

Original Article

Bergen Social Media Addiction Scale: Translation and Validation in Greek

Aglaia Katsiroumpa, RN, MSc, PhD (c)

Clinical Epidemiology Laboratory, Faculty of Nursing, National and Kapodistrian University of Athens, Athens, Greece

Zoe Katsiroumpa, MSc, PhD (c)

School Teacher, Clinical Epidemiology Laboratory, Faculty of Nursing, National and Kapodistrian University of Athens, Athens, Greece

Evmorfia Koukia, PhD

Professor, Laboratory Nursing Counselling, Faculty of Nursing, National and Kapodistrian University of Athens, Athens, Greece

Polyxeni Mangoulia, PhD

Assistant Professor, Faculty of Nursing, National and Kapodistrian University of Athens, Athens, Greece

Parisis Gallos, PhD

Assistant Professor, Faculty of Nursing, University of West Attica, Athens, Greece

Ioannis Moisoglou, PhD

Assistant Professor, Faculty of Nursing, University of Thessaly, Larissa, Greece

Petros Galanis, PhD

Associate Professor, Clinical Epidemiology Laboratory, Faculty of Nursing, National and Kapodistrian University of Athens, Athens, Greece

Correspondence: Petros Galanis, Associate Professor, Clinical Epidemiology Laboratory, Faculty of Nursing, National and Kapodistrian University of Athens, 123 Papadiamantopoulou street, GR-11527, Athens, Greece, e-mail: pegalan@nurs.uoa.gr

Abstract

Background: The steadily increasing use of social media makes it a priority to measure in a valid way the problematic use of social media **Aim:** To translate and validate the Bergen Social Media Addiction Scale (BSMAS) in a sample of general population in Greece. **Methods:** We employed the forward-backward method to translate and adapt the BSMAS in Greek language. In particular, two scholars translated the English version of the BSMAS in Greek, and then two other scholars back translated the Greek version in English. Another scholar overviewed the translation procedure solving any discrepancies. We examined the reliability of the BSMAS by calculating Cronbach's alpha. Also, we performed a test-retest study to examine the reliability of the BSMAS by calculating the intraclass correlation coefficient. We examined the construct validity of the BSMAS by performing confirmatory factor analysis. We examined the concurrent validity of the BSMAS using the TikTok Addiction Scale

(TTAS). We employed ROC analysis to define an optimal cut-off point for the Bergen Social Media Addiction Scale. **Results:** We found that the BSMAS had very good reliability since intraclass correlation coefficient for the test-retest was 0.968 (95% confidence interval = 0.961 to 0.975, $p < 0.001$). Moreover, Cronbach's coefficient alpha for the BSMAS was 0.867. We found that the Greek version of the BSMAS had a one-factor structure as the original version. All indices indicated an acceptable one-factor model. In particular, χ^2/df was 1.216, RMSEA was 0.026, GFI was 0.991, AGFI was 0.973, TLI was 0.983, IFI was 0.992, NFI was 0.958, and CFI was 0.992. Concurrent validity of the Greek version of the BSMAS was very good since we found statistically significant correlation between the BSMAS and the TTAS ($r = 0.864$, $p < 0.001$). We found that the best cut-off point for the BSMAS was 13. The area under the curve was 0.723, while the 95% confidence interval ranged from 0.690 to 0.755. Sensitivity and specificity of the BSMAS were 0.619 and 0.712 respectively ($p < 0.001$). **Conclusion:** The Greek version of the Bergen Social Media Addiction Scale is a reliable and valid tool to measure levels of problematic social media in the general population.

Keywords: Bergen Social Media Addiction Scale; validation; Greek; validity; reliability; TikTok Addiction Scale

Introduction

Today, using social media has become a routine activity, leading to increased engagement for many people. This extensive usage has been linked to adverse effects, such as poorer sleep quality, diminished well-being, interpersonal issues, and decreased work performance, which have raised behavioral and health concerns among researchers, resulting in the concept of problematic social media use (Bányai et al., 2017; Galanis et al., 2023; Katsiroumpa, Moisoglou, Mitropoulos, et al., 2025; D. Kuss et al., 2014; D. J. Kuss & Griffiths, 2011).

