The International Journal of Indian Psychology
ISSN 2348-5396 (e) | ISSN: 2349-3429 (p)
Volume 4, Issue 4, DIP: 18.01.063/20170404
DOI: 10.25215/0404.063
http://www.ijip.in | July-September, 2017

The International Journal of INDIAN PSYCHOLOGY

Original Research Paper

Factor Structure of the Persian Version of the Problematic and Risky Internet Use Screening Scale (PRIUSS)

Fatemeh Pondeh Nezhadan[1]*, Arash Jelodari[2], Ali Pondeh Nezhadan[3]

ABSTRACT

Background: Problematic use of internet is a health concern growing fast among adolescents and young adults across the world. Therefore, the current research aimed to validate the factor structure of the Persian Version of the Problematic and Risky Internet Use Screening Scale. ***Method:*** A convenient and available sample of 240 college students were recruited and filled out the PRIUSS and Young Internet Addiction Test. ***Results:*** The results of the confirmatory factor analysis confirmed the 3-factor model of the scale. The Cronbach's α coefficients of the entire scale and the 3 factors ranged from .83 to .92. The convergent validity of the scale with IAT showed positive and significant relationships. ***Discussion:*** According to the results, the PRIUSS may be a valuable tool for screening and prevention efforts in regard to problematic use of internet among adolescents and adults.

Keywords: *Internet use, Problematic Internet Use, Psychometrics, Factor structure.*

Sometimes, the 3rth millennium is recognized as technology era as the internet-based systems and computers are present everywhere. Further, some scientists fear that the mankind's future can be dominated by robots and artificial intelligence. (BBC, 2014). Along with these complexities, there is no doubt that our lives are intertwined with technologies. However, problematic use of technology, in this case internet, is a health concern growing fast among adolescents and young adults across the world which need to be addressed correctly (Lu & Yeo, 2015; Jelenchick, et al., 2014). Although there are many benefits, there are also risks related to excessive use. Internet addiction can be considered as a type of behavioral addiction. It can include compulsive use, withdrawal, tolerance, and adverse consequences (Jorgenson, Hsiao, & Yen, 2016) and is highly associated with depression, attention deficit hyperactivity disorder, and other substance use disorders (Jorgenson et al., 2016), also Zhang and his colleagues (2017) stated that internet addiction is associated with

[1] Research Scholar, Clinical Psychology, Science and Research Unit, Islamic Azad University, Ahvaz Branch, Iran
[2] Research Scholar, Counseling Psychology, Shahid Chamran University of Ahvaz, Iran
[3] Research Scholar, Industrial and organizational psychology, Tehran Jonub Azad University, Tehran, Iran
*Responding Author

Received: July 18 2017; Revision Received: August 6, 2017; Accepted: August 30, 2017

lower levels of sleep quality among youths. Thus, the first step to deal with this issue is to develop instruments to detect, and if appropriate, diagnose, the excessive use of internet among people. Then, it is possible to collect more data on the issue and to identify the different aspects of the issue. One of the best tools to deal with the issue is the Problematic and Risky Internet Use Screening Scale (PRIUSS) which was developed by Jelenchick et al. (2014) to identify how excessively people use the internet. In doing so, it is consisted of three factors including: Social consequences which describes difficulty communicating and socializing in the offline world, as well as difficulty forming and maintaining relationships as a result of excessively Internet use (items 1 to 6); Emotional consequences describes a maladaptive psychological connection to Internet use (items 7 to 11); and Risky & impulsive internet use describes an inability to constrain Internet use, and interference with normal daily life due to Internet use (items 12 to 18).

Jelenchick et al. (2014) reported good fitness indices for the 3-factor model, GFI = .92, RMSEA =.06. Also, Cronbach's αs for the subscales were .89, .90, and .88, respectively. The mean score of the general population in the test was 15.4 (SD = 10.9) which was obtained by the original authors. As it is a very brief, reliable, and valid instrument to measure internet addiction, the current research aimed to validate the factor structure of the Persian Version of the Problematic and Risky Internet Use Screening Scale (PRIUSS) in a college student population in Iran. Therefore, in the current research, we sought to answer if the 3-factor model of the scale is confirmed, does it have adequate internal consistency, and does it show a satisfactory convergent validity with other instrument measuring internet addiction in Iranian population.

METHODOLOGY

Participants

The statistical sample of the study were recruited from a university in Iran in 2014 and included 240 students using convenient sampling method. Of the participants, 141 (58.8%) were female and 99 (41.4%) were male, 196 (81.7%) were in B.A. course, 43 (17.9%) in M.A. course, and 1 (.4%) was in Ph.D. The mean and standard deviation of the participants' age were 21.62 and 2.79, respectively.

