







Research Article

Internet Addiction on Psycho-Social Symptoms of Happiness and Aggression through Difficulties in Emotion Regulation: Evidence Following COVID-19 Pandemic

Mehmet Kavakli¹  , Suleyman Barbaros Yalcin² , Muhammet Coşkun³ 

¹ *Department of Psychology, Necmettin Erbakan University, Türkiye*

² *Department of Psychological Counseling and Guidance, Necmettin Erbakan University, Türkiye*

³ *Department of Psychology, Middle East Technical University, Türkiye*

ABSTRACT

Background: Internet usage has increased during the pandemic. The aim of this study is to examine the relationship between internet addiction (IA), happiness, and aggression in the context of difficulties in emotion regulation (DER). The psycho-social symptoms of the COVID-19 pandemic appear to be more persistent over time compared to its physical symptoms, especially regarding Internet addiction in the young population. This study seeks to understand these effects on happiness and aggression through difficulties in emotion regulation. **Participants and Procedure:** The sample of this study consisted of 325 university students. Data were gathered using the Young Internet Addiction Scale Short Form, Oxford Happiness Scale Short-Form, Difficulties in Emotion Regulation Scale Brief-Form, and Buss-Perry Aggression Questionnaire. **Results:** The results showed that internet addiction was negatively related to happiness, and this relationship was mediated by difficulties in emotion regulation. Similarly, internet addiction was positively related to aggression, and this relationship was fully mediated by difficulties in emotion regulation as well. **Conclusion:** These research findings emphasize the need for creating effective interventions to enhance emotion regulation skills in internet-

addicted adults. The results are discussed in light of the effects of the coronavirus pandemic.

Keywords: Internet addiction, happiness, emotion regulation difficulty, aggression

UDK: 613.8:159.942:578.834

DOI: 10.19090/pp.v17i1.2466

Received: 07.04.2023.

Revised: 08.08.2023.

Accepted: 17.09.2023.



Copyright © 2024 The Author(s).

This is an open access article distributed under the terms of the [Creative Commons Attribution License](#), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

✉ Corresponding email: mkavakli@erbakan.edu.tr

Introduction

While the world has grappled with the rising number of deaths from the COVID-19 pandemic, social scientists and practitioners have shifted their focus to exploring the antecedents and outcomes of the pandemic (Arslan & Coşkun, 2022a; Gica et al., 2020; Kavaklı et al., 2020; Özmen et al., 2023; Yıldırım et al., 2022). Numerous studies have highlighted a surge in various psychological problems such as anxiety, depression (Arslan & Coşkun, 2022a), posttraumatic stress disorders (Carmassi et al., 2020), and a decline in well-being (Dodd et al., 2021). These issues stem not only from the inherently stressful nature of the pandemic but also from the measures adopted to combat it. Specifically, precautions like lockdowns, social distancing, travel bans, and remote education forced rapid lifestyle adaptations, making individuals more susceptible to another significant issue: Internet addiction.

Indeed, Internet-based addiction had been a growing concern long before the COVID-19 era (Mak et al., 2014). However, emotional reactions to traumatic events such as this pandemic aren't always adaptive. They can lead to an increased risk of adopting maladaptive coping mechanisms, like addictive behaviors that include excessive Internet usage (Sun et al., 2020). Unlike other traumatic events, the risk of developing Internet-based addictive behaviors may be heightened during the pandemic. This is because the pandemic's associated measures necessitated prolonged social isolation, pushing individuals towards online engagements (Tateno et al., 2019). Consequently, alongside the surge in Internet users during the COVID-19 era, there has been a sharp increase in Internet overuse (Li et al., 2021; Servidio et al., 2021; Siste et al., 2020).

This public health issue has rapidly escalated among newer generations (Lozano-Blasco et al., 2022). Thus, it warrants meticulous research and intervention, as Internet addiction is linked with significant physical and psychological health challenges. These include sleep problems (Alimoradi et al., 2019), destructed social relations (Hou et al., 2019), exacerbated mental disorders (Fumero et al., 2018), poor academic performance (Usman et al., 2014), aggression (Teng et al., 2014), and diminished psychological well-being (Samaha & Hawi, 2016). In other words, Internet addiction is a burgeoning global issue,

which surged unexpectedly during the pandemic. Consequently, investigating its outcomes and potential risk factors is pivotal for devising effective intervention and prevention strategies. To this end, the current study aimed to comprehend how Internet addiction is associated with antisocial behaviors (aggression) and positive development (happiness) of youth whilst investigating the exploratory role of difficulties in emotion regulation.