Social media addiction is defined by an excessive preoccupation with social media activities, dedicating too much time and effort to them, ultimately affecting work, studies, relationships, mental health, and other crucial life areas (C. Andreassen & Pallesen, 2014). This addiction has garnered attention from both social scientists and the general public.

A 2021 meta-analysis conducted across 32 countries found that the average prevalence rate of social media addiction had reached 24% (Cheng et al., 2021).

The harmful effects of this addictive behavior have also been confirmed. Previous research has shown that social media addiction is positively correlated with anxiety, depression, and other forms of psychological distress. Studies have also linked problematic social media use to sleep disturbances. Additionally, evidence suggests that excessive reliance on social media leads to a decline in social skills, short-term attention, and the ability to retain information. Therefore, it is crucial and urgent to conduct thorough research and develop effective strategies to address social media addiction (Keles et al., 2020; D. J. Kuss & Griffiths, 2011; Wong et al., 2020).

The Bergen Social Media Addiction Scale (BSMAS) has already been validated in Greek but in a sample of undergraduate students

(Dadiotis et al., 2021). In this context, we translated and validated the BSMAS (C. S. Andreassen et al., 2012, 2016) in a sample of general population in Greece.

Methods

Study design: Study population included 267 participants in Greece. We performed our study during January 2025. We employed the forward-backward method to translate and adapt the BSMAS in Greek language (Galanis, 2019). In particular, two scholars translated the English version of the BSMAS in Greek, and then two other scholars back translated the Greek version in English. Another scholar overviewed the translation procedure solving any discrepancies.

We examined the reliability of the BSMAS by calculating Cronbach's alpha. Cronbach's alpha higher than 0.6 indicates acceptable internal reliability. Also, we performed a test-retest study to examine the reliability of the BSMAS by calculating the intraclass correlation coefficient.

We examined the construct validity of the BSMAS by performing confirmatory factor analysis (Galanis, 2013). We examined the concurrent validity of the BSMAS using the TikTok Addiction Scale (TTAS) (Bilali et al., 2025; Galanis et al., 2024; Galanis, Katsiroumpa, Moisoglou, et al., 2025; Katsiroumpa, Moisoglou, Gallos, et al., 2025). We expected a positive correlation between the BSMAS and the TTAS.

Ethical considerations: We applied the guidelines of the Declaration of Helsinki to perform this study (World Medical Association, 2013). Additionally, the study protocol was approved by the Ethics Committee of Faculty of Nursing, National

and Kapodistrian University of Athens (approval number; 05, October 10; 2024).

Statistical analysis: We performed confirmatory factor analysis (CFA) to examine the construct validity of the BSMAS. In particular, we calculated chi-square/degree of freedom (χ^2/df); root mean square error of approximation (RMSEA); goodness of fit index (GFI); adjusted goodness of fit index (AGFI); Tucker-Lewis index (TLI); incremental fit index (IFI); normed fit index (NFI); comparative fit index (CFI) (Baumgartner & Homburg, 1996; Hu & Bentler, 1998). Acceptable value for χ^2/df is <5 , for RMSEA is <0.10 , and for all other measures in the CFA >0.90 . We used the AMOS version 21 (Amos Development Corporation, 2018) to conduct the CFA. We calculated Pearson's correlation coefficient between the BSMAS and the TTAS to examine the concurrent validity of the BSMAS. Also, we calculated intraclass correlation coefficients between the two BSMAS measurements in test-retest study.

We employed the Receiver Operating Characteristic analysis to identify an optimal cut-off point for the BSMAS by using the Patient Health Questionnaire-4 (PHQ-4) as external criterion. We used the suggested cut-off points from the literature to develop dichotomous variables for PHQ-4. We used the PHQ-4 to measure levels of anxiety and depression in our sample. The PHQ-4 includes four items, and answers are on a four-point Likert scale from 0 (not at all) to 3 (nearly every day). Two items refer to anxiety and the other two items refer to depression. Score on anxiety and depression scales range from 0 to 6. Score ≥ 3 in each scale suggests anxiety and depression. Thus, the optimal cut-off point for anxiety is ≥ 3 , and for depression

