



Trait Emotional Intelligence and Problematic Social Media Use Among Adults: The Mediating Role of Social Media Use Motives

Irfan Süral¹ · Mark D. Griffiths² · Kagan Kircaburun³ · Emrah Emirtekin⁴

Published online: 07 November 2018

© The Author(s) 2018

Abstract

There are many contributing factors to problematic social media use including personality differences, psychosocial factors, and specific use motivations. The present study ($N = 444$ emerging adults, 75% women) investigated the direct and indirect relationships between trait emotional intelligence and problematic social media use via social media use motives by testing a complex mediation model. Path analyses suggested that trait emotional intelligence was directly and indirectly associated with problematic social media use via two social media use motives: (i) expressing or presenting a more popular self, and (ii) passing time. Results of the present study indicate that trait emotional intelligence may have a role in the motives for using social media as well as the development and maintenance of problematic social media use. Moreover, future studies should focus mediator risk factors between trait emotional intelligence and problematic social media use.

Keywords Problematic social media use · Trait emotional intelligence · Social media use motives

✉ Mark D. Griffiths
mark.griffiths@ntu.ac.uk

✉ Kagan Kircaburun
kircaburun.kagan@gmail.com

Irfan Süral
isural@gmail.com

Emrah Emirtekin
emrah.emirtekin@yasar.edu.tr

¹ Computer and Instructional Technologies Department, Osmangazi University, Eskişehir, Turkey

² International Gaming Research Unit, Psychology Department, Nottingham Trent University, Nottingham, UK

³ Computer and Instructional Technologies Department, Duzce University, Duzce, Turkey

⁴ The Centre for Open and Distance Learning, Yaşar University, İzmir, Turkey

Problematic social media use (PSMU) has been an increasing concern among researchers and health professionals. Studies reporting prevalence rates of this phenomenon report different proportions of problematic users ranging between 2% and 47% (e.g., Alabi 2013; Bányai et al. 2017; Jafarkarimi et al. 2016; Olowu and Seri 2012; Shensa et al. 2017). Although there is wide variation in the prevalence rates—most probably due to non-representative samples and the collecting of data in different cultures (Bányai et al. 2017)—a small minority of individuals consistently report addiction-like symptoms, become problematic users, and experience detrimental effects from it (Hawi and Samaha 2017; Kuss and Griffiths 2017; Satici 2018).

Various scholars have proposed different theoretical models in order to understand and explain why some individuals develop and maintain problematic use of different Internet applications. The Interaction of Person-Affect-Cognition-Execution (I-PACE) model suggests that an individual's core characteristic features (e.g., personality, social cognitions, psychosocial factors, and specific usage motives) are associated with the decision to use a specific application and obtaining gratifications from that particular platform, in which such factors lead to different types of specific Internet use disorders (Brand et al. 2016). Additionally, uses and gratifications theory (U&G) asserts that individuals use specific media for specific motivations and gratifications and that individual differences (e.g., personality traits and motivations) affect user preferences and the frequency of use of that particular media (Katz et al. 1973; Rubin 1993; Ryan et al. 2014).

In addition to theoretical frameworks, empirical research also suggests that some variables are more important contributory factors for PSMU including personality (Andreassen et al. 2013; Whaitte et al. 2018) and social media use motives (Chen and Kim 2013; Floros and Siomos 2013; Kircaburun et al. 2018). In light of I-PACE model and U&G theory, the present study expected to find direct and indirect pathways from trait emotional intelligence (considered within the personality framework [Petrides and Furnham 2001]) to PSMU via social media use motives.

