Lopez-Fernandez, O. and Griffiths, M.D. and Kuss, D.J. and Dawes, C. and Pontes, Halley and Justice, L. and Rumpf, H.-J. and Bischof, A. and Gässler, A.-K. and Suryani, E. and Männikkö, N. and Kääriänen, M. and Romo, L. and Morvan, Y. and Kern, L. and Graziani, P. and Rousseau, A. and Hormes, J.M. and Schimmenti, A. and Passanisi, A. and Demetrovics, Z. and Király, O. and Lelonek-Kuleta, B. and Chwaszcz, J. and Dufour, M. and Ponce Terashima, J. and Chóliz, M. and Zacarés, J.J. and Serra, E. and Rochat, L. and Zullino, D. and Achab, S. and Landrø, N.I. and Billieux, J. (2019) Cross-cultural validation of the Compulsive Internet Use Scale in four forms and eight languages. Cyberpsychology, Behavior, and Social Networking 22 (7), pp. 451-464. ISSN 2152-2715.

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Abstract:

The 14-item Compulsive Internet Use Scale (CIUS) is one of the most frequently internationally adapted psychometric instruments developed to assess generalised problematic internet use. Multiple adaptations of this instrument have led to versions in different languages (e.g., Arabic and French), and different numbers of items (e.g., from five to 16 items instead of the original 14). However, to date, the CIUS has never been simultaneously compared and validated in several languages and different versions. Consequently, the present study tested the psychometric properties of four CIUS versions (i.e., CIUS-14, CIUS-9, CIUS-7, CIUS-5) across eight languages (i.e., German, French, English, Finnish, Spanish, Italian, Polish, and Hungarian) in order to (i) examine their psychometric properties, and (ii) test their measurement invariance. These analyses also identified the most optimal versions of the CIUS. The data were collected via online surveys administered to 4,226 voluntary participants from 15 countries, aged at least 18 years, and recruited from academic environments. All brief versions of the CIUS in all eight languages were validated. Dimensional, configural, and metric invariance were established across all languages for the CIUS-5, CIUS-7, and the CIUS-9, but the CIUS-5 and the CIUS-7 were slightly more suitable because their model fitted the ordinal estimate better, while for cross-comparisons the CIUS-9 was slightly better. The brief versions of the CIUS are therefore reliable and structurally stable instruments that can be used for cross-cultural research across adult populations.

1. Introduction

The Compulsive Internet Use Scale (CIUS[1,2]) is one of the most used and rigorously validated scales internationally[3-5] to assess problematic internet use (PIU). The CIUS has received extensive support regarding its reliability and validity from multiple studies[6-7] . Initial psychometric studies on the CIUS relied on confirmatory factor analyses (CFA) to test its unidimensionality. The measurement invariance (MI) of the CIUS was initially established across times, gender, age, and PIU status[1,2], Moreover, its construct, concurrent, criterion, and convergent validity were evidenced[2] through correlations with time spent online, experiencing PIU, and feeling addicted. Thus, it is one of the best psychometric instruments assessing PIU[7-9] in terms of its properties and consistency of findings across different samples.

The CIUS was developed a decade ago using substance dependence, pathological gambling, and obsessive-compulsive disorders (OCD) criteria[2,10], and dominant behavioural addiction models[11-13]. The CIUS includes items corresponding to Internet Gaming Disorder (IGD[14]) criteria[15]. Thus, it is well positioned as a contemporary psychometric scale to assess internet addiction (IA)[16,17] because of its ease and versatility of use, its stability and multiple validity in assessing CIU[2,18], and its alignment with the IGD[14,19]. Furthermore, the CIUS has fewer items compared most other IA scales [7,9] (i.e., 14 items: CIUS-14[5]) and is thus time-saving in both clinical and epidemiological contexts where time allocated to assessment is limited, although it arguably remains relatively long for public health surveys.

The CIUS was initially validated in adult internet users[1,2,20] and assessed: loss of control, preoccupation, withdrawal, coping, and conflict. Further developments led to two longer versions (CIUS-16[21]; CIUS-17[22]) and two shorter versions (CIUS-10[20], CIUS-12[23]) in adolescents[9,24]. The use of the CIU to assess specific online applications has increased since 2000 (e.g., online videogames[20,25,26]). It has been adapted for two age groups (i.e., adolescents and adults). The original CIUS-14 was validated into several languages (e.g.,

Arabic[27], French[28], and German[29-31]), but with psychometric adjustments. Furthermore, recent shorter versions presenting good psychometric properties include the CIUS-7 and CIUS-5 (translated into German[32]) and the CIUS-9 (translated into French[33]).

The initial Dutch CIUS-14[2] was validated with heavy internet users through CFA with a predefined criterion of finding a one-factor solution after a set of paired items with correlated errors were adjusted. It resulted in a good fit with standardised factor loadings ranging from .48 to .69, aligned to factor variances invariant over time. The Arabic CIUS-14[27] also reported a single-factor model using exploratory factor analysis [EFA] and CFA. After including the correlation of variance errors of paired items, the results provided an acceptable solution with satisfactory reliability (α=.78). In the French CIUS-14 validation[28] students and volunteers were surveyed, and EFA and CFA were performed. A solution with paired items comprising correlated errors supported a one-factor model. A short French version (i.e., CIUS-9)[33] was validated for high school students and a CFA demonstrated the unidimensional model was adequate for both genders, and the measure displayed adequate internal consistency.

The first German CIUS-14 [29] surveyed university students to test model fit using CFA and reported a unidimensional factor structure after correlating errors of paired items. The second German validation[30] used CFA with a general population who reported having spent at least one hour online for private purposes (e.g., gaming); a single-factor solution with four correlated errors obtained good fit indices. Moreover, configural invariance (i.e., determining whether groups of heavy internet users versus non-heavy users have the same pattern of CIU) across sex, age, education, and internet use was established. The third German validation[31] tested the CIUS among adolescents with similar findings, after correlating the error variances of paired items. Two new shortened German versions with a merged sample adults were validated[32]. The best performing items across samples were combined to form two short versions of the CIUS, and compared with the CIUS-14. Other versions include a Chinese[34],

Italian[35], Persian[36], and Japanese[36] CIUS-14. The Persian and Japanese adaptations showed three factors (i.e., absorption, difficulty in setting priorities, and mood regulation[36]).

However, to the present authors' knowledge, the CIUS has not been psychometrically tested in different languages and formats for use in cross-cultural comparisons, a gap that the present study fills. More specifically, despite the good internal consistencies reported in validated adaptations, no studies have compared the average of the scale in different languages directly. Group comparisons rely on an established MI of the scale, needed to examine the degree to which the CIUS assesses the same construct across linguistic groups. The primary purpose was to examine eight different linguistic versions of the CIUS (i.e., German, French, English, Finnish, Spanish, Italian, Polish, and Hungarian) and to test four of the existing CIUS versions (i.e., CIUS-14, CIUS-9, CIUS-7, and CIUS-5). More specifically, the study examined the psychometric properties (i.e., reliability and factorial validity) of the four CIUS versions across all eight languages and tested the scale's MI across languages.

2. Material and methods

2.1 Participants and procedure

The Tech Use Disorders online survey study data using a convenience sample recruited via announcements in several universities was used [38-40]. This sampling strategy is acceptable and widely used for the MI[41-44]. Indeed, because the first aim was validation of the CIUS in different languages, participants needed to have direct experience of using the internet, which was almost assured by recruiting a self-selected sample of university students. A total of 4,226 or 81.13% of the 5,209 participants completed all CIUS-14 items. Table 1 shows sociodemographic information across the eight language samples studied, and scores for the four CIUS versions.

TABLE 1

2.2 *Measures*

Sections of the survey analysed were: socio-demographics (age and gender) and the CIUS-14 adapted from English into other languages (except three versions which had previously been validated[2,28,30]). The translation-back translation method[45] was used (see Appendix A).

The CIUS-14 comprises 14 items rated from 0 "never" to 4 "very often". Scores range from 0-56, with higher scores referring to greater PIU severity. The original CIUS showed adequate factorial, content, and concurrent validity and good reliability (Cronbach's α between .89 and .90[2]). The three shortened CIUS versions used in the current study are the CIUS-9 (i.e., α=.85[33]; score range 0–36), the CIUS-7 (i.e., α=.82[32]; score range 0–28), and the CIUS-5 (i.e., α=.77[32]; score range 0–20). The respective items of these scales are presented in Table 2. The correlation matrix of the 14 CIUS items across all languages is presented in Table 3. Factor loadings of all items across all languages for each of the CIUS versions are presented in Table 4.