is ≥ 3 (Karekla et al., 2012; Kroenke et al., 2009). We calculated sensitivity, specificity, and the Youden index. These measures take values from 0 to 1 with higher values indicating better diagnostic value of the BSMAS. The Youden index defines an optimal cut-off point and is calculated as (Sensitivity + Specificity) – 1. Additionally, we calculated the area under the curve (AUC), 95% confidence interval (CI), and p-value. Values for the AUC between 0.5 and 0.7 indicate low accuracy, values between 0.71 and 0.9 indicate moderate accuracy, and values greater than 0.9 indicate high accuracy (Akobeng, 2007; Fischer et al., 2003; Fluss et al., 2005). After defining the best cut-off point for the BSMAS, social media users with a score above this value were considered as social media users with a social media use disorder, while those below it were considered as healthy users. P-values less than 0.05 were considered as statistically significant. We used the IBM SPSS 28.0 (IBM Corp. Released 2021. IBM SPSS Statistics for Windows, Version 28.0. Armonk, NY: IBM Corp) for the analysis.

Results

Study population included 1033 participants from the general population. Among them,

75.6% (n=236) were females and 24.4% (n=76) were males. Mean age of our sample was 31.2 years (standard deviation; 12.4).

We found that the Bergen Social Media Addiction Scale had very good reliability since intraclass correlation coefficient for the test-retest was 0.968 (95% confidence interval = 0.961 to 0.975, $p < 0.001$). Moreover, Cronbach's coefficient alpha for the BSMAS was 0.867.

We performed confirmatory factor analysis to examine the structure of the BSMAS and we found that the Greek version of the BSMAS had a one-factor structure as the original version (Figure 1). Table 1 presents model fit indices for the confirmatory factor analysis. All indices indicated an acceptable one-factor model. In particular, χ^2/df was 1.216, RMSEA was 0.026, GFI was 0.991, AGFI was 0.973, TLI was 0.983, IFI was 0.992, NFI was 0.958, and CFI was 0.992. Moreover, standardized regression weights for the six items ranged from 0.69 to 0.75. Concurrent validity of the Greek version of the BSMAS was very good since we found statistically significant correlation between the BSMAS and the TTAS ($r = 0.864$, $p < 0.001$).

Table 1. Confirmatory factor analysis for the Greek version of the Bergen Social Media Addiction Scale.

Model	χ^2	df	χ^2/df	RMSEA	GFI	AGFI	TLI	IFI	NFI	CFI
Six items	9.489	7	1.356	0.019	0.997	0.991	0.998	0.999	0.997	0.999