Measures

1. *The Problematic and Risky Internet Use Screening Scale (PRIUSS).* The scale consists of 18 items and 3 factors, developed by Jelenchick et al. (2014) to measure the extent to which people use internet problematically. The items are range on a 5-point Likert scale from 0 = never to 4 = vey often and higher score represents higher levels of internet addiction. The scale was initially translated into Persian by the authors and tested in terms of content and word selection and the Persian text translated into English again by a professor fluent in English (reverse translation technique), then the Persian version was used with the minimal changes to administer on the participants.
2. *Internet Addiction Test (IAT).* It is a reliable and valid measure of addictive use of Internet, developed by Dr. Kimberly Young (1996). It consists of 20 items that

measures mild, moderate and severe level of Internet Addiction. The items are range on a 6-point Likert scale from 0 = does not apply to 5 = always. The higher scores represent higher levels of internet addiction.

Data analysis

The data were analyzed using the confirmatory factor analysis to examine fitness of the 3-fator model of the scale, the Cronbach's α coefficient and Pearson's correlation coefficient to examine the convergent validity. The data were analyzed using SPSS-23 and Amos-22.

RESULTS

Table 1. The mean, standard deviation, and correlation coefficients between the items and the total score of the PRIUSS

Items	Mean (std. dv.)	Total score	Items	Mean (std. dv.)	Total score
1	1.22 (1.03)	.23**	10	.78 (1)	.66**
2	.64 (.91	.55**	11	.58 (.89)	.60**
3	.73 (.99)	.48**	12	1.69 (1.23)	.60**
4	.6 (.9)	.63**	13	.89 (.94)	.64**
5	.69 (.93)	.62**	14	.92 (.95)	.69**
6	.62 (.89	.64**	15	.76 (.95)	.72**
7	1.28 (1.22)	.72**	16	1.46 (1.19)	.68**
8	1.04 (1.11)	.70**	17	1.24 (1.15)	.71**
9	.83 (.99)	.65**	18	1.2 (1.2)	.71**
Total	15.95 (11.29)				

** ($p < .01$)

As it is shown in Table 1, the highest mean belongs to item 12 and the lowest belongs to item 11. The mean and standard deviation of the entire scale obtained 15.95 and 11.29, respectively. Also, all of the items are significantly related to the entire scale score (from .23 to .72, $p < .01$).

Table 2 Findings from the confirmatory factor analysis of the 3-factor model

Item \ Factor	Social consequences	Emotional consequences	Risky & impulsive internet use	Factor loading (SE)
1. Do you choose to socialize online instead of in-person?	✓	✗	✗	.16 (.03)
2. Do you have problems with face to face communication due to your internet use?	✓	✗	✗	.61 (.38)
3. Do you experience increased social anxiety due to your internet use?	✓	✗	✗	.60 (.37)

Factor Structure of the Persian Version of the Problematic and Risky Internet Use Screening Scale (PRIUSS)

Item \ Factor	Social consequences	Emotional consequences	Risky & impulsive internet use	Factor loading (SE)
4. Do you fail to create real-life relationships because of the internet?	✓	✗	✗	.75 (.58)
5. Do you skip out on social events to spend time online?	✓	✗	✗	.71 (.50)
6. Do your offline relationships suffer due to your internet use?	✓	✗	✗	.76 (.58)
7. Do you feel irritated when you're not able to use the internet?	✗	✓	✗	.77 (.60)
8. Do you feel angry because you are away from the internet?	✗	✓	✗	.84 (.72)
9. Do you feel anxious because you are away from the internet?	✗	✓	✗	.79 (.63)
10. Do you feel vulnerable when the internet isn't available?	✗	✓	✗	.72 (.52)
11. Do you experience feelings of withdrawal from not using the internet?	✗	✓	✗	.54 (.30)
12. Do you put internet use in front of important, everyday activities?	✗	✗	✓	.51 (.27)
13. Do you avoid other activities in order to stay online?	✗	✗	✓	.64 (.41)
14. Do you neglect your responsibilities because of the internet?	✗	✗	✓	.74 (.56)
15. Do you lose motivation to do other things that need to get done because of the internet?	✗	✗	✓	.76 (.58)
16. Do you lose sleep due to nighttime internet use?	✗	✗	✓	.72 (.52)
17. Does time on the internet negatively affect your school performance?	✗	✗	✓	.81 (.66)
18. Do you feel you use the internet excessively?	✗	✗	✓	.73 (.53)

As is shown in Table 2, item 1 has been removed from the scale due to value less than .3, however, the factorial values of the remaining items ranged from .51 (item 12) to .84 (item 8) which are considered as satisfactory (see figure 1).