2.3 *Data analytic strategy*

MI testing was carried out to determine if and to what extent the four CIUS versions were psychometrically valid and equivalent across eight languages. The procedure comprised a series of increasingly constrained multi-group confirmatory factor analyses (MGCFAs) to establish whether specific levels of the latent mean structure of the CIUS remained stable across multiple groups. More specifically, the procedure comprised the following steps: (i) individual CFAs were computed for each language to test model fit; (ii) a set of constrained and planned models were implemented for each validated version of the investigated measure; (iii) a test of configural invariance was performed, which determines whether the number of factors and their respective items were the same across languages; (iv) a test of metric invariance was performed, which estimated whether factor loadings were equivalent across languages, meaning that participants understand and respond to items in the same way across languages; (v) a test of scalar invariance was performed, which investigated if group

differences in factor means are unbiased[46], meaning latent scores can be compared across language; (vi) a test of strict invariance was performed, which estimated whether observed items had the same residuals, meaning that items had the same measurement error terms across languages; (vii) an additional model of strict invariance and equally constrained means was performed, which tested if the entire mean structure was invariant. If supported, this would suggest that the means of the latent and observed variables are invariant across languages. After these models were estimated, comparison tests were undertaken to determine if reliable differences existed between models[47]. The difference tests conducted for each CIUS short version were used to establish whether languages varied between one another at that specific level (and if they were comparable).

Because all CIUS items are assessed on ordinal scales, analyses were conducted using RStudio (i.e., a package manager that organizes and centralizes R packages) Version 0.99.89[48,49] using the Lavaan[50], Psych[51], and semTools[52] for assessing ordinal data within a CFA framework[53]. Model fit estimations utilised Diagonally Weighted Least Squares Scale-Shifted (DWLSSS) and are recommended over Maximum-likelihood robust analyses[54]. Correlation matrices were polychoric, and the Weight Root Mean-Square Residual (WRMR) was included as an additional measure of model fit due to its suitability for ordinal estimates[55].

The CFAs applied cut-off values for fit indices as follows: Comparative Fit Index (CFI)>.93 adequate, >.95 good, Tucker–Lewis Index (TLI)>.93 adequate, >.95 good, Root Mean Square Error of Approximation (RMSEA) <.08, *p* close >.05, SRMR <.08, and WRMR <.9[56-60]. Although reported here for completeness, χ^2 statistics were not used to assess model fit because these artificially inflate with increasing sample size[55]. Recommendations for MI[61] were: nested models were assessed using differences (Δ) in CFI, RMSEA and SRMR, with respective cut-offs indicating reliable differences of ≤.01, ≤.015, and ≤.03 for metric invariance, and ≤.01 for ΔSRMR in scalar invariance[62]. A series of χ^2 tests were conducted between models (Satorra-

Bentler χ^2 difference test), but these tests can provide unreliable estimates when large sample sizes are present. MGCFAs were subsequently conducted only on the short CIUS versions.

3. Results

3.1 *CFA in the four CIUS versions and eight adaptations*

Individual CFAs were performed for both the overall sample, individually for each language, and for each CIUS version. To maximise statistical power and because the data were assumed to be missing at random, pairwise deletion was employed. The correlation matrix of all items and factor loadings for the CIUS versions across all languages of the overall sample are shown in Tables 3 and 4.

TABLES 2-6

CFAs in the CIUS-14 (see Table 5) provided a poor global overall model fit. However, the single factor solution of the short versions presented with adequate fit in all languages. The CIUS-5 initially returned marginally slight better-fit statistics than the CIUS-7 across all languages, most notably via lower WRMR rates. However, the inspection of both models demonstrated parity of fit.

3.2. *Measurement invariance in the four CIUS versions and eight adaptations*

Configural invariance was supported (see Table 7), and all Δ fit-indices returned below the pre-specified cut-off values between the configural and metric model, supporting metric invariance. However, the ΔCFI and ΔRMSEA between the metric and scalar model exceeded cut-off thresholds, indicating a lack of scalar invariance. Subsequent levels of MI were not estimated due to insufficient evidence to support scalar invariance. Thus, the factor structure and loading strengths were invariant for the CIUS-9, CIUS-7 and CIUS-5 across the eight

languages. However, there was no support for invariance of latent factor means across these languages in any version of the scale.

TABLE 7

4. Discussion

The present study examined the psychometric properties and MI of four CIUS versions across eight languages and determined the most optimal version for future cross-cultural studies.

Findings suggest that short CIUS are robust for screening CIU in adults in the various languages tested. However, the CIUS-14 psychometric properties were harder to replicate[2,27-32,34] without pairing several items via error variance correlations. A potential explanation for these findings is the items comprising the original CIUS were created based on the diagnostic criteria for different disorders (e.g., OCD, substance use and gambling disorders), and therefore do not necessarily load on a single latent construct.

During the past decade, the CIUS[1,2] has been widely used in Western[1,2,6,20-23,25,26,28-33,35,63-65] and Eastern[27,34,36,37] cultures, usually translated into different languages, and validated with adequate and stable psychometric properties. However, it is still considered long for public health surveys[66]. Instruments usually improve psychological assessment by decreasing their length because it reduces variance, and minimize burden and fatigue, while increasing response rates and representativeness[67]. Recently, the CIUS-8 has been validated across the languages used in Switzerland[68], which tested MI within one sample to validate cross-cultural comparisons[69].

The present study, adds to the literature by establishing language invariance, found the short CIUS versions tested presented robust psychometric properties for eight languages. The CIUS-5 was shown to be slightly better than the CIUS-7 because its model fitted the ordinal estimate better, but both models showed parity of fit. Furthermore, the WRMR index itself has received

limited support to date[70], thus its cut-off threshold remains preliminary and needs to be further established. Some researchers reported this index did not behave as hypothesised [71], warranting further study and caution to not rely heavily on it when selecting a model.

Therefore, use of shortened CIUS is recommended, as they assess a narrower PIU construct, characterized by loss of control, conflict or negative consequences, mood regulation, and preoccupation. As a consequence, the shortened CIUS can be used to assess PIU as an OCD, impulse-control disorder, addictive disorder, or dysfunctional coping behaviour, which is useful given the ongoing debate regarding the exact nature of the condition[72,73]. However, an advantage of the CIUS-7 in comparison with the CIUS-5 is it comprises one item that does not necessarily assess a problematic feature (i.e., Item 7 related to 'preoccupation'), thereby reducing the risk to conflate high (but non-problematic) involvement with online applications[74,75].

Another novel aspect was that no previous studies have adapted and validated the original CIUS version into Spanish, Finnish, Italian, Polish, and Hungarian languages. Furthermore, using a shorter CIUS version with fewer items appears to avoid the need to pair items to support good model fit via CFA – another psychometric strength of using short forms of scales. Moreover, regarding the shortened CIUS reliability, Cronbach's alphas were good (i.e., α from .74 [CIUS-5 in Italian] to .89 [CIUS-9 in English, Spanish, Hungarian])[76,77]. These findings are comparable to previous CIUS validation studies examining different languages and versions[2,27-35]. Compared with the previous shortened CIUS validations[32,33], the reliabilities achieved were higher (e.g., German CIUS-7 α was .82[32] compared to .86 [i.e., German in this study]).

Regarding the MI, the CIUS factor structure appears equivalent across languages, which was untested to date. The findings provide great confidence in future studies assessing cross-cultural differences regarding CIU in the languages tested because comparison data will be more reliable, similar to previous research conducted with the Internet Addiction Test (IAT) in

Chinese, Japanese, and Malaysian[78]. According to the World Health Organization[79,p9] the short CIUS-5, CIUS-7, and CIUS-9 support this need of obtaining reliable measures to be able to estimate CIU prevalence with more confidence than in previous studies across languages[39,40]. Future cross-cultural studies could use these brief forms, preferably the CIUS-9.

All linguistic adaptations tested fitted the proposed model well, and configural and metric models supported the invariance of these eight languages through the equivalence of the one-factor solution and factor loading of all items contained in the three shortened versions. However, scalar and strict invariance with equally constrained means have not been performed due to exceeding the threshold proposed in the literature[61,62]. In relation to strict factorial invariance, it is usually difficult to achieve, and very stringent tests of equivalence for previous studies are still debated[58,76-77]. The IAT has not achieved this either[76]. Therefore, findings only affected the invariance of latent factor means, and potential equal residuals in the items across these languages (also reported for the IAT's MI[78]).

