

Psychometric Properties of the Persian Internet Addiction Test-Social Networking Sites Version: Dimensionality Assessment of Social Networking Site Addiction

Yasaman Hashemi¹, Fariba Zarani¹, Mahmood Heidari¹, Khatereh Borhani²,
Shima Shakiba³

Original Article

Abstract

Background: By evaluating the psychometric properties of the Persian version of the Internet Addiction Test-Social Networking Sites version (IAT-SNS) in a sample of Iranian university students, this study investigated the dimensionality of SNS addiction for the first time.

Methods: A total of 620 SNS users (414 women) participated in the study. The study questionnaire comprised demographic information, SNS usage patterns, the IAT-SNS, and the Bergen Social Media Addiction Scale (BSMAS).

Findings: Exploratory factor analysis (EFA) identified the 3-factor structure of the IAT-SNS, namely 'Lack of Control', 'Emotional and Relational Conflict', and 'Preference for online relationships' that explained 54% of the total variance. Confirmatory factor analysis (CFA) verified the current model. Problematic users on average exhibited higher scores on the whole IAT-SNS and each of the 3 factors as compared to non-problematic users. The IAT-SNS and its factors showed good internal consistency, and strong convergent and concurrent validity.

Conclusion: The Persian version of the IAT-SNS is valid and reliable, and is applicable for measuring the 3 dimensions of SNS addiction among students.

Keywords: Social networking; Addictive behavior; Internet addiction disorder; Psychometrics; Students

Citation: Hashemi Y, Zarani F, Heidari M, Borhani K, Shakiba S. **Psychometric Properties of the Persian Internet Addiction Test-Social Networking Sites Version: Dimensionality Assessment of Social Networking Site Addiction.** *Addict Health* 2021; 13(2): 95-105.

Received: 05.12.2020

Accepted: 05.02.2021

1- Department of Psychology, School of Psychology, Shahid Beheshti University, Tehran, Iran

2- Department of Cognitive Psychology, Institute for Cognitive and Brain Sciences, Shahid Beheshti University, Tehran, Iran

3- Department of Clinical Psychology, School of Clinical Psychology, University of Social Welfare and Rehabilitation Sciences, Tehran, Iran

Correspondence to: Mahmood Heidari; Department of Psychology, School of Psychology, Shahid Beheshti University, Tehran, Iran
Email: m-heydari@sbu.ac.ir

Introduction

The world is witnessing an increase in the use of Social Networking Sites (SNSs). This could mean higher rates of SNS addiction, which is defined as problematic and compulsive online social networking.¹ The Diagnostic and Statistical Manual of Mental Disorders, 5th edition (DSM-V) has recognized the possible negative impact of addiction to internet-related activities on mental health, and has introduced the Internet Gaming Disorder (IGD).² However, a variety of potentially addictive online activities exist in addition to gaming, and SNS usage is one of them.³ Various studies have pronounced SNS addiction a growing mental health problem.^{1,4,5} However, compared to other types of pathological media use, pathological SNS use, in particular, has been investigated in a fewer number of studies,⁶ and despite the number of available instruments, there exists a constant necessity to develop valid and reliable instruments to study this field of research.⁷

The most widely used and validated scale among the tools available in this field is the Internet Addiction Test (IAT),⁸ published based on the DSM-IV pathological gambling criteria in order to measure the symptoms associated with compulsive internet use. Given the growing importance of internet-related behaviors in clinical practice and research, a number of studies have attempted to validate the IAT in different languages and cultures.⁹⁻¹² These studies have shown a strong internal consistency ($\alpha = 0.89-0.93$), and satisfactory convergent and concurrent validity in different populations. Moreover, a wide variation in the factor structure has been reported in different samples, and both the uni-factorial and multi-factorial structures have been suggested.¹³

In addition to the fact that IAT has been a basis for the development of many other instruments,^{14,15} a modified version of the IAT itself was used to measure SNS addiction in a number of studies.^{3,16,17} The IAT-SNS is a self-report scale that assesses the severity of the compulsive use of social media.¹⁴ The mentioned studies show a satisfactory Cronbach's alpha for the IAT-SNS; however, there are not a sufficient number of researches that assess the factor structure of IAT-SNS. Thus, SNS addiction has not been analyzed as a multi-dimensional construct. Dimensionality assessment, however, is

important in that it both provides an accurate specification of theories,¹⁸ and brings about a greater level of understanding and a more detailed outlook on SNS addiction. Without it, SNS addiction is merely considered as a general concept. To the best of our knowledge, the factor structure of IAT-SNS has only been examined in a Turkish sample, using exploratory factor analysis (EFA) and an explained variance of 40.93% was reported in one dimension.¹⁹ Nevertheless, given that the factor structure of the original IAT varies in different studies, from sample to sample and even within the same culture,²⁰ there exists a need for studies to validate IAT in different populations with the aim of assessing SNS as a specific subtype of internet addiction. The evaluation of modified versions of IAT seems to have been overlooked, except for a recent study on the validation of IAT-smartphone version.²¹ They have reported a one-factor structure for the IAT-smartphone in a French speaking population. We used the Persian version of the IAT,²² and modified it for SNS (by replacing "Internet" with "Social Networking Sites" in each item) to explore the dimensionality of SNS addiction for the first time via evaluating the psychometric properties of the Persian version of the Internet Addiction Test-Social Networking Sites version (IAT-SNS).