Trait Emotional Intelligence and Problematic Social Media Use

Trait emotional intelligence (TEI) has been defined as “the extent to which individuals attend to, process, and utilize affect-laden information of an intrapersonal (managing one's own emotions) or interpersonal (managing others' emotions) nature” (Petrides and Furnham 2003, p.39) and refers to “a constellation of emotion-related self-perceptions and dispositions, assessed through self-report” (Petrides and Furnham 2003, p. 40). TEI is a personality trait that comprise different facets such as well being (e.g., trait happiness and optimism), self-control (e.g., emotion control, stress management, impulse control), sociability (e.g., social awareness, emotion management, assertiveness), and emotionality (e.g., emotion perception, and expression, trait empathy) (Petrides and Furnham 2001; Petrides et al. 2016). Although to some extent TEI overlaps with other personality theories (such as Big Five), and despite some critics arguing that TEI does not capture any unique personality variance, it has a distinct place in the personality spectrum and lies at the lower levels of personality hierarchies with its relative specific focus on emotions (Petrides et al. 2016, 2007).

TEI is considered an important construct in maintaining an individual's psychological well-being and life satisfaction (Petrides and Furnham 2001), as well as in avoiding health and behavioral problems (Austin et al. 2005; Gugliandolo et al. 2015). This is because individuals with higher TEI deal with their problems using more rational coping (adaptive) strategies rather than emotional coping (maladaptive) strategies (Petrides et al. 2007).

It is well established that addictions and problematic behaviors (e.g., impulsive, compulsive) are maladaptive coping strategies that help individuals deal with real life problems (Kuss and Griffiths 2011). The predictive role of emotional intelligence in addictions (including substance and alcohol abuse) has been demonstrated in several studies. One systematic review posited that low emotional intelligence (e.g., regulation of emotions) may play an important role on the development and maintenance of problematic behaviors such as intensive drug and alcohol use (Kun and Demetrovics 2010). Even though this review mostly focused on general emotional intelligence theory, its overlap with TEI suggests that the latter could also be important. In addition to chemical addictions, a small number of studies have demonstrated that lower TEI may be associated with higher problematic use of technological communication mediums such as smartphones, Internet, and gaming (Beranuy et al. 2009; Che et al. 2017; Parker et al. 2008). Some of these studies concluded that excessive technology users tend to be lonely which may have resulted from their low emotional and interpersonal abilities. Also, there is little doubt that problematic use of technology is a maladaptive coping strategy against problems in everyday life struggles and difficulties, which is demonstrated by individuals who are experiencing personality and psychosocial problems (Kuss and Griffiths 2011). Therefore, it is both theoretically and empirically logical to expect from individuals who have low TEI to engage in higher problematic use of social media when compared to those with higher TEI.

The Mediating Role of Social Media Use Motives

Various scholars have investigated different motivations in order to understand the uses and gratifications of social media. The present study focuses upon motives such as (i) maintaining existing relationships, (ii) meeting new individuals and socializing, (iii) expressing or presenting more popular self (self-promotion), (iv) passing time, (v) providing entertainment, (vi) aiding task management, and (vii) providing information and education (Horzum 2016). U&G theory asserts that individuals' media use is affected by their individual differences (such as personality) and that in this case, motivations and gratifications underpin social media use (Rubin 1993). A recent study that tried to explain social media use motives with Big Five personality traits reported that individuals who were more extraverted and open to experience were using social media for social gratifications such as maintaining existing relationships and for task management and informational and educational gratifications. On the other hand, those who had lower conscientiousness used social media for expressing or presenting a more popular self (Kircaburun et al. 2018). Another study found that university students high on agreeableness and conscientiousness were using *Facebook* to maintain their existing relationships, while extraverted ones used *Facebook* for informational and educational purposes and as a task management tool (Horzum 2016). Similarly, given that those high on TEI are more extraverted, emotionally stable, agreeable, open, and conscientious (Siegling et al. 2015), TEI can be expected to alter individuals' motivations for social media use. For example, individuals low on TEI may use social media for their lack of real life social relationships, to present a more successful and popular self and to pass time. Higher TEI may be associated with higher social media use motivations of task management and obtaining information and education.