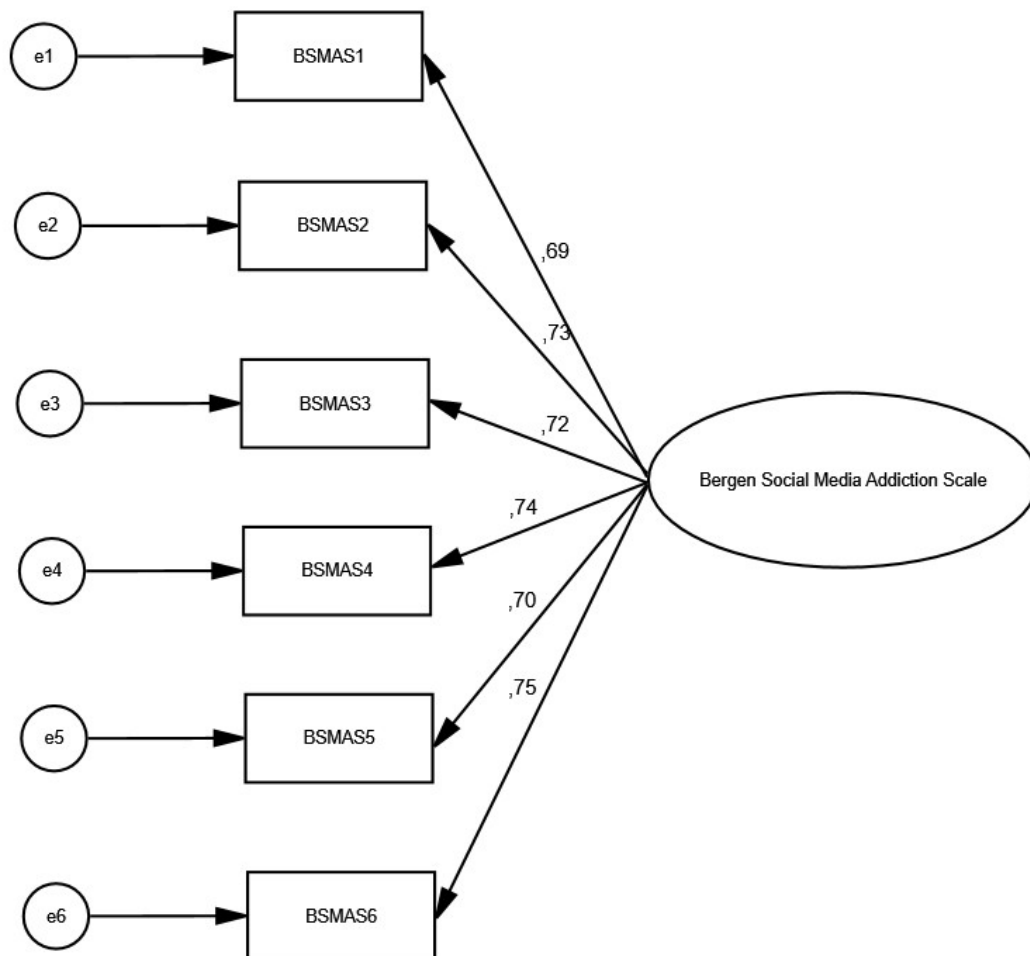


Figure 1. Confirmatory factor analysis for the Greek version of the Bergen Social Media Addiction Scale.

We employed ROC analysis to define an optimal cut-off point for the Bergen Social Media Addiction Scale. We found that the best cut-off point for the BSMAS was 13 using the PHQ-4 (anxiety scale) as criterion (Figure 1). We used the anxiety scale as gold standard since the AUC had greater value than in the depression scale (0.723 vs. 0.701). In that case, we found the highest values for Youden's index and AUC (0.723). The value

for the AUC indicated high accuracy for the cut-off point of 13. The 95% CI for the AUC ranged from 0.690 to 0.755. Sensitivity and specificity of the BSMAS were 0.619 and 0.712 respectively ($p < 0.001$). Therefore, we considered social media users with BSMAS score ≥ 13 as social media users with a social media use disorder, and those with BSMAS score < 13 as healthy users.

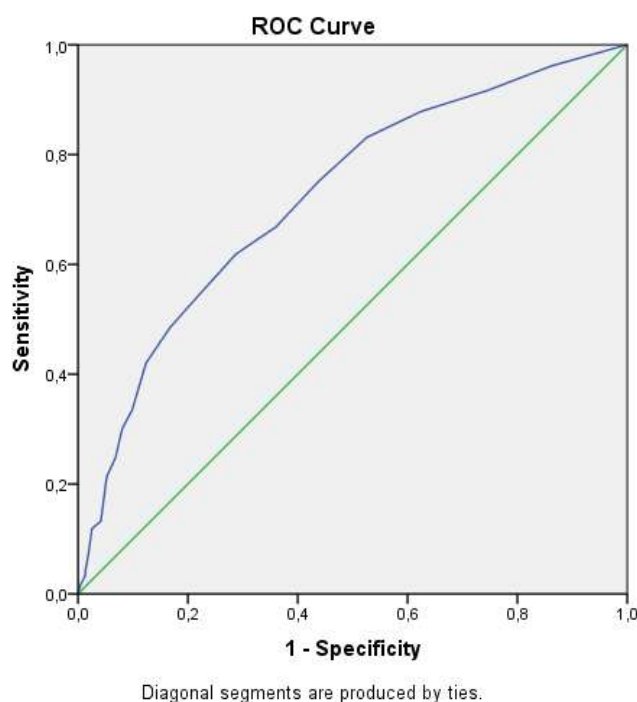


Figure 2. ROC curve of the Bergen Social Media Addiction Scale by using the PHQ-4 as the gold standard.