Methods

Participants and procedure: In this cross-sectional study, total of 695 students from Shahid Beheshti University in Tehran (Iran) completed the questionnaire (response rate: 89.2%) between April 1 and June 3, 2019. After excluding incomplete questionnaires, 620 questionnaires were left and were included in the analysis. Among the respondents 414 were women, with the age range of 18 to 40 years [Mean = 22.05; standard deviation (SD) = 3.84 years]. The participants had majored in different areas of study such as philosophy, law, business administration, social and behavioral sciences, mathematics, natural sciences, and computer sciences. Additional demographic information is listed in table 1.

All participants had used social media before, were fully informed of the recent study's purpose, and had participated voluntarily. Written informed consent forms were obtained from all the participants. The ethics committee of Shahid Beheshti University approved the study (IRB ref.: IR.SBU.ICBS.97/1043).

Table 1. Demographic information of the study participants (n = 620)

Demographic characteristic	n (%)
Marital status	
Single	578 (93.0)
Married	39 (6.0)
Other	3 (5.0)
Education	
Undergraduate	422 (68.0)
Postgraduate	198 (32.0)
Part-time job	
Yes	88 (21.0)
No	332 (79.0)

Measures: The study questionnaire comprises 33 questions in total. It includes 3 sections, the first section is a demographic information form and includes questions 1 to 6 that are related to age, sex, marital-status, part-time job, and grade, and question 7 that enquires into the participants' SNS usage patterns by asking about the number of hours spent on SNSs per day (from less than 1 hour to more than 9 hours; scale: 1-10) and the frequency of SNS checking during the day (from never to every moment; scale: 1-8).

The second section of the questionnaire included the IAT-SNS version. The tendency for pathological use of SNSs as a specific form of internet addiction was assessed using the IAT,⁸ modified for SNSs. We used the Persian version of the IAT,²² and modified it for SNS (by a replacing "Internet" with "Social Networking Sites" in each item). The IAT-SNS is a 20-item inventory. Respondents were asked to report how often they experienced obsession, compulsion, or problems related to the use of SNSs using a 6-point Likert scale (0 = "does not apply" to 5 = "always"). The total score of the scale ranges from 0 to 100, with higher scores representing a greater level of pathological use of SNSs. Good internal consistency was reported for this scale ($\alpha = 0.92$).¹⁷

The third section of the questionnaire includes the Bergen Social Media Addiction Scale (BSMAS). The BSMAS was used to assess problematic social media use.²³ The BSMAS is an adapted version of the previously validated Bergen Facebook Addiction Scale (BFAS).²⁴ The original scale (BFAS) assesses problematic Facebook use in the past 12 months and has shown good psychometric properties across previous studies. The adapted scale comprised a wording change that replaced 'Facebook' with 'Social Media' in each item, with social media

defined in the scale instructions as "Facebook, Twitter, Instagram, etc.". The BSMAS comprises 6 items reflecting each of the 6 addiction components of salience, mood modification, tolerance, withdrawal, conflict, and relapse.²⁵ Each question is scored on a 5-point Likert scale ranging from 1 (very rarely) to 5 (very often). The BSMAS is a psychometrically valid scale.^{26,27} The internal consistency for this study was $\alpha = 0.81$.

EFA and confirmatory factor analysis (CFA) were used to investigate construct validity. First, the EFA was performed to explore the underlying structure of the IAT-SNS scale. Then, the CFA was conducted to validate the results of the EFA. Two subsamples (n = 310) were formed by randomly dividing the original data set (n = 620), one for EFA and the other for CFA. Statistical analyses were performed using SPSS software (version 25, IBM Corp., Armonk, NY, USA) to calculate correlations and EFA, and AMOS (version 25) to calculate CFA.

The recommended sample size for factor analysis in the research literature varied from a minimum subjects-to-variables ratio of 2:1²⁸ to 10:1.²⁹ The number of participants in each subsample was more than 15 times higher than the number of IAT-SNS items. Thus, the required sample size was satisfied. In the EFA, we determined the number of extracted factors through visual examination of a scree plot combined with the conventional cut-off point of eigenvalues greater than 1. To distinguish independent underlying constructs, varimax rotation was employed to determine factor loadings. Items were assigned to the factor that produced the highest factor loading. Every single item of the IAT-SNS was modeled as a reflective indicator with no inter-related error variances in the CFA. Variances and covariance were freely estimated, except for the variance of each factor's first indicator that was fixed to one. The adjustment indicators of goodness of fit index (GFI), comparative fit index (CFI), Tucker-Lewis index (TLI) with values ≥ 0.90 , and root mean square error of approximation (RMSEA) with a value of less than 0.08 were used as criteria.³⁰

For further analysis, we used data from the whole sample (n = 620). For descriptive analysis, IAT-SNS scores were dichotomized into a binary variable coded "non-problematic users" (0-49) and "problematic users" (50-100).¹⁷ We examined the reliability of the scale by estimating internal

consistency (Cronbach's Alpha) of both the whole scale and the subscales. To assess the convergent validity, an analysis of the inter-factor correlations and the factors-scale correlations was performed. Moreover, the correlation between IAT-SNS and BSMAS scores was determined. Concurrent validity was examined using the correlation of IAT-SNS and the amount of time spent on SNSs per day and the frequency of SNS checking during the day.