Using U&G, various studies have found that social media use motives such as entertainment, self-presentation, seeking friendship, relationship maintenance, and escapism are related to PSMU (Chen and Kim 2013; Floros and Siomos 2013; Huang 2011; Kircaburun et al. 2018; Koc and Gulyagci 2013). Evidence from prior literature and theoretical assumptions of U&G

suggest that social media use motives will vary according to different levels of TEI. In turn, motivations for engaging in social media use should influence PSMU. Thus, social media use motives should account for the relationship between trait emotional intelligence and PSMU. Based on the theoretical assumptions of the I-PACE model, U&G, and extant empirical evidence, the present study tested a mediation model to explore the direct and indirect relationships of TEI with PSMU via social media use motives.

Methods

Participants

Participants were recruited using a mixed methods approach. The study was first promoted in via social media groups and 121 individuals completed an online survey. Given the lower than expected number of participants, the same survey was administered (offline and in class) to students attending a Turkish state university. All participants were informed regarding the sole criterion for inclusion to the study, which was to have an active social media account. The final sample comprised 444 individuals, whose ages ranged from 18 to 43 years ($M_{\text{age}} = 20.45$, $SD = 3.57$; 75% female). Participants provided informed consent and completed the questionnaires voluntarily and anonymously.

Measures

Social Media Use Questionnaire The Social Media Use Questionnaire (SMUQ) assesses problematic use of social media and comprises nine items on a 5-point Likert scale from “never” to “always” (e.g., “I feel anxious, when I am not able to check my social network account”). The scale has two factors (i.e., withdrawal and compulsion) and was developed by Xanidis and Brignell (2016) and adapted to Turkish (Kircaburun et al. 2018). The SMUQ showed high internal consistency in the present study ($\alpha = 0.84$).

Trait Emotional Intelligence Questionnaire-Short Form The TEIQ-SF comprises 20 items on a 7-point Likert scale from “absolutely disagree” to “absolutely agree” and consists of four factors: emotionality (e.g., “I often find it difficult to recognize what emotion I’m feeling”), self-control (e.g., “I tend to get ‘carried away’ easily”), well being (e.g., “I generally believe that things will work out fine in my life”), and sociability (e.g., “I can deal with people effectively”). Previous studies have reported optimal validity and reliability of the Turkish form (Deniz et al. 2013; Petrides and Furnham 2003). The scale also showed high internal consistency in the present study ($\alpha = 0.87$).

Social Media Use Motives Social media use motives were assessed using one item from each of seven dimensions in the *Facebook* Usage Aims Scale (Horzum 2016) starting with the words “I use social media because I can...” and are responded to with the following responses: (i) “maintain my existing relationships”, (ii) “meet new people and socialize”, (iii) “express or present myself as being more popular”, (iv) “pass time”, (v) “entertain myself”, (vi) “manage my tasks and media (videos, photos, etc.)”, and (vii) “access information and education”. The word “*Facebook*” was replaced with “social media.” Participants were asked to choose options that were on a 5-point Likert scale from “never” to “always”.

Statistical Analysis

The present study used frequency and descriptive statistics, Pearson's correlation tests, and path analysis. The statistical analyses were carried out with SPSS 23 and AMOS 23 software. In the path analysis, maximum likelihood estimation method was used. Direct and indirect relationships were analyzed via using the bootstrapping method with 5000 bootstrap samples and 95% bias-corrected confidence intervals. Cutoff criteria (Hu and Bentler 1999) for goodness of fit indices were examined in order to decide model fit. However, after identifying covariances between mediator variables (these are not depicted in the figure), a saturated model was obtained, in which all fit indices had perfect values and there were no modification indices. Indirect pathways were tested for significance by using an estimand (Gaskin 2016).

Results

Frequency statistics, mean scores, standard deviations, minimum–maximum scores, and correlation coefficients are shown in Tables 1 and 2. Participants were asked to choose their three most used social media platforms among *Whatsapp*, *Instagram*, *Facebook*, *Twitter*, *Snapchat*, *Youtube*, and *Google+*. *Whatsapp* and *Instagram* were reported as the most popular social media platforms. All independent and mediator variables, apart from the information and education use motive of social media ($r = .08$, $p > .05$), were weakly to moderately correlated with problematic social media use (PSMU).