Discussion

There is a growing trend of problematic social media usage, which has been linked to various outcomes, including symptoms and attitudes related to eating disorders (Galanis, Katsiroumpa, Katsiroumpa, et al., 2025). Individuals with a dual dependency on social media often experience increased emotional negativity, such as depression and anxiety, particularly if they are susceptible to disordered eating. This dependency can also heighten distress and exacerbate mental health issues in other psychiatric conditions that frequently co-occur with eating disorders, like affective disorders (Balcerowska et al., 2022; Brailovskaia et al., 2019; González-Nuevo et al., 2021; Hummel & Smith, 2015; Mabe et al., 2014; Zhang et al., 2021).

Therefore, we translated and validated the Bergen Social Media Addiction Scale in the Greek language to provide a tool for scholars and healthcare professionals to measure problematic social media use in the general population. Our study shows that the Greek version of the Bergen Social Media Addiction Scale exhibits very good psychometric characteristics, confirming its validity and reliability as a tool for assessing levels of problematic social media in the general population. We found that the BSMAS is a uni-dimensional measure for problematic social media use in the general population.

Our findings confirm previous studies in several languages that assure high reliability and validity of the BSMAS (C. S. Andreassen et al., 2016; Bányai et al., 2017; Chen et al., 2020; Lin et al., 2017; Stănculescu, 2023).

The BSMAS is a widely recognized tool for assessing social media addiction and has been translated into several languages across Europe, Asia and America (C. S. Andreassen et al., 2016; Bányai et al., 2017; Cheng et al., 2021; Dadiotis et al., 2021; Leung et al., 2020; Lin et al., 2017; Monacis et al., 2017; Shin, 2022; Stănculescu, 2023; Watson et al., 2020; Yam et al., 2019; Žmavc et al., 2022). It offers a reliable and valid one-dimensional assessment of social media addiction, showing positive correlations with external measures like anxiety and depression scales.

The BSMAS is based on the "components" model of addiction, and our study provides empirical support for this theory, aligning with existing literature (Griffiths, 2005). Specifically, our research confirmed that social media addiction shares the common features outlined by this model, and these symptoms, along with the model's structure, were consistently observed and validated in the Greek general population. The study also has practical implications for researchers, clinicians, and the public, allowing for direct comparisons of social media addiction severity across different groups to identify potential differences.

Our study encountered a few limitations. We utilized a convenience sample of the general population to validate the BSMAS in Greek, which limits the generalizability of our findings. It is important to validate this tool with other samples in Greece. Additionally, we used self-reported questionnaires, including the TTAS, to examine the concurrent validity of the BSMAS. Researchers could also explore various other types of validity for the BSMAS.

In summary, the Greek version of the Bergen Social Media Addiction Scale demonstrated very good psychometric properties, making it a valid and reliable instrument for assessing levels of problematic social media use in the general population.

References

- Akobeng, A. K. (2007). Understanding diagnostic tests 3: Receiver operating characteristic curves. *Acta Paediatrica*, 96(5), 644–647. <https://doi.org/10.1111/j.1651-2227.2006.00178.x>
- Andreassen, C., & Pallesen, S. (2014). Social Network Site Addiction—An Overview. *Current Pharmaceutical Design*, 20(25), 4053–4061. <https://doi.org/10.2174/13816128113199990616>
- Andreassen, C. S., Billieux, J., Griffiths, M. D., Kuss, D. J., Demetrovics, Z., Mazzoni, E., & Pallesen, S. (2016). The relationship between addictive use of social media and video games and symptoms of psychiatric disorders: A large-scale cross-sectional study. *Psychology of Addictive Behaviors*, 30(2), 252–262. <https://doi.org/10.1037/adb0000160>
- Andreassen, C. S., Torsheim, T., Brunborg, G. S., & Pallesen, S. (2012). Development of a Facebook Addiction Scale. *Psychological Reports*, 110(2), 501–517. <https://doi.org/10.2466/02.09.18.PR0.110.2.501-517>
- Balcerowska, J. M., Bereznowski, P., Biernatowska, A., Atroszko, P. A., Pallesen, S., & Andreassen, C. S. (2022). Is it meaningful to distinguish between Facebook addiction and social networking sites addiction? Psychometric analysis of Facebook addiction and social networking sites addiction