This study has limitations derived from the cross-cultural data collection difficulties. Firstly, sample size was reduced by 983 participants who did not complete the survey for several reasons. However, the final sample size was large enough with regard to the study's objectives; all data collection was carried out simultaneously in 2015, using similar strategies to guarantee procedural standardization for collecting reliable data. The sampling strategy did not employ a probabilistic method (i.e., the samples were not nationally representative, nor representative of university students or university employees). However, the sample used was adequate for the purpose of the study, because the aim was not to identify the prevalence of problematic internet use (a representative sample would have been necessary for that), but was designed to test the psychometric properties of the CIUS in different languages. Future studies should therefore collect data outside this environment via a randomized sampling strategy to achieve greater external validity. Secondly, the study was based on self-reports and

open to well-known biases. Third, the MI[80-81] did not support the invariance of latent factor means and residuals of the items across the eight languages tested in all versions. Nevertheless, the invariance of the brief scales established good comparative factor structure and loadings for use in future cross-cultural studies, similar to what has previously been found in studies testing MI with convenience samples[82-83]. Furthermore, additional validation of the short CIUS versions is necessary. CFA and MI are not sufficient to prove psychometric properties. External criteria based on clinical interviews are the best way to prove validity and provide recommendations regarding cut-offs, which was not possible in the current study. Moreover, convergent validity based on measures of functional impairment would be meaningful, as well as reliability should be tested via test-retest-methods. Finally, another way to validate these versions is to utilize their predictive power on major outcomes (i.e., PIU associated to specific psychopathological symptoms and functional impairment).

In conclusion, it has been demonstrated the theoretical robustness and psychometric validity of the shortened 5-item, 7-item, and 9-item CIUS version across eight languages (German, French, English, Finnish, Spanish, Italian, Polish, and Hungarian). The present study supports the brief CIUS instruments as being valid and time-saving instruments in screening for problematic internet use.

References

1) Meerkerk GJ, Eijnden RJ, Garretsen HF. Predicting compulsive Internet use: it's all about sex! CyberPsychology & Behavior 2006; 9(1): 95-103. doi: 10.1089/cpb.2006.9.95

2) Meerkerk GJ, Van Den Eijnden RJ, Vermulst AA, Garretsen HF. The compulsive internet use scale (CIUS): some psychometric properties. CyberPsychology & Behavior 2009; 12(1): 1-6. doi: 10.1089/cpb.2008.0181

3) Young KS. (1998). Caught in the net: How to recognize the signs of internet addiction--and a winning strategy for recovery. New York, NY: John Wiley & Sons.

4) Young KS. Internet addiction: The emergence of a new clinical disorder. CyberPsychology & Behavior 1998; 1(3): 237-244. doi: 10.1089/cpb.1998.1.237

5) Király O, Nagygyörgy K, Koronczai B, Griffiths MD, Demetrovics Z. (2015) Assessment of problematic Internet use and online video gaming. In: Aboujaoude E, Starcevic V, eds. *Mental health in the digital age: Grave dangers, great promise. Mental health in the digital age:* Grave dangers, great promise. New York, NY: Oxford University Press, pp. 46-68.

6) Guertler D, Rumpf HJ, Bischof A, Kastirke N, Petersen KU, John U, Meyer C. Assessment of problematic internet use by the compulsive internet use scale and the internet addiction test: A sample of problematic and pathological gamblers. European Addiction Research 2014; 20(2): 75-81. doi: 10.1159/000355076

7) Lortie CL, Guitton MJ. Internet addiction assessment tools: dimensional structure and methodological status. Addiction 2013 07;108(7):1207-1216. doi: 10.1111/add.12202

8) Widyanto L, Griffiths MD, Brunsden V. A psychometric comparison of the Internet Addiction Test, the Internet-Related Problem Scale, and self-diagnosis. Cyberpsychology, Behavior, and Social Networking 2011;14(3): 141-149. doi: 10.1089/cyber.2010.0151

9) Laconi S, Rodgers RF, Chabrol H. The measurement of Internet addiction: A critical review of existing scales and their psychometric properties. Comput Hum Behav 2014 12;41:190-202. doi: 10.1016/j.chb.2014.09.026

10) American Psychiatric Association. Diagnostic and statistical manual of mental disorders, Fourth edition (DSM-IV). Washington, DC: American Psychiatric Association; 1994.

11) Griffiths M. Internet addiction: fact or fiction? The Psychologist 1999; 12: 246–250.

12) Marks I. Behavioural (non-chemical) addictions. British Journal of Addiction 1990; 85(11):1389-1394.

13) Brown RI. (1993) Some contributions of the study of gambling to the study of other addictions. In: Eadington WR , Cornelius, JA, editors. Gambling Behavior and Problem Gambling. Reno, NV: University of Nevada Press, pp. 241-272.

14) Lopez-Fernandez O, Honrubia-Serrano ML, Gibson W, Griffiths MD. Problematic Internet use in British adolescents: An exploration of the addictive symptomatology. Computers in Human Behavior 2014; 35: 224-233. doi: 10.1016/j.chb.2014.02.042

15) American Psychiatric Association. Diagnostic and statistical manual of mental disorders, Fifth edition (DSM-5). Arlington, VA: American Psychiatric Association; 2013.

16) Anderson EL, Steen E, Stavropoulos V. Internet use and Problematic Internet Use: A systematic review of longitudinal research trends in adolescence and emergent adulthood. International Journal of Adolescence and Youth 2017; 22(4): 430-454. doi: 10.1080/02673843.2016.1227716

17) Dhir A, Chen S, Nieminen M. A repeat cross-sectional analysis of the psychometric properties of the Compulsive Internet Use Scale (CIUS) with adolescents from public and private schools. Computers & Education 2015; 86: 172-181. doi: 10.1016/j.compedu.2015.03.011

18) Kuss DJ, Shorter GW, van Rooij AJ, Griffiths MD, Schoenmakers TM. Assessing internet addiction using the parsimonious internet addiction components model—a preliminary study. International Journal of Mental Health and Addiction 2014; 12(3): 351-366. doi: 10.1007/s11469-013-9459-9

19) Feng W, Ramo DE, Chan SR, Bourgeois JA. Internet gaming disorder: Trends in prevalence 1998-2016. Addictive Behaviors 2017; 75: 17-24. doi: 10.1016/j.addbeh.2017.06.010

20) Van den Eijnden RJ, Meerkerk GJ, Vermulst AA, Spijkerman R, Engels RC. Online communication, compulsive Internet use, and psychosocial well-being among adolescents: a longitudinal study. Developmental Psychology 2008; 44(3): 655-665. doi: 10.1037/0012-1649.44.3.655

21) van Den Eijnden RJ, Spijkerman R, Vermulst AA, van Rooij TJ, Engels RC. Compulsive Internet use among adolescents: Bidirectional parent–child relationships. Journal of Abnormal Child Psychology 2010; 38(1): 77-89. doi: 10.1007/s10802-009-9347-8

22) Van der Aa N, Overbeek G, Engels RC, Scholte RH, Meerkerk GJ, Van den Eijnden RJ. Daily and compulsive internet use and well-being in adolescence: a diathesis-stress model based on big five personality traits. Journal of Youth and Adolescence 2009; 38(6): 765-776. doi: 10.1007/s10964-008-9298-3

23) de Leeuw JR, de Bruijn M, de Weert-van Oene GH, Schrijvers AJ. Internet and game behaviour at a secondary school and a newly developed health promotion programme: a prospective study. BMC Public Health 2010; 10(1): 544. doi: 10.1186/1471-2458-10-544

24) Davis RA. A cognitive-behavioral model of pathological Internet use. Computers in Human Behavior 2001; 17(2): 187-195. doi: 10.1016/S0747-5632(00)00041-8

25) Van Rooij AJ, Schoenmakers TM, Van de Eijnden RJ, Van de Mheen D. Compulsive internet use: the role of online gaming and other internet applications. Journal of Adolescent Health 2010; 47(1): 51-57. doi: 10.1016/j.jadohealth.2009.12.021

26) Van Rooij AJ, Schoenmakers TM, Vermulst AA, Van Den Eijnden RJ, Van De Mheen D. Online video game addiction: identification of addicted adolescent gamers. Addiction 2011; 106(1): 205-212. doi: 10.1111/j.1360-0443.2010.03104.x

27) Khazaal Y, Chatton A, Atwi K, Zullino D, Khan R, Billieux J. Arabic validation of the compulsive internet use scale (CIUS). Substance Abuse Treatment, Prevention, and Policy 2011; 6(1): 32. doi: 10.1186/1747-597X-6-32

28) Khazaal Y, Chatton A, Horn A, Achab S, Thorens G, Zullino D, Billieux J. French validation of the compulsive internet use scale (CIUS). Psychiatric Quarterly 2012; 83(4): 397-405. doi: 10.1007/s11126-012-9210-x

29) Peukert P, Steffen S, ElKasmi J, Barth GM, Meerkerk GJ, Batra A. Faktorielle Struktur der deutschen Version der Compulsive Internet Use Scale (CIUS) nach konfirmatorischer Faktorenanalyse. Zeitschrift für Klinische Psychologie und Psychotherapie 2012;41: 101-108. doi: 10.1026/1616-3443/a000137