Path analysis was used to test the hypothesized model (Fig. 1). Results demonstrated that trait emotional intelligence (TEI) was directly associated with PSMU ($\beta = -0.39$, $p < .001$; 95% CI $[-0.46, -0.31]$) and indirectly ($\beta = -0.07$, $p < .01$; 95% CI $[-0.11, -0.03]$) via social media use motives of expressing or presenting a popular self and passing time (see Table 3). TEI explained 1% of meeting new individuals and socializing, 6% of expressing or presenting a more popular self, 2% of passing time, 2% of getting information and education, and the model explained 35% of PSMU (Fig. 2).

Table 1 Demographic features of the participants ($N = 444$)

	% (n)
Gender	
Male	25 (110)
Female	75 (334)
Daily social media use time	
Less than 2 h	17 (51)
2–4 h	50 (223)
More than 4 h	33 (146)
Most popular social media platforms	
<i>WhatsApp</i>	87 (387)
<i>Instagram</i>	77 (342)
<i>YouTube</i>	53 (237)
<i>Twitter</i>	23 (103)
<i>Facebook</i>	19 (85)
<i>Google+</i>	17 (77)
<i>Snapchat</i>	8 (36)

Table 2 Mean scores, standard deviations, score ranges, and Pearson correlation coefficients of the study variables

	1.	2.	3.	4.	5.	6.	7.	8.	9.
1. Problematic social media use	–								
2. Trait emotional intelligence	–0.45***	–							
3. Maintain existing relationship	0.19***	–0.00	–						
4. Meet new people & socialize	0.27***	–0.08	0.26***	–					
5. Express & present a popular self	0.31***	–0.24***	0.10*	0.30***	–				
6. Pass time	0.33***	–0.16**	0.21***	0.18***	0.21***	–			
7. Entertainment	0.26***	–0.06	0.16**	0.16**	0.05	0.50***	–		
8. Task management	0.19***	–0.01	0.11*	0.18***	0.19***	0.17***	0.26***	–	
9. Information and education	–0.08	0.14**	0.09	–0.12**	–0.11*	–0.11*	–0.01	0.16**	–
Mean	2.71	4.59	3.12	2.11	1.54	3.57	4.03	3.05	3.43
SD	0.75	0.90	1.16	1.08	0.90	1.08	0.84	1.25	0.97
Score Ranges	1.00–4.89	1–7	1–5	1–5	1–5	1–5	1–5	1–5	1–5

* $p < .05$; ** $p < .01$; *** $p < .001$

Discussion

The present study examined the complex relationship between trait emotional intelligence (TEI) and problematic social media use (PSMU) using a complex mediation model. According to the results of the path analyses, TEI was moderately directly and weakly indirectly