Table 3 The Cronbach's α and convergent validity coefficients of PRIUSS with IAT

Factor	Cronbach's α	Convergent validity
Social consequences	.83	.53**
Emotional consequences	.87	.68**
Risky & impulsive internet use	.87	.81**
The entire scale	.92	.83**

** *p < .01*

As is shown in Table 3, the Cronbach's α coefficient of the entire scale was .92 and it ranged from .83 to .87 for the 3 factors. The convergent validity coefficients of the scale and the 3 subscales with IAT ranged from .53 to .83 ($p < .01$).

Table 4 The fitness indices of the 3-factor model of the PRIUSS

As is shown in Table 4, the fitness index of χ^2 of the 3-factor model is 371.11 ($p < .001$) which is statistically significant, and indicates that the model is fit to the population. Other indices including χ^2/df 2.811 is lower than the contractual value of 3, fitness indices of GFI, CFI, and AGFI are higher than .80, and RMSEA is equal to the contractual value of .08, which all of them indicate that the 3-factor model is fitted to the population.

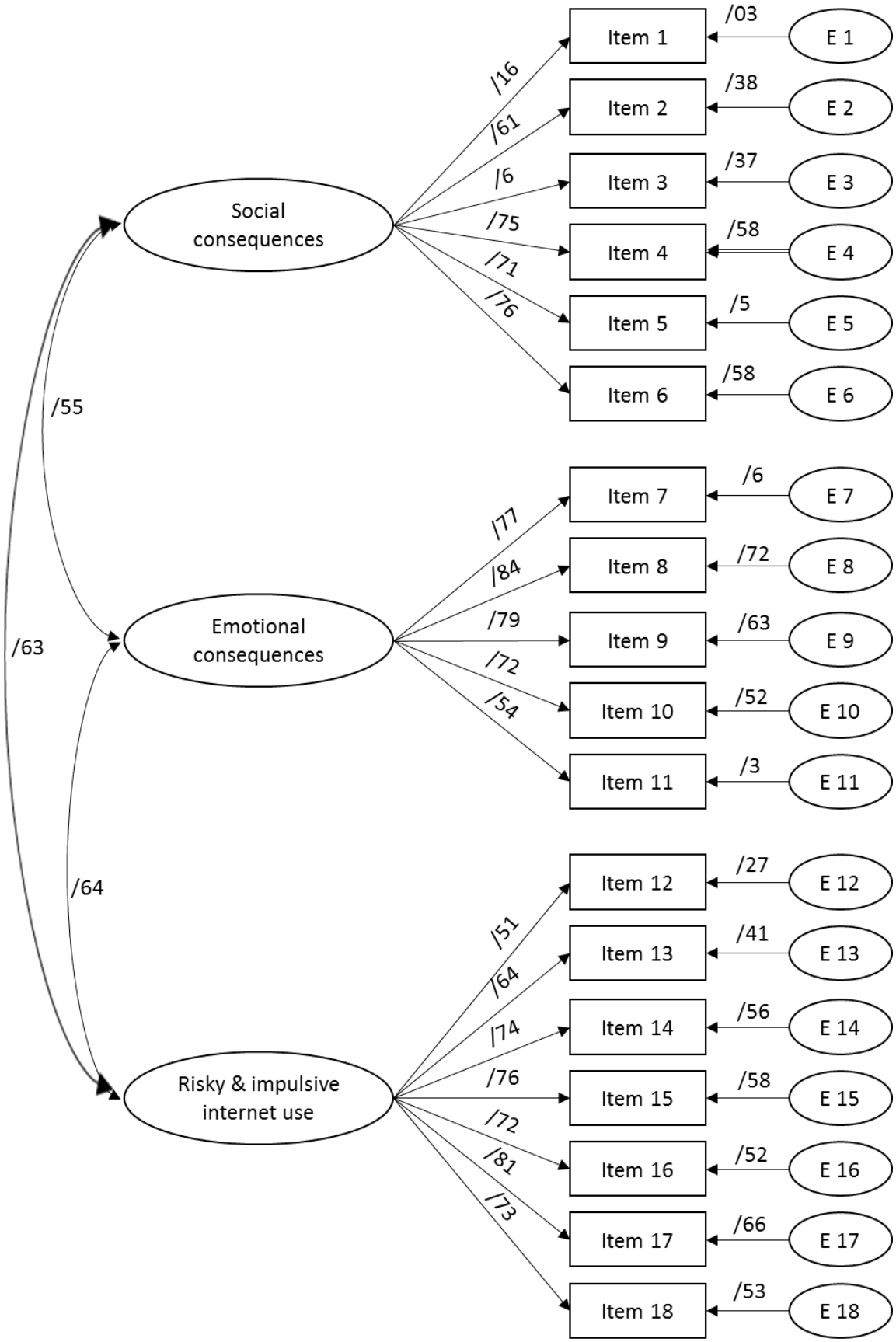

Figure 1. The 3-factor model of the PRIUSS

DISCUSSION

As mentioned earlier, due to importance of problematic use of internet in our lives and the negative effects associated with it, the current research sought to find out if the 3-factor model of the scale is confirmed, does it have adequate internal consistency, and does it show a satisfactory convergent validity with other instrument measuring internet addiction in Iranian population. The results of the current research showed that the 3-factor model was fitted to the population and all of the fitness indices were satisfactory above the contracted value of .70. Therefore, the 3-model factor was confirmed. However, it should be noted that the item 1 (' Do you choose to socialize online instead of in-person?') was omitted due to low value of factor loading. The mean and standard deviation of participants' scores in the scale were 15.95 and 11.29, respectively. This may suggest that the majority of the sample scored lower than the absolute mean of the scale (with minimum, maximum, and mean scores of 0, 72, and 36, respectively). This finding is in line with those Jelenchick et al. (2014) stating that the mean score of the general population in the test was 15.4 (SD = 10.9)

Cronbach's α coefficients obtained for the entire scale, social consequences, emotional consequences, and risky & impulsive internet use subscales were .92, .83, .87, and .87, respectively, which were in the same range as those Jelenchick et al. (2014) obtained. Thus, the internal consistency of the scale was approved too.