Results

EFA: Factor analysis was performed using the principal component analysis (PCA) with varimax rotation. The Kaiser-Meyer-Olkin (KMO) measure verified the sampling adequacy (KMO = 0.92). Bartlett's test of sphericity was significant

($\chi^2_{(10)} = 2764.63$; $P < 0.001$), thus supporting the factorability of the correlation matrix. Three factors were generated for the IAT-SNS; together, they explained 54% of the total variance. All items loaded 0.40 or above on respective factors. We labeled the 3 factors "lack of control", "emotional and relational conflict", and "preference for online relationships" (Table 2).

Confirmatory factor analysis: We examined the presented 3-factor-structure of the IAT-SNS through comparative factor analysis. The model shows an adequate fit (Chi-square = 406.66; degree of freedom (df) = 167; $P = 0.001$; CMIN/df = 2.435; GFI = 0.90; CFI = 0.90; TLI = 0.89; RMSEA = 0.07). The loadings are depicted in figure 1.

Table 2. Rotated factor matrix for items of the Internet Addiction Test-Social Networking Sites version (IAT-SNS)

Items	Questions	Factor Loadings		
		F1	F2	F3
Q1	How often do you find that you stay on SNSs longer than you intended?	0.718		
Q2	How often do you neglect household chores to spend more time on SNSs?	0.626		
Q5	How often do others in your life complain of the amount of time you spend on SNSs?	0.617		
Q6	How often do your grades or university work suffer because of the amount of time you spend on SNSs?	0.809		
Q7	How often do you check your SNSs before something else that you need to do?	0.729		
Q8	How often does your job performance or productivity suffer because of SNSs?	0.748		
Q10	How often do you block out disturbing thoughts about your life with soothing thoughts of SNSs?	0.484	0.435	
Q11	How often do you find yourself anticipating going on SNSs again?	0.640	0.356	
Q14	How often do you lose sleep due to late night log-ins on SNSs?	0.533		
Q15	How often do you feel preoccupied with SNSs when offline, or fantasize about being online?	0.583	0.496	
Q16	How often do you find yourself saying "just a few more minutes" when on SNSs?	0.656		
Q17	How often do you try to cut down the amount of time you spend on SNSs?	0.693		
Q4	How often do you form new relationships with fellow SNS users?		0.537	
Q9	How often do you become defensive or secretive when anyone asks you what you do on SNSs?	0.406	0.620	
Q12	How often do you fear that life without SNSs would be boring, empty, or joyless?		0.668	
Q13	How often do you snap, yell, or act annoyed if someone bothers you while you are on SNSs?		0.614	0.338
Q18	How often do you try to hide how long you have been on SNSs?	0.323	0.425	
Q20	How often do you feel depressed, moody, or nervous when you are offline, and the feeling goes away when you are back on SNSs?		0.567	0.510
Q3	How often do you prefer the excitement of SNSs to intimacy with your partner?			0.837
Q19	How often do you choose to spend more time on SNSs over going out with others?			0.796
	Eigenvalue	5.72	2.98	2.18
	Variance explained	28.58	14.90	10.92

SNSs: Social networking sites; n = 310

Factor loadings < 0.30 were suppressed.

Items corresponding to the parenthesized loadings did not conceptually fit with the corresponding factors.

Extraction method: Principal component analysis, Rotation method: Varimax with Kaiser normalization

Rotation converged in 5 iterations.