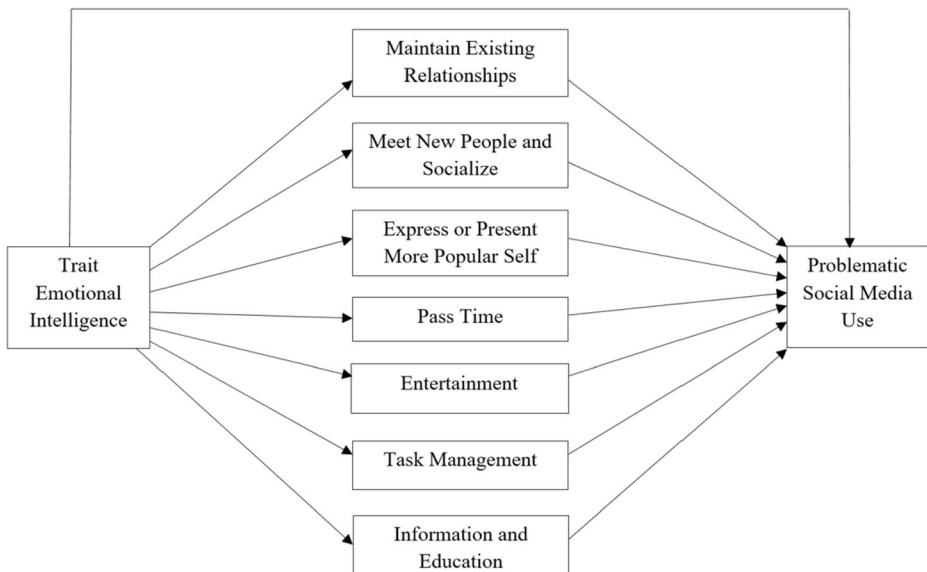


Fig. 1 Hypothesized model testing the mediator role of social media use motives

Table 3 Standardized estimates of total, direct, and indirect effects on problematic social media use and mediator variables

	Effect	S.E.	% explained of total effect
TEI → PSMU (total effect)	-0.46***	0.04	-
TEI → PSMU (direct effect)	-0.39***	0.04	85
TEI → PSMU (total indirect effect)	-0.07**	0.02	15
TEI → MEPO → PSMU (indirect effect)	-0.03**	0.01	6
TEI → PT → PSMU (indirect effect)	-0.02**	0.01	4

Only significant indirect effects are shown in the table

S.E. standardized error, PSMU problematic social media use, TEI trait emotional intelligence, MEPO express or present a more popular self, PT pass time

** $p < .01$; *** $p < .001$

associated with PSMU via the motives of expressing or presenting a more popular self and passing time.

TEI was directly associated with PSMU. This result may be interpreted in that individuals who are lower on TEI use PSMU as a coping strategy to deal with their real life troubles (Petrides et al. 2007) because prior studies indicate that individuals with lower TEI experience health, psychological, and behavioral problems more frequently than those who have higher TEI (Austin et al. 2005; Gugliandolo et al. 2015). Also, individuals who have lower TEI have higher scores on rumination (Petrides et al. 2007), which may be another explanation for this direct relationship. Rumination refers to the “intrusive thoughts or images about past mistakes or failures that cause negative feelings when they occur” (McLaughlin et al. 2007, p. 27).

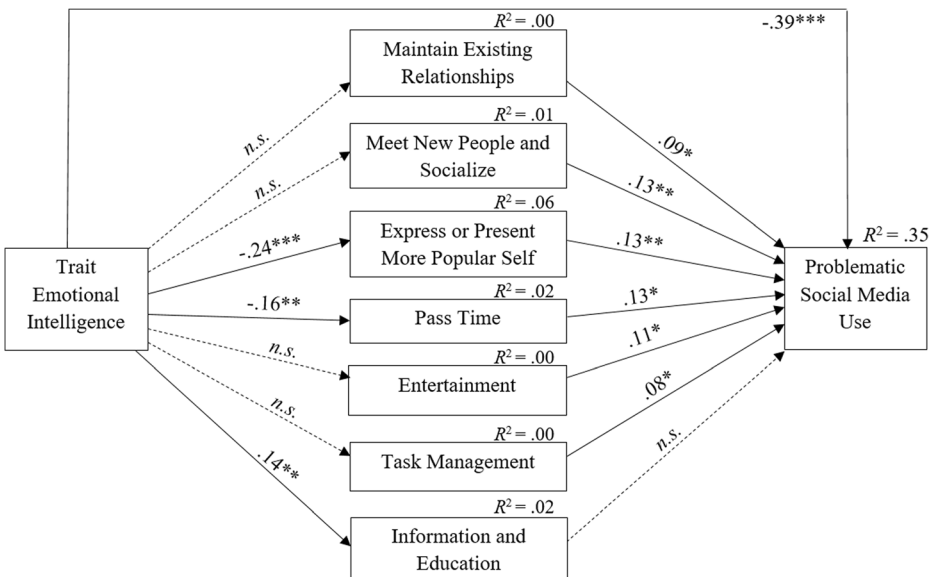


Fig. 2 Final model of the significant path coefficients between trait emotional intelligence, social media use motives, and problematic social media use. For clarity, correlations between the mediator variables have not been depicted in the figure and insignificant path coefficients have been depicted as dashed lines. * $p < .05$; ** $p < .01$; *** $p < .001$

Those who have lower TEI may be expected to experience more ruminative intrusions and in order to cope with or avoid these unpleasant thoughts they may engage in increased PSMU.