- scales. *Current Psychology*, 41(2), 949–962.
<https://doi.org/10.1007/s12144-020-00625-3>
- Bányai, F., Zsila, Á., Király, O., Maraz, A., Elekes, Z., Griffiths, M. D., Andreassen, C. S., & Demetrovics, Z. (2017). Problematic Social Media Use: Results from a Large-Scale Nationally Representative Adolescent Sample. *PLOS ONE*, 12(1), e0169839.
<https://doi.org/10.1371/journal.pone.0169839>
- Baumgartner, H., & Homburg, C. (1996). Applications of structural equation modeling in marketing and consumer research: A review. *International Journal of Research in Marketing*, 13(2), 139–161.
[https://doi.org/10.1016/0167-8116\(95\)00038-0](https://doi.org/10.1016/0167-8116(95)00038-0)
- Bilali, A., Katsiroumpa, A., Koutelekos, I., Dafogianni, C., Gallos, P., Moisoglou, I., & Galanis, P. (2025). Association Between TikTok Use and Anxiety, Depression, and Sleepiness Among Adolescents: A Cross-Sectional Study in Greece. *Pediatric Reports*, 17(2), 34.
<https://doi.org/10.3390/pediatric17020034>
- Brailovskaia, J., Margraf, J., & Köllner, V. (2019). Addicted to Facebook? Relationship between Facebook Addiction Disorder, duration of Facebook use and narcissism in an inpatient sample. *Psychiatry Research*, 273, 52–57.
<https://doi.org/10.1016/j.psychres.2019.01.016>
- Chen, I.-H., Strong, C., Lin, Y.-C., Tsai, M.-C., Leung, H., Lin, C.-Y., Pakpour, A. H., & Griffiths, M. D. (2020). Time invariance of three ultra-brief internet-related instruments: Smartphone Application-Based Addiction Scale (SABAS), Bergen Social Media Addiction Scale (BSMAS), and the nine-item Internet Gaming Disorder Scale- Short Form (IGDS-SF9) (Study Part B). *Addictive Behaviors*, 101, 105960.
<https://doi.org/10.1016/j.addbeh.2019.04.018>
- Cheng, C., Lau, Y., Chan, L., & Luk, J. W. (2021). Prevalence of social media addiction across 32 nations: Meta-analysis with subgroup analysis of classification schemes and cultural values. *Addictive Behaviors*, 117, 106845.
<https://doi.org/10.1016/j.addbeh.2021.106845>
- Dadiotis, A., Bacopoulou, F., Kokka, I., Vlachakis, D., Chrousos, G. P., Darviri, C., & Roussos, P. (2021). Validation of the Greek version of the Bergen Social Media Addiction Scale in Undergraduate Students. *EMBnet.Journal*, 26(1), e975.
<https://doi.org/10.14806/ej.26.1.975>
- Fischer, J. E., Bachmann, L. M., & Jaeschke, R. (2003). A readers' guide to the interpretation of diagnostic test properties: Clinical example of sepsis. *Intensive Care Medicine*, 29(7), 1043–1051.
<https://doi.org/10.1007/s00134-003-1761-8>
- Fluss, R., Faraggi, D., & Reiser, B. (2005). Estimation of the Youden Index and its associated cutoff point. *Biometrical Journal. Biometrische Zeitschrift*, 47(4), 458–472.
<https://doi.org/10.1002/bimj.200410135>
- Galanis, P. (2013). Validity and reliability of questionnaires in epidemiological studies. *Arch Hellen Med*, 30(1), 97–110.
- Galanis, P. (2019). Translation and cross-cultural adaptation methodology for questionnaires in languages other than Greek. *Arch Hellen Med*, 36(1), 124–135.
- Galanis, P., Katsiroumpa, A., Katsiroumpa, Z., Mangoulia, P., Gallos, P., Moisoglou, I., & Koukia, E. (2025). Association between problematic TikTok use and mental health: A systematic review and meta-analysis. *AIMS Public Health*, 12(2), 491–519.
<https://doi.org/10.3934/publichealth.2025027>