30) Guertler D, Broda A, Bischof A, Kastirke N, Meerkerk GJ, John U, Meyer C, Rumpf HJ. Factor structure of the compulsive internet use scale. Cyberpsychology, Behavior, and Social Networking 2014; 17(1): 46-51. doi: 10.1089/cyber.2013.0076

31) Wartberg L, Petersen KU, Kammerl R, Rosenkranz M, Thomasius R. Psychometric validation of a German version of the compulsive Internet use scale. Cyberpsychology, Behavior, and Social Networking 2014; 17(2): 99-103. doi: 10.1089/cyber.2012.0689

32) Besser B, Rumpf HJ, Bischof A, Meerkerk GJ, Higuchi S, Bischof G. Internet-Related Disorders: Development of the Short Compulsive Internet Use Scale. Cyberpsychology, Behavior, and Social Networking 2017; 20(11): 709-717. doi: 10.1089/cyber.2017.0260

33) Cartierre N, Coulon N, Demerval R. Validation d'une version courte en langue française pour adolescents de la Compulsive Internet Use Scale. Neuropsychiatrie de l'Enfance et de l'Adolescence 2011; 59(7): 415-49. doi: 10.1016/j.neurenf.2011.06.003

34) Dhir A, Chen S, Nieminen M. Psychometric validation of the Chinese compulsive internet use scale (CIUS) with Taiwanese high school adolescents. Psychiatric Quarterly 2015; 86(4): 581-596. doi: 10.1007/s11126-015-9351-9

35) Siciliano V, Bastiani L, Mezzasalma L, Thanki D, Curzio O, Molinaro S. Validation of a new Short Problematic Internet Use Test in a nationally representative sample of adolescents. Computers in Human Behavior 2015; 45: 177-184. doi: 10.1016/j.chb.2014.11.097

36) Alavi SS, Jannatifard F, Maracy MR, Alaghemandan H, Setare M. Comparison of national and personal identity between person with internet addiction disorder and normal internet users. Journal of Education and Health Promotion 2014; 3: 42. doi: 10.4103/2277-9531.131926

37) Yong RK, Inoue A, Kawakami N. The validity and psychometric properties of the Japanese version of the Compulsive Internet Use Scale (CIUS). BMC Psychiatry 2017; 17(1): 201. doi: 10.1186/s12888-017-1364-5

38) Tech Use Disorders. Technological use disorders: European cross-cultural longitudinal and experimental studies for Internet and smartphone problem uses. 2017. Available from: http://cordis.europa.eu/project/rcn/189961_en.html Cited 14 March 2018.

39) Lopez-Fernandez O, Kuss DJ, Romo L, Morvan Y, Kern L, Graziani P, et al. Self-reported dependence on mobile phones in young adults: A European cross-cultural empirical survey. Journal of Behavioral Addictions 2017; 6(2): 168-177. doi: 10.1556/2006.6.2017.020

40) Lopez-Fernandez O, Männikkö N, Kääriäinen M, Griffiths MD, Kuss DJ. Mobile gaming and problematic smartphone use: A comparative study between Belgium and Finland. Journal of Behavioral Addictions Forthcoming 2018: 1-12. doi: 10.1556/2006.6.2017.080

41) Checa I, Perales J, Espejo B. Measurement invariance of the satisfaction with life scale by gender, age, marital status and educational level. Quality of Life Research 2019; 28(4): 963-968. doi: 10.1007/s11136-018-2066-2

42) Burke NL, Tanofsky-Kraff M, Crosby R, Mehari RD, Marwitz SE, Broadney MM, . . . Yanovski JA. Measurement invariance of the eating disorder examination in black and white children and adolescents. International Journal of Eating Disorders 2017; 50(7): 758-768. doi: 0.1002/eat.22713

43) Joshanloo M, Bakhshi A. The factor structure and measurement invariance of positive and negative affect: A study in Iran and the USA. European Journal of Psychological Assessment 2016; 32(4): 265-272. doi: 10.1027/1015-5759/a000252

44) Jafari P, Nozari F, Ahrari F, Bagheri Z. Measurement invariance of the depression anxiety stress scales-21 across medical student genders. International Journal of Medical Education 2017; 8: 116-122. doi: 10.5116/ijme.58ba.7d8b

45) Brislin RW. Back-translation for cross-cultural research. Journal of Cross-Cultural Psychology. 1970; 1(3): 185-216. doi: 10.1177/135910457000100301

46) Gregorich SE. Do self-report instruments allow meaningful comparisons across diverse population groups? Testing measurement invariance using the confirmatory factor analysis framework. Medical Care 2006; 44(11 Suppl 3): S78-94. doi: 10.1097/01.mlr.0000245454.12228.8f

47) Van de Schoot R, Lugtig P, Hox J. A checklist for testing measurement invariance. European Journal of Developmental Psychology 2012; 9(4): 486-492. doi: 10.1080/17405629.2012.686740

48) Kim ES, Yoon M. Testing measurement invariance: A comparison of multiple-group categorical CFA and IRT. Structural Equation Modeling 2011; 18(2): 212-228. doi: 10.1080/10705511.2011.557337

49) Team R. RStudio: Integrated development for R. Boston, MA: RStudio, Inc.; 2015. Available from: http://www.rstudio.com/ Cited 14 March 2018.

50) Rosseel Y. Lavaan: An R package for structural equation modeling and more. Version 0.5–12 (BETA). Journal of Statistical Software 2012; 48(2): 1-36. doi: 10.18637/jss.v048.i02 Available from: http://lavaan.ugent.be/ Cited 14 March 2018.

51) Revelle W. (2016) Psych: Procedures for personality and psychological research [internet]. Evanston, IL: Northwestern University. Available from: https://CRAN.R-project.org/package=psych Version = 1.6.12. Cited 14 March 2018.

52) Contributors S. semTools: Useful tools for structural equation modeling. R package version 0.4-11. Available from: https://CRAN.R-project.org/package=semTools Cited 14 March 2018.

43) Hirschfeld G, Von Brachel R. Multiple-Group confirmatory factor analysis in R-A tutorial in measurement invariance with continuous and ordinal indicators. Practical Assessment, Research & Evaluation 2014; 19(7); 1-11. Available from: http://pareonline.net/getvn.asp?v=19&n=7 Cited 14 March 2018.

54) Mindrila D. Maximum likelihood (ML) and diagonally weighted least squares (DWLS) estimation procedures: A comparison of estimation bias with ordinal and multivariate non-normal data. International Journal of Digital Society 2010; 1(1):60-66. Available from:

http://infonomics-society.org/wp-content/uploads/ijds/published-papers/volume-1-2010/Maximum-Likelihood-ML-and-Diagonally-Weighted-Least-Squares-DWLS-Estimation-Procedures-A-Comparison-of-Estimation-Bias-with-Ordinal-and-Multivariate-Non-Normal-Data.pdf Cited 14 March 2018.

55) Muthén LK., Muthén BO. *Mplus*Users Guide. Sixth Edition. Los Angeles, CA: Muthén & Muthén; 2010. Available from: http://research.socialwork.wayne.edu/pdf/mplus-users-guide.pdf Cited 14 March 2018.

56) Flora DB, Curran PJ. An empirical evaluation of alternative methods of estimation for confirmatory factor analysis with ordinal data. Psychological Methods 2004; 9(4): 466-491. doi: 10.1037/1082-989X.9.4.466

57) Hooper D, Coughlan J, Mullen M. Structural equation modelling: Guidelines for determining model fit. Electronic Journal of Business Research Methods 2008; 6(1): 53-59. Available from: https://arrow.dit.ie/cgi/viewcontent.cgi?article=1001&context=buschmanart Cited 14 March 2018.

58) Hu LT, Bentler PM. Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. Structural Equation Modeling 1999; 6(1): 1-55. doi: 10.1080/10705519909540118

59) Marsh HW, Balla JR, McDonald RP. Goodness-of-fit indexes in confirmatory factor analysis: The effect of sample size. Psychological Bulletin 1988; 103(3): 391-410. doi: 10.1037/0033-2909.103.3.391

60) Benjamini Y, Hochberg Y. Controlling the false discovery rate: a practical and powerful approach to multiple testing. Journal of the Royal Statistical Society. Series B (Methodological).

1995; series B: 289-300. Available from: http://www.jstor.org/stable/2346101 Cited 14 March 2018.