Social media use motives accounted for only a small part of the relationship between TEI and PSMU. Individuals with lower TEI used social media more to express and present themselves as being more popular and to pass time. In turn, these motives were associated with higher PSMU. This finding is consistent with the existing studies suggesting that self-presentation and escapism motives are among the motives that may lead to problematic use (Chen and Kim 2013; Floros and Siomos 2013; Kircaburun et al. 2018). It may be that TEI is positively associated with academic performance and success (Qualter et al. 2012; Perera and DiGiacomo 2013; Petrides et al. 2004); therefore, individuals low on TEI might be using social media excessively as a procrastination or avoidance behavior from real life responsibilities (Meier et al. 2016). Moreover, self-promotion on social media has been found to be related with higher Machiavellianism (Rosenberg and Egbert 2011), whereas Machiavellianism is also associated with lower TEI (Petrides et al. 2011).

The present study has a number of limitations that should be taken into account when interpreting the findings. First, the cross-sectional design prevents the authors from drawing causal relationships. In order to be able to indicate causality and confidently identify the directions of these relationships, future studies need to employ longitudinal designs. Second, the research data were collected via self-report questionnaires that are vulnerable to well-known biases. Future studies require more in-depth analysis using qualitative or mixed methods. Finally, the non-representative study sample mostly comprised emerging adult students from a single university in Turkey; therefore, generalizability of the results is limited both age-wise and cross-culturally. Future studies need to replicate the findings in the present study using different age group samples from other cultures.

Despite its limitations, the present study is the first to demonstrate the direct and indirect associations between trait emotional intelligence and problematic social media via social media use motives of expressing or presenting a more popular self and passing time. The findings of the present study suggest that when considering PSMU and social media use motives, trait emotional intelligence should be taken into account. Future studies should investigate the relationship between facets of trait emotional intelligence and problematic social media use and the mediating roles of different psychosocial risk factors other than self-esteem and depression.

Compliance with Ethical Standards

Conflict of Interest The authors declare that they have no conflict of interest.

Ethical Approval All procedures performed in this study involving human participants were in accordance with the ethical standards of University's Research Ethics Board and with the 1975 Helsinki Declaration.

Informed Consent Informed consent was obtained from all participants.

Open Access This article is distributed under the terms of the Creative Commons Attribution 4.0 International License (<http://creativecommons.org/licenses/by/4.0/>), which permits unrestricted use, distribution, and reproduction in any medium, provided you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license, and indicate if changes were made.