- Galanis, P., Katsiroumpa, A., Moisoglou, I., & Konstantakopoulou, O. (2024). The TikTok Addiction Scale: Development and validation. *AIMS Public Health*, 11(4), 1172–1197. <https://doi.org/10.3934/publichealth.2024061>
- Galanis, P., Katsiroumpa, A., Moisoglou, I., & Konstantakopoulou, O. (2025). Determining an optimal cut-off point for TikTok addiction using the TikTok Addiction Scale. *Archives Hellenic Medicine*, 42(4), 554–559.
- Galanis, P., Katsiroumpa, Z., Katsiroumpa, A., Tsakalaki, A., & Vasilopoulos, S. (2023). Relationship between Sexting and Self-Esteem, Depression, Anxiety, and Stress among Young People. *International Journal of Caring Sciences*, 16(1), 62–71.
- González-Nuevo, C., Cuesta, M., & Muñoz, J. (2021). Concern about appearance on Instagram and Facebook: Measurement and links with eating disorders. *Cyberpsychology: Journal of Psychosocial Research on Cyberspace*, 15(2). <https://doi.org/10.5817/CP2021-2-9>
- Griffiths, M. (2005). A “components” model of addiction within a biopsychosocial framework. *Journal of Substance Use*, 10(4), 191–197. <https://doi.org/10.1080/14659890500114359>
- Hu, L., & Bentler, P. M. (1998). Fit indices in covariance structure modeling: Sensitivity to underparameterized model misspecification. *Psychological Methods*, 3(4), 424–453. <https://doi.org/10.1037/1082-989X.3.4.424>
- Hummel, A. C., & Smith, A. R. (2015). Ask and you shall receive: Desire and receipt of feedback via Facebook predicts disordered eating concerns. *International Journal of Eating Disorders*, 48(4), 436–442. <https://doi.org/10.1002/eat.22336>
- Karekla, M., Pilipenko, N., & Feldman, J. (2012). Patient Health Questionnaire: Greek language validation and subscale factor structure. *Comprehensive Psychiatry*, 53(8), 1217–1226. <https://doi.org/10.1016/j.comppsy.2012.05.008>
- Katsiroumpa, A., Moisoglou, I., Gallos, P., Katsiroumpa, Z., Konstantakopoulou, O., Tsiachri, M., & Galanis, P. (2025). Problematic TikTok Use and Its Association with Poor Sleep: A Cross-Sectional Study Among Greek Young Adults. *Psychiatry International*, 6(1), 25. <https://doi.org/10.3390/psychiatryint6010025>
- Katsiroumpa, A., Moisoglou, I., Mitropoulos, A., Paschali, A., Koutelekos, I., Katsiroumpa, Z., & Galanis, P. (2025). Association Between Social Media Addiction and Mental Health among Greek Young Adults. *International Journal of Caring Sciences*, 18(1), 459–466.
- Keles, B., McCrae, N., & Grealish, A. (2020). A systematic review: The influence of social media on depression, anxiety and psychological distress in adolescents. *International Journal of Adolescence and Youth*, 25(1), 79–93. <https://doi.org/10.1080/02673843.2019.1590851>
- Kroenke, K., Spitzer, R. L., Williams, J. B. W., & Lowe, B. (2009). An Ultra-Brief Screening Scale for Anxiety and Depression: The PHQ-4. *Psychosomatics*, 50(6), 613–621. <https://doi.org/10.1176/appi.psy.50.6.613>
- Kuss, D., Griffiths, M., Karila, L., & Billieux, J. (2014). Internet Addiction: A Systematic Review of Epidemiological Research for the Last Decade. *Current Pharmaceutical Design*, 20(25), 4026–4052. <https://doi.org/10.2174/13816128113199990617>
- Kuss, D. J., & Griffiths, M. D. (2011). Online Social Networking and Addiction—A Review of the Psychological Literature. *International Journal of Environmental Research and Public*