61) Chen FF. Sensitivity of goodness of fit indexes to lack of measurement invariance. Structural Equation Modeling 2007; 14(3): 464-504. doi: 10.1080/10705510701301834

62) Cheung GW, Rensvold RB. Evaluating goodness-of-fit indexes for testing measurement invariance. Structural Equation Modeling 2002; 9(2): 233-55. doi: 10.1207/S15328007SEM0902_5

63) Li W, O'Brien JE, Snyder SM, Howard MO. Characteristics of internet addiction/pathological internet use in US university students: a qualitative-method investigation. PLoS ONE 2015; 10(2): e0117372. doi: 10.1371/journal.pone.0117372

64) Li W, O'Brien JE, Snyder SM, Howard MO. Diagnostic criteria for problematic internet use among US University students: A mixed-methods evaluation. PLoS ONE 2016; 11(1): e0145981. doi: 10.1371/journal.pone.0145981

65) Snyder SM, Li W, O'Brien JE, Howard MO. The effect of US university students' problematic Internet use on family relationships: A mixed-methods investigation. PLoS ONE 2015; 10(12): e0144005. doi: 10.1371/journal.pone.0144005

66) Aadahl M, Jorgensen T. The effect of conducting a lottery on questionnaire response rates: A randomised controlled trial. Eur J Epidemiol 2003;18(10):941-4. doi: 10.1023/A:1025826921030

67) Dodeen H, Al-Darmaki F. The application of item response theory in developing and validating a shortened version of the Emirate Marital Satisfaction Scale. Psychol Assess 2016 12;28(12):1625-1633. doi: 10.1037/pas0000296

68) Gmel G, Khazaal Y, Studer J, Baggio S, Marmet S. Development of a short form of the compulsive internet use scale in switzerland. International Journal of Methods in Psychiatric Research 2019 Jan 16. doi: 10.1002/mpr.1765

69) van de Vijver HJR, Poortinga YH. Towards an integrated analysis of bias in cross-cultural assessment. European Journal of Psychological Assessment 1997;13(1):29-37. doi: 10.1027/1015-5759.13.1.29

70) DiStefano C, Liu J, Jiang N, Shi D. Examination of the Weighted Root Mean Square Residual: Evidence for Trustworthiness? Structural Equation Modeling 2018; 25(3):453-466. https://doi.org/10.1080/10705511.2017.1390394

71) Muthén BO. Mplus technical appendices. Los Angeles, CA: Muthén & Muthén; 1998–2004. Available from: https://www.statmodel.com/techappen.shtml Cited 12 April 2018.

72) Kardefelt-Winther D. A conceptual and methodological critique of internet addiction research: Towards a model of compensatory internet use. Computers in Human Behavior 2014; 31: 351-354. doi: 10.1016/j.chb.2013.10.059

73) Starcevic V, Aboujaoude E. Internet gaming disorder, obsessive-compulsive disorder, and addiction. Current Addiction Reports 2017; 4(3): 317-322. doi: 10.1007/s40429-017-0158-7

74) Deleuze J, Long J, Liu TQ, Maurage P, Billieux J. Passion or addiction? Correlates of healthy versus problematic use of videogames in a sample of French-speaking regular players. Addictive Behaviors 2018. doi: 10.1016/j.addbeh.2018.02.031

75) Király O, Tóth D, Urbán R, Demetrovics Z, Maraz A. Intense video gaming is not essentially problematic. Psychology of Addictive Behaviors 2017, 31(7), 807. doi: 10.1037/adb0000316

76) Cortina JM. What is coefficient alpha? An examination of theory and applications. Journal of Applied Psychology 1993; 78(1): 98-104. doi: 10.1037/0021-9010.78.1.98

77) Schmitt N. Uses and abuses of coefficient alpha. Psychological Assessment. 1996; 8(4): 350-353. doi: 10.1037/1040-3590.8.4.350

78) Lai CM, Mak KK, Cheng C, Watanabe H, Nomachi S, Bahar N, Young KS, Ko HC, Kim D, Griffiths MD. Measurement invariance of the internet addiction test among Hong Kong, Japanese, and Malaysian adolescents. Cyberpsychology, Behavior, and Social Networking 2015; 18(10): 609-617. doi: 10.1089/cyber.2015.0069

79) World Health Organization. Public Health Implications of Excessive Use of the Internet, Computers, Smartphones and Similar Electronic Devices Meeting report. Main Meeting Hall, Foundation for Promotion of Cancer Research. National Cancer Research Centre, Tokyo, Japan. 27-29 August 2014. Available from: http://apps.who.int/iris/bitstream/10665/184264/1/9789241509367_eng.pdf Cited 14 March 2018.

80) Vandenberg RJ, Lance CE. A review and synthesis of the measurement invariance literature: Suggestions, practices, and recommendations for organizational research. Organizational Research Methods 2000; 3(1): 4-70. doi: 10.1177/109442810031002

81) Schmitt N, Kuljanin G. Measurement invariance: Review of practice and implications. Human Resource Management Review 2008; 18(4): 210-222. doi: 10.1016/j.hrmr.2008.03.003

82) Pontes HM, Griffiths MD. Portuguese validation of the Internet Gaming Disorder Scale – Short-Form (IGD9-SF). Cyberpsychology, Behavior and Social Networking 2016; 19: 288-293. doi: 10.1089/cyber.2015.0605

83) Ortiz de Gortari AB, Pontes HM, Griffiths MD. The Game Transfer Phenomena Scale: An instrument for investigating the non-volitional effects of video game playing. Cyberpsychology, Behavior and Social Networking 2015; 18: 588-594. doi: 10.1089/cyber.2015.0221

Table 1. Demographic Information, Compulsive Internet Use Scale (CIUS) total scores across all eight adaptations of the four versions of the CIUS, and item scores in all and each language adaptations

	All	German	French	English	Finnish	Spanish	Italian	Polish	Hungarian
N	4226	389	1079	1188	449	265	284	258	314
Women [*N* (%)]	2931 (69.360)	263 (67.610)	833 (77.201)	756 (63.640)	308 (68.596)	186 (70.188)	191 (67.253)	187 (72.481)	207 (65.924)
Age [in years; *M* (*SD*)]	24.630 (8.837)	25.244 (6.568)	25.298 (10.125)	19.966 (4.540)	28.300 (9.06)	27.22 (11.88)	28.285 (9.138)	25.279 (6.965)	27.959 (9.185
Total Score [*M* (*SD*)]									
CIUS-14	16.028 (10.714)	14.015 (9.525)	16.729 (10.625)	19.886 (11.477)	12.4 (8.927)	13.48 (10.37)	11.173 (8.193)	14.574 (8.855)	14.377 (10.248)
CIUS-9	8.121 (7.338)	6.708 (6.362)	7.752 (7.329)	12.150 (7.778)	7.675 (5.773)	8.464 (6.723)	5.104 (5.423)	8.278 (5.741)	8.173 (6.658)
CIUS-7	6.618 (5.942)	5.479 (5.192)	6.320 (5.967)	9.777 (6.239)	6.223 (4.668)	6.902 (5.478)	4.260 (4.540)	6.794 (4.727)	6.964 (5.422)
CIUS-5	5.101 (4.481)	4.256 (3.969)	4.943 (4.594)	7.291 (4.555)	4.984 (3.618)	5.54 (4.263)	3.363 (3.508)	5.347 (3.690)	5.313 (4.104)
Item Scores CIUS-14 [*M* (*SD*)]									
'Stop'	1.823 (1.256)	1.720 (1.158)	1.899 (1.258)	2.195 (1.235)	1.292 (1.08)	1.879 (1.314)	1.549 (1.281)	1.508 (1.148)	1.596 (1.222)
'Continue'	0.601 (1.063)	0.530 (1.014)	0.501(0.999)	1.001 (1.253)	1.477 (1.079)	1.494 (1.34)	0.215 (0.591)	0.202 (0.610)	0.436 (0.924)
'Others stop'	0.825(1.111)	0.456 (0.804)	0.683 (1.043)	1.176 (1.265)	0.706 (0.944)	0.981 (1.201)	0.570 (0.947)	0.795 (0.983)	0.745 (1.078)
'Prefer'	0.795 (0.999)	0.718 (0.922)	0.804(1.011)	1.010 (1.088)	0.78 (0.944)	0.626 (0.925)	0.387 (0.712)	0.632 (0.832)	0.682 (0.949)