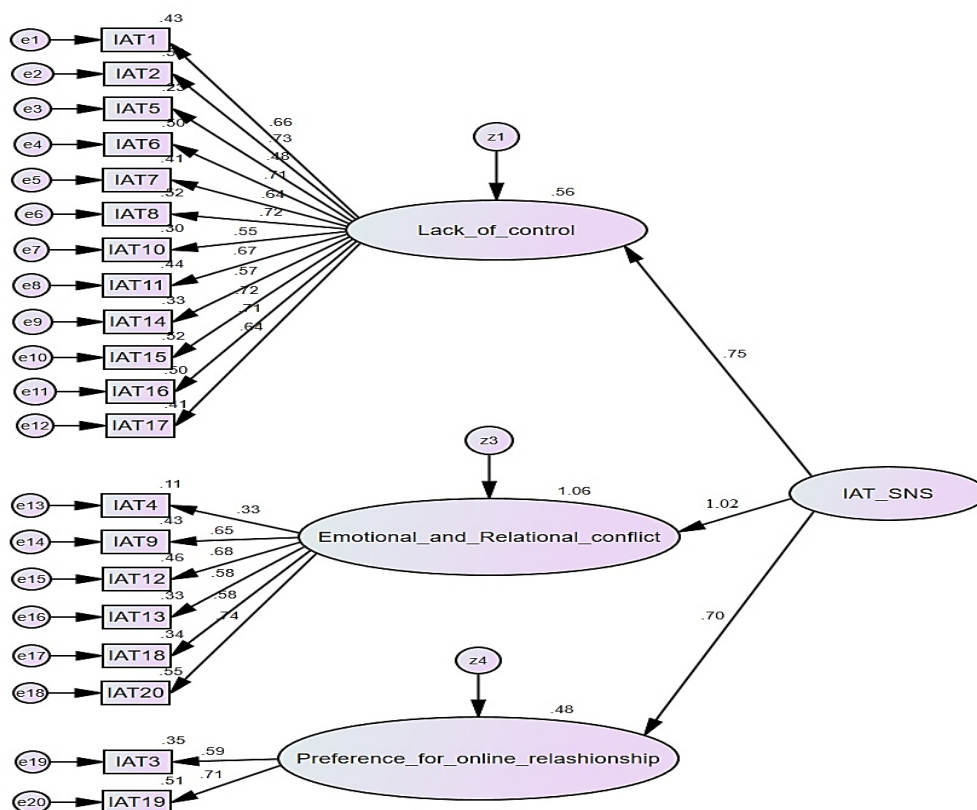


Figure 1. Graphic representation of the confirmatory factor analysis (CFA) of the Internet Addiction Test-Social Networking Sites version (IAT-SNS) in Persian students (n = 310). The factor is represented by the circle. The observed variables (indicators/questions) are represented by rectangles. The factor arrows on the left of the observed variables represent the factorial loads.

IAT-SNS and factors scores: The mean IAT-SNS score was 30.24 (SD = 15.31). The majority of participants (n = 538; 87%) were categorized as non-problematic users (score < 50). The remaining 82 participants (13%) were categorized as problematic users (score ≥ 50). The mean IAT-SNS score was 25.89 for non-problematic users, and 58.66 for problematic users. Problematic users exhibited higher scores on the whole IAT-SNS and each of the 3 factors,

on average, as compared to non-problematic users (Table 3).

Reliability: Cronbach's alpha coefficient was used as a measure of internal consistency. The whole scale and “Lack of control” displayed outstanding internal consistency ($\alpha > 0.9$), “Emotional and Relational Conflict” displayed high internal consistency ($\alpha > 0.7$), and “Preference for online relationships” displayed moderate internal consistency ($\alpha > 0.5$) (Table 3).

Table 3. Descriptive statistics for the Persian version of the Internet Addiction Test-Social Networking Sites version (IAT-SNS) and the factors, and Cronbach’s alpha results by scale (n = 620)

IAT-SNS factors/IAT-SNS	Non-problematic users (mean ± SD)	Range	Problematic users (mean ± SD)	Range	Cronbach's alpha
Lack of control	19.68 ± 8.24	0-43	41.67 ± 5.72	26-53	0.91
Emotional and relational conflict	4.71 ± 3.32	0-16	13.40 ± 4.80	3-26	0.76
Preference for online relationships	1.49 ± 1.57	0-10	3.54 ± 2.04	0-10	0.66
IAT-SNS	25.89 ± 10.94	0-49	58.66 ± 7.32	50-82	0.92

IAT-SNS: Internet Addiction Test-Social Networking Sites version; SD: Standard deviation

Convergent validity: We examined the convergent validity of the Persian version of the IAT-SNS by computing the factor-scale correlation and inter-factors correlations (using Pearson's *r*). The correlations were all significant, with coefficients ranging from 0.40 to 0.67.

Moreover, the correlations between the IAT-SNS scores and SNS use patterns were estimated. The IAT-SNS and all factors were positively related to daily hours of SNS use (*r* ranged from 0.23 to 0.48) and the frequency of SNS checking (*r* ranged from 0.18 to 0.46) (Table 4).

Concurrent validity: As evidence for the concurrent validity of IAT-SNS, correlations between the IAT-SNS and the BSMAS scores were computed, and positive significant correlations (ranging from 0.41 to 0.77) were found (Table 4).

