi MS, Jin HJ. Study on the reliability and validity of Korean translated acceptance-action questionnaire-II. Korean J Couns Psychother 2009;21:861-878.
54. Horowitz LM, Rosenberg SE, Baer RA, Ureño G, Villaseñor VS. Inventory of interpersonal problems: psychometric properties and clinical applications. J Consult Clin Psychol 1988;56:885-892.
55. Alden LE, Wiggins JS, Pincus AL. Construction of circumplex scales for the inventory of interpersonal problems. J Pers Assess 1990;55:521-536.
56. Hong SH, Park EY, Kim YH, Kwon JH, Cho YR, Kim YK. Short form of the Korean inventory of interpersonal problems circumplex scales (KIIP-SC). Korean J Clin Psychol 2002;21:923-940.
57. Horney K. Our inner conflicts: a constructive theory of neurosis. Lee HK, Yoon I, Lee HR, Jo HI, trans. Seoul: Hakjisa; 2006.
58. Anderson JC, Gerbing DW. Structural equation modeling in practice: a review and recommended two-step approach. Psychol Bull 1988;103:411-423.
59. Hong SH. The criteria for selecting appropriate fit indices in structural equation modeling and their rationales. Korean J Clin Psychol 2000;19:161-177.
60. Mun SB. Understanding and application of structural equation modeling. Seoul: Hakjisa; 2009.
61. Woo JP. Structural equation model concept and understanding. Seoul: Hannarae; 2012.
62. Hu LT, Bentler PM. Cutoff criteria for fit indexes in covariance structure analysis: conventional criteria versus new alternatives. Struct Equ Model 1999;6:1-55.
63. Bae BR. Structural equation modeling with Amos 19: principles and practice. Seoul: Cheongram; 2011.
64. Kline RB. Principles and practice of structural equation modeling. New York: Guilford Press; 2015.
65. Mun YJ, Choi ES. Influence of adolescents' covert narcissism on their social networking service addiction tendency: examining the mediating effect of social anxiety and quality of peer relationships. Korean J Youth Stud 2020:27:77-108.
66. Park YS. The dual mediating effect of depression and dispositional self-focused attention in the relationship between social anxiety and SNS addiction tendency in Youth. J DCS 2020:21:1973-1980.
67. Yang JW, Oh KJ. Interpretational bias of social and emotional stimuli in social anxiety. Korean J Cogn Behav Ther 2010;10:93-115.