The results of the validity test showed statistically significant, positive relationships between the entire scale and its subscales with IAT, with coefficients from good to strong relationships (Mukaka, 2012). This result suggests that the scale successfully measures a construct in line with IAT, i.e. excessive use of internet and confirms the convergent validity of the scale.

CONCLUSION

The results of the current research showed that the PRIUSS can be a valuable tool for screening and prevention efforts in regard to problematic use of internet among adolescents and adults. However, in order to obtain more specified results, the authors suggest to perform the scale on two samples consisting normal people and internet addicted people to better comparison of the results. Thus, one of the limitations of the current research was lack of recruiting people who use internet excessively.

Acknowledgments

The author appreciates all those who participated in the study and helped to facilitate the research process.

Conflict of Interests: The author declared no conflict of interests.

REFERENCE

BBC (2014). Stephen Hawking warns artificial intelligence could end mankind. Retrieved from www.bbc.com/news/technology-30290540

Jelenchick, L. A., Eickhoff, J., Christakis, D. A., Brown, R. L., Zhang, C., Benson, M., et al. (2014). The Problematic and Risky Internet Use Screening Scale (PRIUSS) for adolescents and young adults: Scale development and refinement. *Computers in Human Behavior, 35*, 171–178. http://dx.doi.org/10.1016/j.chb.2014.01.035

Jorgenson, A. G., Hsiao, R. C. J., & Yen, C. F. (2016). Internet addiction and other behavioral addictions. *Child and Adolescent Psychiatric Clinics of North America, 25*(3), 509-520. https://doi.org/10.1016/j.chc.2016.03.004

Lu, X., & Yeo, K. J. (2015). Psychometric properties of the Internet Addiction Test in a sample of Malaysian undergraduate students. Psicología Educativa, 21, 17-25. http://dx.doi.org/10.1016/j.pse.2015.03.001

Mukaka, M. M. (2012). A guide to appropriate use of Correlation coefficient in medical research. *Malawi Medical Journal*, *24*(3), 69–71.

Young, K. (1996). Internet addiction: The emergence of a new clinical disorder. *Cyber Psychology and Behavior, 3*, 237-244.

Zhanga, M. W. B., Tran, B. X., Huong, L. T., Hinh, N. D., Nguyen, H. L. T., Tho, T. D., et al. (2017). Internet addiction and sleep quality among Vietnamese youths. *Asian Journal of Psychiatry, 28*, 15-20. https://doi.org/10.1016/j.ajp.2017.03.025

How to cite this article: Fatemeh P N, Arash J & Ali P N (2017). Factor Structure of the Persian Version of the Problematic and Risky Internet Use Screening Scale (PRIUSS). *International Journal of Indian Psychology*, Vol. 4, (4), DIP:18.01.063/20170404, DOI:10.25215/0404.063