Discussion

Although some studies have used IAT-SNS to assess the severity of SNS use problems, no research has been dedicated to examining the psychometric properties of this modified scale. The present study investigated the validation of the Persian version of the IAT-SNS. According to EFA, the IAT-SNS can recognize the 3 dimensions of SNS behaviors of lack of control, emotional and relational conflict, and preference for online relationships. Factor 1 (12 items) measures lack of control (e.g., cutting down SNS time, avoiding study or duty, losing sleep, and complaints of time spent on SNS), factor 2 (6 items) measures emotional and relational conflict (e.g., being defensive and aggressive if asked about SNS activities, searching for new relationships, and feeling depressed offline), factor 3 (2 items) measures preference for online relationships (preferring to spend time with SNS friends, and

preferring SNS relationships to partner's intimacy). Together, these factors explained 54% of the total variance, their individual contributions ranging from 10.92% to 28.58% (Table 2). According to CFA, the model structure can be generally accepted, again highlighting that the Persian version of the IAT-SNS can be considered as a multi-dimensional tool. The high degree of variance, along with the strong inter-item correlation and theoretical consistency of the current model, is an indication that the IAT-SNS is a valid test for the assessment of SNS addiction in university students. As mentioned earlier, there are numerous factor analysis studies that have been attempted in different languages and cultures for the original IAT. They reported different structures of 1-factor to 6-factor solutions. Despite the remarkable resemblances in factor arrangements in IAT analyses, the variation in factor loadings of questions in the models was quite evident using different samples (Table 5).

There were also some significant similarities between the findings of previous studies and our results. Most items of the "Lack of Control" factor fitted into factors 1 (salience) and 3 (tolerance) of the study by Ndasauka et al., while the "Emotional and Relational Conflict" factor overlapped with factors 2 (conflict) and 4 (mood modification) of this study.¹³ Furthermore, our "Lack of Control" factor showed a broad overlap with factors 2 (time management and performance) and 3 (reality substitute) in the study by Chang and Man Law³¹ and factor 2 (excessive use) in the study by Jelenchick et al.,⁹ and our factors 2 and 3 (Emotional and Relational Conflict, and Preference for Online Relationships) fitted into factor 1 (dependent use) of the study by Jelenchick et al.⁹

Table 4. Correlations between age, duration, and frequency of social networking sites use, and factors of the Internet Addiction Test-Social Networking Sites version (IAT-SNS) and the Bergen Social Media Addiction Scale (BSMAS) (*n* = 620)

Variables	Lack of control	Emotional and relational conflict	Preference for online relationships	IAT-SNS
Lack of control	-			0.96*
Emotional and relational conflict	0.67*	-		0.83*
Preference for online relationships	0.40*	0.46*	-	0.54*
Age	-0.22*	-0.13*	0.02	-0.19*
Daily use of SNS	0.48*	0.34*	0.23*	0.47*
Frequency of SNS checking	0.46*	0.35*	0.18*	0.46*
BSMAS	0.74*	0.63*	0.41*	0.77*

IAT-SNS: Internet Addiction Test-Social Networking Sites version; BSMAS: Bergen Social Media Addiction Scale

**P* < 0.01

Table 5. Comparison of Internet Addiction Test-Social Networking Sites version (IAT-SNS) factor solution with previous factor analyses for the original Internet Addiction Test (IAT)

IAT-SNS factor solution	Items	IAT factor solutions											
		2004 ¹²	2006 ³²	2008 ³¹	2008 ³³	2010 ³⁴	2011 ¹¹	2012 ⁹	2012 ³⁵	2014 ³⁶	2015 ³⁷	2015 ²¹	2019 ¹³
Factor 1	Item 1	2	5	2	1	1	2	2	2	1	1	6	3
	Item 2	2	2	2	1	2	2	2	2	1	1	1	3
	Item 5	5	1	1	1	1	1	1	1	1	4	2	3
	Item 6	3	4	2	1	1	2	2	2	1	2	1	3
	Item 7	4	3	-	1	2	2	2	1	-	5	2	2
	Item 8	3	4	2	1	1	1,2	2	2	1	2	1	3
	Item 10	1	6	3	1	1	1	1	1	3	1	3	4
	Item 11	4	3	-	1	1	1	1	1	3	1	3	4
	Item 14	2	2	3	1	1	3	2	2	1	1	3	1
	Item 15	1	4	1	1	1	3	1	1	2	3	4	1
	Item 16	5	1	2	1	2	2	2	1	-	1	6	1
	Item 17	5	5	2	1	2	1	2	2	2	1	6	1
	Factor 2	Item 4	6	1	1	1	1	3	1	1	3	3	2
Item 9		3	1	1	1	1	1	1	1	4	2	5	2
Item 12		1	2	3	1	1	3	1	1	3	1	4	4
Item 13		3	1	1	1	1	1	1	1	4	4	4	4
Item 18		2	1	1	1	1	1	1	1	4	2	5	2
Item 20		2	2	1	1	1	3	1	1	2	2	4	2
Factor 3	Item 3	6	6	1	1	2	1	1	1	3	2	1	3
	Item 19	1	2	1	1	1	1	1	1	2	2	4	1

IAT-SNS: Internet Addiction Test-Social Networking Sites version

Note: Numbers in table indicate the factors each item belongs to.