'Sleep'	1.100	0.961	1.082(1.183)	1.503	0.978	0.774	0.511	0.895	0.933
	(1.187)	(1.079)		(1.273)	(1.065)	(1.136)	(0.907)	(1.002)	(1.09)
'Think'	0.902(1.031)	0.951	0.889(1.032)	1.020	0.893	0.626	0.658	0.775	0.975
		(1.003)		(1.130)	(0.969)	(0.905)	(0.917)	(0.884)	(0.956)
'Session'	1.075(1.109)	0.992	1.054	1.399	0.871	0.589	0.669	0.988	1.115
		(1.009)	(1.097)	(1.210)	(0.983)	(0.888)	(0.926)	(1.038)	(1.023)
'Use less'	1.275(1.168)	1.052	1.297	1.512	1.147	1.208	0.954	1.128	1.274
		(1.009)	(1.172)	(1.201)	(1.092)	(1.196)	(1.069)	(1.124)	(1.178)
'Less time'	0.797	0.558	0.782(1.069)	1.206	0.367	0.774	0.570	0.566	0.646
	(1.070)	(0.840)		(1.205)	(0.777)	(1.031)	(0.928)	(0.835)	(0.975)
'Rush'	0.751	0.466	0.919	0.966	0.278	0.762	0.534	0.86	0.481
	(1.038)	(0.829)	(1.080)	(1.149)	(0.685)	(1.059)	(0.835)	(0.992)	(0.865)
'Obligations'	0.792(1.052)	0.749	0.994(1.152)	0.839	0.608	0.709	0.530	0.733	0.611
		(0.954)		(1.083)	(0.903)	(1.092)	(0.835)	(0.914)	(0.993)
'Sad'	1.740(1.243)	1.492	1.930	1.927	1.401	1.196	1.496	1.81	1.783
		(1.143)	(1.300)	(1.267)	(1.13)	(1.203)	(1.104)	(1.115)	(1.166)
'Escape'	1.378(1.262)	1.319	1.483(1.317)	1.636	0.949	1.004	1.078	1.434	1.236
		(1.171)		(1.315)	(1.073)	(1.181)	(1.028)	(1.173)	(1.229)
'Restless'	1.060(1.172)	0.835	1.104	1.474	0.673	0.936	0.784	0.961	0.608
		(1.035)	(1.143)	(1.336)	(0.872)	(1.062)	(1.007)	(1.001)	(0.967)

Note: CIUS is 'compulsive internet use scale', *N* is sample size, % is the percentage, *M* is the mean, *SD* is the standard deviation.

Table 2. Respective items included in each ver

CIUS

	CIUS versions		
	CIUS-9	***CIUS-7***	***CIUS-5***
(1) "Do you find it difficult to stop using the internet when you are online?"	X	X	X
(2) "Do you continue to use the internet despite your intention to stop?"			
(3) "Do others (e.g., partner, children, parents) say you should use the internet less?"	X	X	X
(4) "Do you prefer to use the internet instead of spending time with others (e.g., partner, children, parents)?"	X		
(5) "Are you short of sleep because of the internet"	X	X	X
(6) "Do you think about the internet, even when not online"			
(7) "Do you look forward to your next internet session?"	X	X	
(8) "Do you think you should use the internet less often?"			
(9) "Have you unsuccessfully tried to spend less time on the internet?"	X	X	
(10) "Do you rush through your (home) work in order to go on the internet?"			
(11) "Do you neglect your daily obligations (work, school, or family life) because you prefer to go on the internet?"	X	X	X
(12) "Do you go on the internet when you are feeling down"	X	X	X
(13) "Do you use the internet to escape from your sorrows or get relief from negative feelings?"			
(14) "Do you feel restless, frustrated, or irritated when you cannot use the internet"	X		

Table 3. Correlation matrix of the 14 CIUS items across all language adaptations (i.e., overall sample).

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	-													
2	.71***	-												
3	.46***	.49***	-											
4	.45***	.49***	.46***	-										
5	.47***	.54***	.44***	.51***	-									
6	.42***	.45***	.38***	.49***	.49***	-								
7	.45***	.46***	.40***	.53***	.49***	.66***	-							
8	.47***	.54***	.55***	.42***	.50***	.42***	.44***	-						
9	.52***	.58***	.51***	.46***	.54***	.43***	.48***	.67***	-					
10	.44***	.45***	.44***	.50***	.51***	.50***	.55***	.46***	.53***	-				
11	.42***	.49***	.39***	.51***	.54***	.45***	.45***	.47***	.51***	.59***	-			
12	.44***	.46***	.35***	.44***	.47***	.46***	.50***	.43***	.44***	.50***	.48***	-		
13	.44***	.45***	.37***	.46***	.47***	.44***	.52***	.43***	.48***	.51***	.47***	.82***	-	
14	.41***	.40***	.36***	.43***	.41***	.47***	.51***	.35***	.43***	.50***	.43***	.48***	.48***	-

Note: **** p < .001, p values false discovery rate corrected (BH correction, [56]) for multiple comparison.*

Table 4. Factor loadings of each [item] across all adaptations for each of the CIUS versions

	Factor loadings			
Item	*CIUS-14*	*CIUS-9*	*CIUS-7*	*CIUS-5*
1.	.72***	.67***	.67***	.66***
2.	.76***			
3.	.61***	.62***	.62***	.61***
4.	.66***	.70***		
5.	.69***	.72***	.73***	.74***
6.	.68***			
7.	.71***	.71***	.68***	
8.	.69***			
9.	.74***	.72***	.74***	
10.	.70***			
11.	.67***	.69***	.69***	.70***
12.	.83***	.67***	.66***	.65***
13.	.84***			
14.	.61***	.64***		

Note: * $p < .05$, *** $p < .001$, all are standardized loadings ;

Note: CIUS = 'Compulsive Internet Use Scale'

Table 5. Confirmatory Factor Analyses conducted for each language adaption of the original CIUS-14 and short CIUS-9

Version	Model	α	df	χ^2	*p*	CFI	TLI	RMSEA	RMSEA 90% CI	p_{Close}	SRMR	WRMR
CIUS-14	All languages	.93	77	7213.370	<.001	.916	.901	.148	.145-.151	<.001	.076	5.942
	German	.93	77	519.460	<.001	.932	.920	.122	.112-.132	<.001	.084	1.710
	French	.92	77	2118.691	<.001	.918	.891	.157	.151-.163	<.001	.093	3.349
	English	.93	77	2075.905	<.001	.931	.918	.148	.142-.153	<.001	.074	3.228
	Finnish	.92	77	632.456	<.001	.915	.900	.127	.118-.136	<.001	.084	1.847
	Spanish	.99	77	422.179	<.001	.916	.901	.130	.118-.143	<.001	.105	1.644

	Italian	.90	77	252.882	<.001	.907	.891	.090	.078-.102	<.001	.079	1.176
	Polish	.90	77	351.278	<.001	.911	.895	.118	.105-.130	<.001	.092	1.487
	Hungarian	.93	77	387.082	<.001	.945	.935	.113	.102-.125	<.001	.074	1.445
CIUS-9	All languages	.88	27	390	<.001	.987	.982	.056	.051-.061	=.015	.031	1.769
	German	.88	27	53	=.002	.985	.980	.050	.030-.070	=.458	.046	0.672
	French	.87	27	122	<.001	.983	.977	.057	.047-.068	=.111	.039	1.025
	English	.89	27	124	<.001	.990	.987	.055	.045-.064	=.194	.030	1.007
	Finnish	.88	27	58.544	<.001	.986	.981	.051	.033-.069	=.434	.045	0.732
	Spanish	.89	27	50.086	=.004	.985	.979	.057	.031-.081	=.298	.052	0.662
	Italian	.84	27	42	<.001	.976	.968	.045	.014-.070	=.603	.061	0.642
	Polish	.84	27	41	=.044	.984	.979	.044	.008-.071	=.602	.051	0.613
	Hungarian	.89	27	77	<.001	.976	.967	.077	.057-.098	=.014	.055	0.819

Note: CIUS = Compulsive Internet Use Scale, χ^2 = Chi-square value, CFI = comparative fit index, TLI = Tucker–Lewis index, RMSEA = root mean squared error of approximation, p_{Close} = provides a one-sided test of the null hypothesis that the RMSEA is equal to 0.05 in the population, SRMR = standardized root mean square residual, and WRMR = weighted root mean-square residual.

Table 6. Confirmatory Factor Analyses conducted for each language adaption of the CIUS-7 and CIUS-5.

Version	Model	α	df	χ^2	*p*	CFI	TLI	RMSEA	RMSEA 90% CI	p_{Close}	SRMR	WRMR

CIUS-7	All languages	.86	1 4	194	<.000	.991	.986	.055	.048-.062	=.102	.027	1.516
	German	.86	1 4	19	=.151	.996	.994	.031	.000-.062	=.915	.030	.476
	French	.84	1 4	52	<.000	.990	.985	.052	.038-.067	=.399	.031	.808
	English	.86	1 4	51	<.000	.994	.992	.047	.034-.061	=.061	.024	.783
	Finnish	.85	1 4	14.798	=.216	.997	.996	.025	.000-.055	=.909	.031	.481
	Spanish	.87	1 4	20.718	=.109	.994	.991	.043	.000-.079	=.585	.040	.505
	Italian	.81	1 4	22	=.083	.985	.977	.044	.000-.078	=.565	.054	.563
	Polish	.80	1 4	17	=.240	.994	.991	.030	.000-.071	=.746	.045	.482
	Hungarian	.86	1 4	44	<.000	.979	.969	.083	.055-.111	=.026	.049	.748
CIUS-5	All languages	.80	5	78	<.000	.993	.985	.058	.047-.070	=.095	.024	1.243
	German	.81	5	6	=.280	.998	.997	.026	.000-.079	=.715	.023	.317
	French	.79	5	35	<.000	.987	.973	.075	.053-.100	=.032	.036	.841

English	.80	5	22	<.000	.994	.988	.053	.032-.077	=.361	.024	.662
Finnish	.79	5	1.023	=.961	1.00	1.00	.000	.000-.000	=.997	.009	.140
Spanish	.82	5	10.640	=.059	.992	.984	.065	.000-.120	=.267	.042	.465
Italian	.74	5	7	=.213	.992	.983	.039	.000-.097	=.549	.041	.410
Polish	.75	5	9	=.112	.990	.980	.055	.000-.113	=.372	.041	.431
Hungarian	.81	5	7	=.249	.998	.996	.032	.000-.090	=.620	.026	.359

Note: CIUS = Compulsive Internet Use Scale, χ^2 = Chi-square value, CFI = comparative fit index, TLI = Tucker–Lewis index, RMSEA = root mean squared error of approximation, p_{Close} = provides a one-sided test of the null hypothesis that the RMSEA is equal to 0.05 in the population, SRMR = standardized root mean square residual, and WRMR = weighted root mean-square residual.