- Health*, 8(9), 3528–3552.
<https://doi.org/10.3390/ijerph8093528>
- Leung, H., Pakpour, A. H., Strong, C., Lin, Y.-C., Tsai, M.-C., Griffiths, M. D., Lin, C.-Y., & Chen, I.-H. (2020). Measurement invariance across young adults from Hong Kong and Taiwan among three internet-related addiction scales: Bergen Social Media Addiction Scale (BSMAS), Smartphone Application-Based Addiction Scale (SABAS), and Internet Gaming Disorder Scale-Short Form (IGDS-SF9) (Study Part A). *Addictive Behaviors*, 101, 105969.
<https://doi.org/10.1016/j.addbeh.2019.04.027>
- Lin, C.-Y., Broström, A., Nilsen, P., Griffiths, M. D., & Pakpour, A. H. (2017). Psychometric validation of the Persian Bergen Social Media Addiction Scale using classic test theory and Rasch models. *Journal of Behavioral Addictions*, 6(4), 620–629.
<https://doi.org/10.1556/2006.6.2017.071>
- Mabe, A. G., Forney, K. J., & Keel, P. K. (2014). Do you “like” my photo? Facebook use maintains eating disorder risk. *International Journal of Eating Disorders*, 47(5), 516–523.
<https://doi.org/10.1002/eat.22254>
- Monacis, L., De Palo, V., Griffiths, M. D., & Sinatra, M. (2017). Social networking addiction, attachment style, and validation of the Italian version of the Bergen Social Media Addiction Scale. *Journal of Behavioral Addictions*, 6(2), 178–186.
<https://doi.org/10.1556/2006.6.2017.023>
- Shin, N. Y. (2022). Psychometric Properties of the Bergen Social Media Addiction Scale in Korean Young Adults. *Psychiatry Investigation*, 19(5), 356–361.
<https://doi.org/10.30773/pi.2021.0294>
- Stănculescu, E. (2023). The Bergen Social Media Addiction Scale Validity in a Romanian Sample Using Item Response Theory and Network Analysis. *International Journal of Mental Health and Addiction*, 21(4), 2475–2492.
<https://doi.org/10.1007/s11469-021-00732-7>
- Watson, J. C., Prosek, E. A., & Giordano, A. L. (2020). Investigating Psychometric Properties of Social Media Addiction Measures Among Adolescents. *Journal of Counseling & Development*, 98(4), 458–466.
<https://doi.org/10.1002/jcad.12347>
- Wong, H. Y., Mo, H. Y., Potenza, M. N., Chan, M. N. M., Lau, W. M., Chui, T. K., Pakpour, A. H., & Lin, C.-Y. (2020). Relationships between Severity of Internet Gaming Disorder, Severity of Problematic Social Media Use, Sleep Quality and Psychological Distress. *International Journal of Environmental Research and Public Health*, 17(6), 1879.
<https://doi.org/10.3390/ijerph17061879>
- World Medical Association. (2013). World Medical Association Declaration of Helsinki: Ethical Principles for Medical Research Involving Human Subjects. *JAMA*, 310(20), 2191.
<https://doi.org/10.1001/jama.2013.281053>
- Yam, C.-W., Pakpour, A. H., Griffiths, M. D., Yau, W.-Y., Lo, C.-L. M., Ng, J. M. T., Lin, C.-Y., & Leung, H. (2019). Psychometric Testing of Three Chinese Online-Related Addictive Behavior Instruments among Hong Kong University Students. *Psychiatric Quarterly*, 90(1), 117–128.
<https://doi.org/10.1007/s11126-018-9610-7>
- Zhang, J., Wang, Y., Li, Q., & Wu, C. (2021). The Relationship Between SNS Usage and Disordered Eating Behaviors: A Meta-Analysis. *Frontiers in Psychology*, 12, 641919.
<https://doi.org/10.3389/fpsyg.2021.641919>
- Žmavc, M., Šorgo, A., Gabrovec, B., Crnković, N., Cesar, K., & Selak, Š. (2022). The Protective Role of Resilience in the

Development of Social Media Addiction in Tertiary Students and Psychometric Properties of the Slovenian Bergen Social Media Addiction Scale (BSMAS). *International*

Journal of Environmental Research and Public Health, 19(20), 13178.
<https://doi.org/10.3390/ijerph192013178>