In good agreement with our results, questions 3 and 19 were presented in the same factor in most of the models.^{11,13} Moreover, our findings present a high variability in content factors of items in comparison with previous structures of the IAT. As already explained, this disparity might be due to the differences in the concept of the internet as a whole and SNS as one of the subtypes of risky internet-behaviors. Further research is needed to explore these differences and its associating implications and analyze social networking addiction as a multi-dimensional construct. Cam and Isbulan identified a uni-dimensional model for the IAT-SNS among teacher candidates of a Turkish University.¹⁹ The difference in culture and background may be the cause of the difference between their reports and this study.

We classified the entire dataset into 2 groups of "non-problematic users" comprising individuals that scored less than 50, and "problematic users" comprising individuals that scored 50 or above, and similar to some IAT psychometric studies,³⁶ we analyzed both the IAT-SNS score and factors' scores at each level of SNS use. Among the participants, 87% were non-problematic, and 13% were problematic users of SNSs (Table 3).

Cronbach's alpha value of 0.92 was obtained for the questionnaire as a whole. This finding was consistent with that of other studies which found alphas equal to 0.92.^{17,19} The factors indicated moderate to outstanding internal consistency (Table 3).

All of the factors were significantly correlated with the entire IAT-SNS ($r = 0.54-0.96$; Table 4). The moderate inter-correlations of the factors ($r = 0.46-0.67$) supported them to be distinguishable and unique components.⁹ Furthermore, in line with internet addiction studies,³⁸ a significant positive correlation was found between IAT-SNS scores and the daily duration of SNS use, in addition to the daily frequency of SNS checking.

This study has an interesting and distinct aspect in evaluating the convergent validity of the IAT-SNS with another scale measuring the same construct. To the best of our knowledge, there is a lack of comparison of SNS addiction scales in the literature. The whole IAT-SNS demonstrated good convergent validity with the BSMAS ($r = 0.77$), ranging from 0.41 to 0.74 for the factors (Table 4).

The limitations of our methods and results should be kept in mind. First, we only investigated

university students, and generalizing the results to other young adult populations may not be warranted. Given that university students are the main users of SNS and are at risk of SNS addiction,³⁹ this population was our choice for this analysis. Second, there was a lack of clinical cases for comparison. In future studies, recruiting a clinical sample could also be considered. Additionally, results may not be valid for other countries and cultures. Future studies should address the validation of the IAT-SNS among other populations and cultures. Another limitation of this study was that it did not examine the test-retest reliability of IAT-SNS. Future studies can consider this and other indicators to further validate the IAT-SNS in Iran. Results also convey the potential significance of the dimensionality of SNS addiction. More research in the field is required to determine whether SNS addiction symptoms cluster similarly in other populations, such as in individuals suffering from other types of addictions or psychiatric comorbidities or those with more severe addiction symptoms.

Conclusion

This study provided support for the psychometric properties of the IAT-SNS in a sample of Iranian university students and included a 3-dimensional structure, good internal consistency, and evidence for convergent and concurrent validity. Therefore, healthcare professionals and providers can use the Persian version of the IAT-SNS to assess and compare the level of SNS addiction dimensions among students. More studies are needed to further evaluate the cross-cultural validity and generalizability of this instrument.

Conflict of Interests

The Authors have no conflict of interest.

Acknowledgements

Authors would like to thank all the students of Shahid Beheshti University who participated in this study.

Authors' Contribution

All authors discussed the results and commented on the manuscript and the manuscript has been read and approved by all named authors. We further confirm that the order of authors listed in the manuscript has been approved by all authors.