References

- Alabi, O. F. (2013). A survey of Facebook addiction level among selected Nigerian university undergraduates. *New Media and Mass Communication*, 10(2012), 70–80.
- Andreassen, C. S., Griffiths, M. D., Gjertsen, S. R., Krossbakken, E., Kvam, S., & Pallesen, S. (2013). The relationships between behavioral addictions and the five-factor model of personality. *Journal of Behavioral Addictions*, 2(2), 90–99.
- Austin, E. J., Saklofske, D. H., & Egan, V. (2005). Personality, well-being and health correlates of trait emotional intelligence. *Personality and Individual Differences*, 38(3), 547–558.
- 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>.
- Beranuy, M., Oberst, U., Carbonell, X., & Chamarro, A. (2009). Problematic internet and mobile phone use and clinical symptoms in college students: The role of emotional intelligence. *Computers in Human Behavior*, 25(5), 1182–1187.
- Brand, M., Young, K. S., Laier, C., Wölfling, K., & Potenza, M. N. (2016). Integrating psychological and neurobiological considerations regarding the development and maintenance of specific internet-use disorders: An interaction of person-affect-cognition-execution (I-PACE) model. *Neuroscience & Biobehavioral Reviews*, 71, 252–266.
- Che, D., Hu, J., Zhen, S., Yu, C., Li, B., Chang, X., & Zhang, W. (2017). Dimensions of emotional intelligence and online gaming addiction in adolescence: The indirect effects of two facets of perceived stress. *Frontiers in Psychology*, 8, 1206.
- Chen, H. T., & Kim, Y. (2013). Problematic use of social network sites: The interactive relationship between gratifications sought and privacy concerns. *Cyberpsychology, Behavior, and Social Networking*, 16(11), 806–812.
- Deniz, M. E., Özer, E., & Isik, E. (2013). Trait emotional intelligence questionnaire-short form: Validity and reliability studies. *Education and Science*, 38(169), 407–419.
- Floros, G., & Siomos, K. (2013). The relationship between optimal parenting, Internet addiction and motives for social networking in adolescence. *Psychiatry Research*, 209(3), 529–534.
- Gaskin, J. (2016). *Gaskination's statistics*. Retrieved July 22, 2018, from: <http://statwiki.kolobkreatations.com>.
- Gugliandolo, M. C., Costa, S., Cuzzocrea, F., Larcán, R., & Petrides, K. V. (2015). Trait emotional intelligence and behavioral problems among adolescents: A cross-informant design. *Personality and Individual Differences*, 74, 16–21.
- Hawi, N. S., & Samaha, M. (2017). The relations among social media addiction, self-esteem, and life satisfaction in university students. *Social Science Computer Review*, 35(5), 576–586.
- Horzum, M. B. (2016). Examining the relationship to gender and personality on the purpose of Facebook usage of Turkish university students. *Computers in Human Behavior*, 64, 319–328.
- Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6(1), 1–55.
- Huang, H. (2011). Social media addiction among adolescents in urban China: An examination of sociopsychological traits, uses and gratifications, academic performance, and social capital (Doctoral dissertation). Hong Kong: Chinese University of Hong Kong.
- Jafarkarimi, H., Sim, A. T. H., Saadatdoost, R., & Hee, J. M. (2016). Facebook addiction among Malaysian students. *International Journal of Information and Education Technology*, 6(6), 465–469.
- Katz, E., Blumler, J. G., & Gurevitch, M. (1973). Uses and gratifications research. *The Public Opinion Quarterly*, 37(4), 509–523.
- Kircaburun, K., Alhabash, S., Tosuntaş, Ş. B., & Griffiths, M. D. (2018). Uses and gratifications of problematic social media use among university students: A simultaneous examination of the Big Five of personality traits, social media platforms and social media use motives. *International Journal of Mental Health and Addiction*. <https://doi.org/10.1007/s11469-018-9940-6>.
- Koc, M., & Gulyagci, S. (2013). Facebook addiction among Turkish college students: The role of psychological health, demographic, and usage characteristics. *Cyberpsychology, Behavior, and Social Networking*, 16(4), 279–284.
- Kun, B., & Demetrovics, Z. (2010). Emotional intelligence and addictions: A systematic review. *Substance Use & Misuse*, 45(7–8), 1131–1160.
- 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.
- Kuss, D. J., & Griffiths, M. D. (2017). Social networking sites and addiction: Ten lessons learned. *International Journal of Environmental Research and Public Health*, 14(3), 311.