Table 7. Measurement invariance procedure conducted between for CIUS-9, CIUS-7, and CIUS-5.

CIUS-9

Invariance	**df**	**χ^2**	***p***	**CFI**	**TLI**	**RMSEA**	**RMSEA 90% CI**	**p_{Close}**	**SRMR**	**WRMR**	**$\Delta\chi^2$**	**Δdf**	**ΔRMSEA**	**ΔCFI**	**ΔSRMR**
Configural***	216	550.1	<.001	.986	.981	.054	.049-.060	=.109	.042	2.225					
Configural vs. metric											42	56	.007	.001	.009
Metric***	272	592.1	<.001	.987	.986	.047	.042-.052	=.805	.051	2.756					
Metric vs. Scalar											1011.9	182	.022	.035	.002
Scalar	454	1604	<.001	.952	.969	.069	.066-.073	<.000	.049	4.558					

Note: CIUS = compulsive internet use scale; Satorra-Bentler $\Delta\chi^2$ Tests: Config vs Metric: $X^2(4.758) = 9.68$, $p = .074$, Metric vs Scalar: $X^2(10.132) = 40.39$, $p < .001$

CIUS-7

Invariance	df	χ^2	*p*	CFI	TLI	RMSEA	RMSEA 90% CI	pClose	SRMR	WRMR	$\Delta\chi^2$	Δdf	ΔRMSEA	ΔCFI	ΔSRMR
Configural*	112	238.3	<.001	.992	.989	.046	.038-.054	=0.768	.034	1.757					
Config vs. metric*											108.9	42	.004	.004	.013
Metric	154	347.2	<.001	.988	.987	.050	.043-.057	=0.486	.047	2.529					
Metric vs Scalar***											902.8	140	.029	.044	.001
Scalar	294	1250	<.001	.944	.968	.079	.074-.083	<.000	.046	4.728					

Note: CIUS = compulsive internet use scale; Satorra-Bentler $\Delta\chi^2$ Tests: Config vs Metric: $X^2(3.713) = 10.59$, p = 0.03, Metric vs Scalar: $X^2(8.475) = 35.75$, $p < .001$

CIUS-5

Invariance	df	χ^2	*p*	CFI	TLI	RMSEA	RMSEA 90% CI	pClose	SRMR	WRMR	$\Delta\chi^2$	Δdf	ΔRMSEA	ΔCFI	ΔSRMR
Configural*	40	96.44	<.001	.994	.987	.052	.039-.065	=.394	.029	1.401					
Config vs. metric*											81.9	28	.004	.006	.016
Metric	68	178.4	<.001	.986	.985	.055	.046-.065	=.174	.044	2.227					
Metric vs Scalar***											756.0	98	.038	.075	.002

		93								
Scalar	166	4.4	<.001	.912	.958	.094	.088-.100	<.001	.047	4.987

Note: CIUS = Compulsive Internet Use Scale; Satorra-Bentler $\Delta\chi^2$ Tests: Configural vs. Metric: $X^2(2.491) = 7.263$, $p = .04$, Metric vs. Scalar: $X^2(6.687) = 30.3$, $p < .001p < .001$

Appendix A

English

To evaluate your use of the Internet on the computer, please answer the following 14 questions using a scale of response from 1 to 4: 0 " Never ", 1 " Rarely ", 2 " Sometimes ", 3 " Often ", 4 " Very often"

How often…

1. Do you find it difficult to stop using the Internet when you are online?
2. Do you continue to use the Internet despite your intention to stop?
3. Do others (e.g., partner, children, parents) say you should use the Internet less?
4. Do you prefer to use the Internet instead of spending time with others (e.g., partner, children, parents)?
5. Are you short of sleep because of the Internet?
6. Do you think about the Internet, even when not online?
7. Do you look forward to your next Internet session?
8. Do you think you should use the Internet less often?
9. Have you unsuccessfully tried to spend less time on the Internet?
10. Do you rush through your (home) work in order to go on the Internet?
11. Do you neglect your daily obligations (work, school, or family life) because you prefer to go on the Internet?
12. Do you go on the Internet when you are feeling down?
13. Do you use the Internet to escape from your sorrows or get relief from negative feelings?
14. Do you feel restless, frustrated, or irritated when you cannot use the Internet?

French

Afin d'évaluer votre usage d'Internet sur l'ordinateur, veuillez répondre aux 14 questions suivantes au moyen d'une échelle allant de 0 à 4 : 0 " Jamais ", 1 " Rarement ", 2 " Parfois ", 3 " Souvent ", 4 " Très souvent "

¿ A quelle fréquence…

1. trouvez-vous difficile d'arrêter d'utiliser internet pendant que vous êtes en ligne (c'est à dire s'arrêter, stopper l'activité)?
2. continuez-vous à utiliser internet malgré votre intention d'arrêter?
3. les autres (ex : partenaire, enfants, parents) vous disent-t-ils que vous devriez moins utiliser internet?
4. est-ce que vous préférez utiliser internet au lieu de passer du temps avec les autres (partenaires, enfants, parents)?
5. êtes-vous en manque de sommeil à cause d'internet?
6. pensez-vous à internet même quand vous n'êtes pas en ligne?
7. est-ce que vous vous réjouissez de votre prochaine utilisation d'internet?
8. pensez-vous que vous devriez moins utiliser internet?
9. avez-vous sans succès essayé de passer moins de temps sur internet?
10. vous dépêchez-vous de finir vos tâches (travail, tâches ménagères…) afin d'aller sur internet?
11. négligez-vous vos obligations quotidiennes (travail, école, ou vie familiale) parce que vous préférez aller sur internet?
12. allez-vous sur internet quand vous avez une baisse de moral?
13. utilisez-vous internet pour fuir vos peines (tristesses) ou vous soulager d'un sentiment négatif?
14. sentez-vous agité, frustré ou irrité lorsque vous ne pouvez pas utiliser internet?

German

Um die Nutzung des Internet am Computer zu bewerten, beantworten Sie bitte die folgenden 14 Fragen auf einer Skala von 0 bis 4: 0 " Nie ", 1 " Selten " 2 " Manchmal ", 3 " Häufig ", 4 " Sehr häufig "
1. Wie häufig finden Sie es schwierig, mit dem Internetgebrauch aufzuhören, wenn Sie online sind?
2. Wie häufig setzen Sie Ihren Internetgebrauch fort, obwohl Sie eigentlich aufhören wollten?
3. Wie häufig sagen Ihnen andere Menschen (z.B. Partner, Kinder, Eltern, Freunde), dass Sie das Internet weniger nutzen sollten?
4. Wie häufig bevorzugen Sie das Internet, statt Zeit mit anderen zu verbringen (z.B. Partner, Kinder, Eltern, Freunde)?
5. Wie häufig schlafen Sie zu wenig wegen des Internets?
6. Wie häufig denken Sie an das Internet, auch wenn Sie gerade nicht online sind?
7. Wie oft freuen Sie sich bereits auf Ihre nächste Internetsitzung?
8. Wie häufig denken Sie darüber nach, dass Sie weniger Zeit im Internet verbringen sollten?
9. Wie häufig haben Sie erfolglos versucht, weniger Zeit im Internet zu verbringen?
10. Wie häufig erledigen Sie Ihre Aufgaben zuhause hastig, damit Sie früher ins Internet können?
11. Wie häufig vernachlässigen Sie Ihre Alltagsverpflichtungen (Arbeit, Schule, Familienleben), weil Sie lieber ins Internet gehen?
12. Wie häufig gehen Sie ins Internet, wenn Sie sich niedergeschlagen fühlen?
13. Wie häufig nutzen Sie das Internet, um Ihren Sorgen zu entkommen oder um sich von einer negativen Stimmung zu entlasten?
14. Wie häufig fühlen Sie sich unruhig, frustriert oder gereizt, wenn Sie das Internet nicht nutzen können?