References

1. Wang P, Wang X, Wu Y, Xie X, Wang X, Zhao F, et al. Social networking sites addiction and adolescent depression: A moderated mediation model of rumination and self-esteem. *Pers Individ Dif* 2018; 127: 162-7.
2. American Psychiatric Association. Diagnostic and statistical manual of mental disorders (DSM-5). 5th ed. Arlington, VA: American Psychiatric Publications; 2013.
3. Wegmann E, Stodt B, Brand M. Addictive use of social networking sites can be explained by the interaction of Internet use expectancies, Internet literacy, and psychopathological symptoms. *J Behav Addict* 2015; 4(3): 155-62.
4. Pantic I. Online social networking and mental health. *Cyberpsychol Behav Soc Netw* 2014; 17(10): 652-7.
5. Ryan T, Chester A, Reece J, Xenos S. The uses and abuses of Facebook: A review of Facebook addiction. *J Behav Addict* 2014; 3(3): 133-48.
6. Holmgren HG, Coyne SM. Can't stop scrolling: pathological use of social networking sites in emerging adulthood. *Addict Res Theory* 2017; 25(5): 375-82.
7. Sigerson L, Cheng C. Scales for measuring user engagement with social network sites: A systematic review of psychometric properties. *Comput Hum Behav* 2018; 83: 87-105.
8. Young KS. Internet addiction: The emergence of a new clinical disorder. *Cyberpsychol Behav* 1998; 1(3): 237-44.
9. Jelenchick LA, Becker T, Moreno MA. Assessing the psychometric properties of the Internet Addiction Test (IAT) in US college students. *Psychiatry Res* 2012; 196(2-3): 296-301.
10. Milani L, Osualdella D, Di BP. Quality of interpersonal relationships and problematic Internet use in adolescence. *Cyberpsychol Behav* 2009; 12(6): 681-4.
11. Widyanto L, Griffiths MD, Brunnsden V. A psychometric comparison of the Internet Addiction Test, the Internet-Related Problem Scale, and self-diagnosis. *Cyberpsychol Behav Soc Netw* 2011; 14(3): 141-9.
12. Widyanto L, McMurrin M. The psychometric properties of the internet addiction test. *Cyberpsychol Behav* 2004; 7(4): 443-50.
13. Ndasauka Y, Pitafi A, Kayange GM. Psychometric properties of Young's Internet Addiction Test (IAT) in Urdu language. *Asian J Psychiatr* 2019; 40: 39-44.
14. de Bérail P, Guillon Mn, Bungener C. The relations between YouTube addiction, social anxiety and parasocial relationships with YouTubers: A moderated-mediation model based on a cognitive-behavioral framework. *Comput Hum Behav* 2019; 99: 190-204.
15. Laconi Sp, Rodgers RF, Chabrol H. The measurement of Internet addiction: A critical review of existing scales and their psychometric properties. *Comput Hum Behav* 2014; 41: 190-202.
16. Intapong P, Charoenpit S, Achalakul T, Ohkura M. Assessing symptoms of excessive SNS usage based on user behavior and emotion. Cham, Switzerland: Springer International Publishing; 2017 p. 71-83.
17. Wu AM, Cheung VI, Ku L, Hung EP. Psychological risk factors of addiction to social networking sites among Chinese smartphone users. *J Behav Addict* 2013; 2(3): 160-6.
18. Smith GT, McCarthy DM. Methodological considerations in the refinement of clinical assessment instruments. *Psychol Assess* 1995; 7(3): 300-8.
19. Cam E, Isbulan O. A new addiction for teacher candidates: Social networks. *Turkish Online J Educ Technol* 2012; 11(3): 14-9.
20. Lu X, Yeo KJ. Psychometric properties of the Internet Addiction Test in a sample of Malaysian undergraduate students. *Psicologia Educativa* 2015; 21(1): 17-25.
21. Barrault S, Duroisseau F, Ballon N, Reveillere C, Brunault P. Smartphone addiction: French validation of the Internet Addiction Test-Smartphone version (IAT-smartphone) and associated psychopathological features. *L'Encéphale* 2019; 45(1): 53-9.
22. Mohagheghi A, Alizadeh M, Shahriari F, Jabbari S. Validity, reliability and psychometric evaluation of Persian version of Young Internet Addiction Questionnaire for Tabriz University and Tabriz University of Medical Sciences students. *Res Dev Med Educ* 2016; 4(2): 153-7.
23. Andreassen CS, Pallesen S, Griffiths MD. The relationship between addictive use of social media, narcissism, and self-esteem: Findings from a large national survey. *Addict Behav* 2017; 64: 287-93.
24. Andreassen CS, Torsheim T, Brunborg GS, Pallesen S. Development of a Facebook Addiction Scale. *Psychol Rep* 2012; 110(2): 501-17.
25. Griffiths M. A 'components' model of addiction within a biopsychosocial framework. *J Subst Use* 2005; 10(4): 191-7.
26. Banyai F, Zsila A, Kiraly O, Maraz A, Elekes Z, Griffiths MD, et al. Problematic social media use: Results from a Large-Scale Nationally Representative Adolescent Sample. *PLoS One* 2017; 12(1): e0169839.
27. Lin CY, Brostrom A, Nilsen P, Griffiths MD,

- Pakpour AH. Psychometric validation of the Persian Bergen Social Media Addiction Scale using classic test theory and Rasch models. *J Behav Addict* 2017; 6(4): 620-9.
28. Kline P. *Psychometrics and Psychology*. London, UK: Academic Press; 1979.
29. Marascuilo LA, Levin JR. *Multivariate statistics in the social sciences: A Researcher's guide*. Belmont, CA: Wadsworth Publishing Company; 1983.
30. Brown TA. *Confirmatory factor analysis for applied research*. New York, NY: The Guilford Press; 2014.
31. Chang MK, Man Law SP. Factor structure for Young's Internet Addiction Test: A confirmatory study. *Comput Hum Behav* 2008; 24(6): 2597-619.
32. Ferraro G, Caci B, D'Amico A, Di Blasi M. Internet addiction disorder: An Italian study. *Cyberpsychol Behav* 2007; 10(2): 170-5.
33. Khazaal Y, Billieux J, Thorens G, Khan R, Louati Y, Scarlatti E, et al. French validation of the internet addiction test. *Cyberpsychol Behav* 2008; 11(6): 703-6.
34. Korkeila J, Kaarlas S, Jaaskelainen M, Vahlberg T, Taiminen T. Attached to the web--harmful use of the Internet and its correlates. *Eur Psychiatry* 2010; 25(4): 236-41.
35. Barke A, Nyenhuis N, Kroner-Herwig B. The German version of the internet addiction test: a validation study. *Cyberpsychol Behav Soc Netw* 2012; 15(10): 534-42.
36. Rezaul Karim AK, Nigar N. The Internet Addiction Test: Assessing its psychometric properties in Bangladeshi culture. *Asian J Psychiatr* 2014; 10: 75-83.
37. Guan NC, Isa SM, Hashim AH, Pillai SK, Harbajan Singh MK. Validity of the Malay version of the Internet Addiction Test: A study on a group of medical students in Malaysia. *Asia Pac J Public Health* 2015; 27(2): NP2210-9.
38. Pawlikowski M, Nader IW, Burger C, Stieger S, Brand M. Pathological Internet use-It is a multidimensional and not a unidimensional construct. *Addict Res Theory* 2014; 22(2): 166-75.
39. Aparicio-Martinez P, Ruiz-Rubio M, Perea-Moreno A-J, Martínez-Jimenez MP, Pagliari C, Redel-Macías MD, et al. Gender differences in the addiction to social networks in the Southern Spanish university students. *Telemat Inform* 2020; 46: 101304.