- McLaughlin, K. A., Borkovec, T. D., & Sibrava, N. J. (2007). The effects of worry and rumination on affect states and cognitive activity. *Behavior Therapy, 38*(1), 23–38.
- Meier, A., Reinecke, L., & Meltzer, C. E. (2016). “Facebocrastination”? Predictors of using Facebook for procrastination and its effects on students’ well-being. *Computers in Human Behavior, 64*, 65–76.
- Olowu, A. O., & Seri, F. O. (2012). A study of social network addiction among youths in Nigeria. *Journal of Social Science and Policy Review, 4*(1), 63–71.
- Parker, J. D., Taylor, R. N., Eastbrook, J. M., Schell, S. L., & Wood, L. M. (2008). Problem gambling in adolescence: Relationships with internet misuse, gaming abuse and emotional intelligence. *Personality and Individual Differences, 45*(2), 174–180.
- Perera, H. N., & DiGiacomo, M. (2013). The relationship of trait emotional intelligence with academic performance: A meta-analytic review. *Learning and Individual Differences, 28*, 20–33.
- Petrides, K. V., & Furnham, A. (2001). Trait emotional intelligence: Psychometric investigation with reference to established trait taxonomies. *European Journal of Personality, 15*(6), 425–448.
- Petrides, K. V., & Furnham, A. (2003). Trait emotional intelligence: Behavioural validation in two studies of emotion recognition and reactivity to mood induction. *European Journal of Personality, 17*(1), 39–57.
- Petrides, K. V., Frederickson, N., & Furnham, A. (2004). The role of trait emotional intelligence in academic performance and deviant behavior at school. *Personality and Individual Differences, 36*(2), 277–293.
- Petrides, K. V., Pita, R., & Kokkinaki, F. (2007). The location of trait emotional intelligence in personality factor space. *British Journal of Psychology, 98*(2), 273–289.
- Petrides, K. V., Vernon, P. A., Schermer, J. A., & Veselka, L. (2011). Trait emotional intelligence and the dark triad traits of personality. *Twin Research and Human Genetics, 14*(1), 35–41.
- Petrides, K. V., Mikolajczak, M., Mavroveli, S., Sanchez-Ruiz, M. J., Furnham, A., & Pérez-González, J. C. (2016). Developments in trait emotional intelligence research. *Emotion Review, 8*(4), 335–341.
- Qualter, P., Gardner, K. J., Pope, D. J., Hutchinson, J. M., & Whiteley, H. E. (2012). Ability emotional intelligence, trait emotional intelligence, and academic success in British secondary schools: A 5 year longitudinal study. *Learning and Individual Differences, 22*(1), 83–91.
- Rosenberg, J., & Egbert, N. (2011). Online impression management: personality traits and concerns for secondary goals as predictors of self-presentation tactics on Facebook. *Journal of Computer-Mediated Communication, 17*(1), 1–18.
- Rubin, A. M. (1993). Audience activity and media use. *Communications Monographs, 60*(1), 98–105.
- Ryan, T., Chester, A., Reece, J., & Xenos, S. (2014). The uses and abuses of Facebook: A review of Facebook addiction. *Journal of Behavioral Addictions, 3*(3), 133–148.
- Satici, S. A. (2018). Facebook addiction and subjective well-being: A study of the mediating role of shyness and loneliness. *International Journal of Mental Health and Addiction*. <https://doi.org/10.1007/s11469-017-9862-8>.
- Shensa, A., Escobar-Viera, C. G., Sidani, J. E., Bowman, N. D., Marshal, M. P., & Primack, B. A. (2017). Problematic social media use and depressive symptoms among US young adults: A nationally-representative study. *Social Science & Medicine, 182*, 150–157.
- Siegling, A. B., Furnham, A., & Petrides, K. V. (2015). Trait emotional intelligence and personality: Gender-invariant linkages across different measures of the Big Five. *Journal of Psychoeducational Assessment, 33*(1), 57–67.
- Whaite, E. O., Shensa, A., Sidani, J. E., Colditz, J. B., & Primack, B. A. (2018). Social media use, personality characteristics, and social isolation among young adults in the United States. *Personality and Individual Differences, 124*, 45–50.
- Xanidis, N., & Brignell, C. M. (2016). The association between the use of social network sites, sleep quality and cognitive function during the day. *Computers in Human Behavior, 55*, 121–126.