Hungarian

Kérjük, válaszolj a következő 14, az internethasználat különböző formáira vonatkozó kérdésre egy skála segítségével, ahol: 0 " Soha ", 1 " Ritkán ", 2 " Időnként ", 3 " Gyakran ", 4 " Nagyon gyakran "
Milyen gyakran…
1. találod nehéznek, hogy abbahagyd az internetezést akkor, amikor online vagy?
2. folytatod az internetezést annak ellenére, hogy tudod, abba kellene hagynod?
3. mondják neked mások (pl. partner, gyerek, szülők), hogy kevesebbet kellene internetezned?
4. töltöd szívesebben az időt internetezéssel, mint mások társaságában? (pl. partner, gyerek, szülők)?
5. fordul elő, hogy kialvatlan vagy az internetezés miatt?
6. gondolsz az internetre akkor is, amikor nem vagy online?
7. várod a következő alkalmat, hogy újra internetezhess?
8. gondolod, hogy kevesebbet kellene internetezned?
9. fordult elő, hogy megpróbáltad csökkenteni az internetezéssel töltött időt, de nem sikerült?
10. csapod össze a házi feladatod vagy munkád azért, hogy minél előbb internetezhess?
11. hanyagolod el a mindennapi kötelességeidet (munka, iskola, család) azért, mert inkább internetezel?
12. internetezel, amikor rossz kedved van?
13. szoktál azért internetezni, hogy elmenekülj a problémák elől, vagy megszabadulj a negatív érzésektől?
14. érzed magad nyugtalannak, frusztráltnak vagy idegesnek, ha nem internetezhetsz?

Finnish

Alla löydätte väittämiä Internetin käytöstä. Vastatkaa ystävällisesti seuraaviin väittämiin käyttämällä vastausvaihtoehtoja 1-4: 0 " Ei koskaan ", 1 " Harvoin ", 2 " Joskus ", 3 " Usein ", 4 " Melkein aina "
Kuinka usein …
1. Onko teillä vaikeuksia lopettaa Internetin käyttö kun olette yhteydessä verkkoon?
2. Jatkatteko Internetin käyttöä, vaikka olette aikoneet lopettaa?
3. Ovatko muut (esim. puoliso/kumppani, lapset, vanhemmat) sanoneet, että teidän tulisi käyttää Internetiä vähemmän?
4. Vietättekö mieluummin aikaa Internetissä kuin muiden ihmisten (esim. puolison/kumppanin, lasten, vanhempien) kanssa?
5. Jäävätkö unenne lyhyeksi Internetin käytön vuoksi?
6. Ajatteletteko Internetiä, vaikka ette olisi yhteydessä verkkoon?
7. Odotatteko innokkaasti seuraavaa Internet-istuntoanne/-sessiotanne?
8. Ajatteletteko, että teidän tulisi käyttää Internetiä vähemmän?
9. Oletteko yrittänyt vähentää Internetin käyttöä ja epäonnistunut yrityksessänne?
10. Kiirehdittekö töistä kotiin viettääksenne aikaa Internetissä?
11. Jätättekö päivittäiset välttämättömyydet (työ, koulu tai perhe) huomiotta, koska vietätte mieluummin aikaa internetissä?
12. Menettekö Internetiin kun tunnette mielenne olevan maassa?
13. Käytättekö internetiä paetaksenne surujanne tai saadaksenne helpotusta kielteisiin tunteisiinne?
14. Tunnetteko itsenne rauhattomaksi, turhautuneeksi tai ärsyyntyneeksi, jos ette voi käyttää internetiä?

Italian

Al fine di valutare l'utilizzo di Internet che fai sul computer, rispondi per favore alle seguenti 14 domande utilizzando una scala di risposta che va da 0 a 4: 0 "Mai", 1 "Raramente" 2 "A volte", 3 "Spesso", 4 "Molto spesso"
1. Trovi difficile smettere di utilizzare Internet quando sei online (per esempio, fermare o interrompere l'attività)?
2. Continui a utilizzare Internet, nonostante la tua intenzione di smettere?
3. Gli altri (per esempio, partner, figli, genitori) ti dicono che dovresti utilizzare Internet di meno?
4. Ti capita di preferire l'utilizzo di Internet piuttosto che trascorrere del tempo con gli altri (per esempio, partner, figli, genitori)?
5. Dormi di meno a causa dell'utilizzo di Internet?
6. Pensi a Internet anche quando non sei online?
7. Aspetti con impazienza la prossima occasione in cui utilizzerai Internet?
8. Pensi che dovresti utilizzare Internet meno frequentemente?

9. Hai provato a trascorrere meno tempo su Internet senza riuscirci?
10. Svolgi in fretta le tue attività (lavoro, compiti, etc.) per poterti connettere a Internet?
11. Trascuri i tuoi impegni quotidiani (lavoro, scuola, o vita familiare) perchè preferisci andare su Internet?
12. Vai su Internet quando ti senti giù di morale?
13. Utilizzi Internet per fuggire dai tuoi problemi, dalla tristezza, o per allievare sentimenti negativi?
14. Ti senti irrequieto/a, frustrato/a o irritato/a quando non puoi utilizzare Internet?

Spanish

Para evaluar su uso de Internet en el ordenador, por favor, conteste las siguientes 14 preguntas utilizando una escala de respuesta de 0 a 4: 0 "Nunca", 1 "Raramente" 2 "A veces", 3 "Frecuentemente", 4 "Muy frecuentemente"
¿Con qué frecuencia…
1. le resulta difícil dejar de usar Internet cuando está en línea?
2. continúa utilizando Internet a pesar de su intención de parar?
3. le dicen otros (por ejemplo, compañero, hijos, padres) que debe utilizar menos Internet?
4. usted prefiere utilizar Internet en lugar de pasar tiempo con los demás (por ejemplo, compañero, hijos, padres)?
5. está falto de sueño por Internet?
6. piensa en Internet, incluso cuando no está en línea (es decir, en la vida real)?
7. está esperando ya (o deseando) su próxima sesión de Internet?
8. cree que debería utilizar Internet menos frecuentemente?
9. ha intentado, sin éxito, pasar menos tiempo en Internet?
10. se apresura en su trabajo (o deberes) con el fin de conectarse a Internet?
11. descuida sus obligaciones diarias (trabajo, escuela, o vida familiar) porque prefiere estar en Internet?
12. acude a Internet cuando se siente deprimido?
13. utiliza Internet para escapar de sus penas o conseguir alivio de sentimientos negativos?
14. se siente inquieto, frustrado o irritado cuando no puede usar Internet?

Polish
W celu pomiaru Twojego korzystania z Internetu za pośrednictwem komputera, proszę odpowiedzieć na 14 poniższych pytań ze skalą odpowiedzi, gdzie: 0 " Nigdy ", 1 " Rzadko " 2 " Czasami ", 3 " Często ", 4 " Bardzo często "
1. Jak często jest Ci trudno przerwać korzystanie z Internetu (czyli przerwać daną aktywność wykonywaną przez Internet)?
2. Jak często zdarza Ci się kontynuować korzystanie z Internetu pomimo chęci zaprzestania?
3. Jak często inne osoby (np. partner(ka), rodzic, dziecko) mówią Ci, że powinieneś/aś korzystać rzadziej z Internetu?
4. Jak często zdarza Ci się, że wolisz korzystać z Internetu niż spędzić czas z innymi osobami (partner(ka), rodzic, dziecko)?
5. Jak często jesteś niewyspany(a) z powodu korzystania z Internetu?
6. Jak często myślisz o zajęciach wykonywanych przez Internet wtedy, kiedy nie korzystasz z Interentu?
7. Jak często czujesz zadowolenie na myśl o planowanym korzystaniu z Internetu?
8. Jak często myślisz, że powinieneś/aś ograniczyć korzystanie z Interentu?
9. Jak często próbowałeś/aś bezskutecznie ograniczyć czas spędzany w Internecie?
10. Jak często śpieszy Ci się ze skończeniem jakiegoś zajęcia (praca, porządki, obowiązki domowe, itp.), aby usiąść przed Internetem?
11. Jak często zaniedbujesz codzienne obowiązki (praca, szkoła, życie rodzinne) z powodu korzystania z Internetu?
12. Jak często siadasz przed Internetem wtedy, gdy jesteś w obniżonym nastroju?
13. Jak często korzystasz z Internetu po to, by zapomnieć o przykrości, smutku albo poprawić sobie zły nastrój?
14. Jak często czujesz się niespokojny, sfrustrowany(a) czy poirytowany(a) w sytuacji, gdy nie możesz skorzystać z Internetu?