ویژگی‌های روان‌سنجی نسخه فارسی آزمون اعتیاد به اینترنت – سایت‌های شبکه‌های اجتماعی: ارزیابی ابعادی اعتیاد به سایت‌های شبکه‌های اجتماعی

یاسمن هاشمی^۱، فریبا زرانی^۱، محمود حیدری^۱، خاطره برهانی^۲، شیما شکبیا^۳

مقاله پژوهشی

چکیده

مقدمه: با ارزیابی ویژگی‌های روان‌سنجی آزمون فارسی اعتیاد به اینترنت- نسخه سایت‌های شبکه‌های اجتماعی (IAT-SNS) یا (Internet Addiction Test-Social Networking Sites) در نمونه‌ای از دانشجویان ایرانی، پژوهش حاضر برای اولین بار ابعاد اعتیاد به سایت‌های شبکه‌های اجتماعی را مورد بررسی قرار داد.

روش‌ها: در مجموع، ۶۲۰ کاربر سایت‌های شبکه‌های اجتماعی (۴۱۴ زن) در این مطالعه شرکت کردند. پرسش‌نامه مورد استفاده شامل سه بخش اطلاعات دموگرافیک و الگوهای استفاده از SNS در آزمون IAT-SNS و مقیاس اعتیاد به رسانه‌های اجتماعی (Bergen Social Media Addiction Scale) یا BSMAS) بود.

یافته‌ها: تحلیل عاملی اکتشافی حاکی از ساختاری سه عاملی با نام‌های «عدم کنترل، درگیری عاطفی و ارتباطی و ترجیح روابط آنلاین» بود که در مجموع، ۵۴ درصد از واریانس کل را توضیح داد. مدل ارایه شده با استفاده از تحلیل عاملی تأییدی مورد تأیید قرار گرفت. کاربران مشکل‌دار در نمره کل آزمون و هر یک از سه عامل در مقایسه با کاربران بدون مشکل، به طور متوسط نمرات بالاتری دریافت کردند. IAT-SNS و هر یک از عامل‌های آن، همسانی درونی خوب و همچنین، روایی همگرا و هم‌زمان مناسبی را نشان دادند.

نتیجه‌گیری: نسخه فارسی IAT-SNS آزمون معتبری است و به منظور اندازه‌گیری سه بعد از اعتیاد به شبکه‌های اجتماعی در بین دانشجویان کاربرد دارد.

واژگان کلیدی: شبکه‌های اجتماعی؛ رفتار اعتیادآور؛ اختلالات مرتبط با اعتیاد به اینترنت؛ روان‌سنجی؛ دانشجویان

ارجاع: هاشمی یاسمن، زرانی فریبا، حیدری محمود، برهانی خاطره، شکبیا شیما. ویژگی‌های روان‌سنجی نسخه فارسی آزمون اعتیاد به اینترنت- سایت‌های شبکه‌های اجتماعی: ارزیابی ابعادی اعتیاد به سایت‌های شبکه‌های اجتماعی. مجله اعتیاد و سلامت ۱۴۰۰؛ ۱۳ (۲): ۹۵-۱۰۵.

تاریخ پذیرش: ۱۳۹۹/۱۱/۱۷

تاریخ دریافت: ۱۳۹۹/۹/۱۵

۱- گروه روان‌شناسی، دانشکده روان‌شناسی، دانشگاه شهید بهشتی، تهران، ایران

۲- گروه روان‌شناسی شناختی، پژوهشکده علوم شناختی و مغز، دانشگاه شهید بهشتی، تهران، ایران

۳- گروه روان‌شناسی بالینی، دانشکده روان‌شناسی بالینی، دانشگاه علوم بهزیستی و توان‌بخشی، تهران، ایران

نویسنده مسؤول: محمود حیدری؛ گروه روان‌شناسی، دانشکده روان‌شناسی، دانشگاه شهید بهشتی، تهران، ایران

Email: m-heydari@sbu.ac.ir