Internet Addiction and Happiness

In general, Internet addiction is characterized by a lack of control over, and excessive use of the Internet that negatively influences the quality of lives of individuals (Davis, 2001). Excessive and maladaptive use of the Internet steals time allocated for real-life social relations, lessens opportunities to develop social skills for real life, and decreases physical activity (de Leeuw et al., 2010). Consequently, this results in isolated individuals who suffer from psychosocial maladjustment (Cheng et al., 2015), reduced well-being (Valkenburg & Peter, 2007), and happiness (Baltaci, 2019; Muusses et al., 2014; Yilmaz & Karaoglan-Yilmaz, 2022).

Although addictive behaviors, including Internet-based ones, are related to pleasure in life, these are toxic sources of pleasure and decrease happiness in the end (e.g., Yang et al., 2017), which is fundamental for healthy human development. Human beings are genuinely motivated to strive for optimal and permanent well-being in life. Indeed, happiness consists of various elements such as eudemonic well-being (i.e., meaning in life), affective well-being (positive feelings), and evaluative well-being (i.e., satisfaction in life), which all make it essential for a physically and psychologically healthy lifetime (Step toe, 2019). As an important component of psychological well-being, thousands of empirical researches studied happiness from the micro-individual level to the macro level of society (Veenhoven, 2015). Correspondingly, a substantial body of evidence shows that happy people are more resistant to physical and mental illnesses (Sabatini, 2014; Step toe, 2019), and they are more likely to grow positive mental health (Smith et al., 2023).

In essence, people need happiness and well-being to flourish, but Internet addiction emerges as an inhibitory factor against it. Past research

already found a negative association between Internet addiction and happiness (e.g., Baltaci, 2019; Muusses et al., 2014), but still, there is a gap in what possible third factors explain this relationship. Within this scope, the present study readdressed this relationship under the COVID-19 crisis by exploring the role of emotion regulation difficulties.

Internet Addiction and Aggression

As mentioned above, Internet addiction does not only impede the pursuit of positive development but also has detrimental impacts like antisocial behaviors, including aggression. Aggression, in general, involves any behaviors that are intended to harm another individual (Allen & Anderson, 2017). More specifically, the present paper adapted the conceptualization and related measurement by Buss and Perry (1992). They approached aggression as physical acts associated with hostile cognitions, perceptions, and feelings. Internet overuse, including social media, movies, and games, might be a possible explanation behind these aggressive acts. Several past studies underlined the aggressive behavioral outcomes in youth with Internet-based addictions (Agbaria, 2021; Caner & Evgin, 2021; Teng et al., 2014). Ultimately, aggression gives rise to both individual and societal problems, such as ruined social relations (Skrzypiec et al., 2021), increased psychopathological symptoms (Hayes et al., 2021), crimes (Vakili et al., 2015), and so on. Even though these adverse effects create serious concerns, it is still ambiguous why and how Internet addiction increases aggressive behaviors (Agbaria, 2021). This limits coming up with effective intervention and prevention strategies against developing aggression in young people (Widyanto & McMurrin, 2004). With this backdrop, the present study proposes difficulties in emotion regulation as a potential mediator explaining the relationship between Internet addiction and aggression, further elucidated in the following sections.

Role of Difficulties in Emotion Regulation

Emotions inform us about how we interact with the social world. They assist individuals in communication, feel empathy, make decisions, and avoid dangers in life (Hwang & Matsumoto, 2019; Kavakli, 2019); but they may also

cause poor intrapersonal and interpersonal functioning (Gratz & Roemer, 2004) and various psychopathological symptoms (Sheppes et al., 2015). Whether emotions play a constructive or detrimental role largely hinges on an individual's capacity for emotion regulation (McRae & Gross, 2020). Emotion regulation (ER) means intentional and automatic processes that involve the emergence, way of experience, magnitude, duration, and expression of an emotion (Gross & Thompson, 2007). Whilst maladaptive strategies increase the risks for the onset of various problems like derogated social relations, depressive symptoms (Marroquin & Nolen-Hoeksema, 2015), and aggressive behaviors (Robertson et al., 2012); implementing effective emotion regulation strategies contributes to the healthy functioning of individuals, (Thompson, 2011), including increased happiness (Quoidbach et al., 2015; Verzeletti et al., 2016). Hence, difficulties in emotion regulation, like Internet addiction, also prevent the pursuit of happiness and cause aggression.

Given the preceding research, emotion dysregulation and Internet addiction seem to be mutually responsible for this adverse influence on happiness and aggression. Previous empirical findings pointed out that individuals with excessive Internet use were more prone to suffer emotion regulation difficulties (Evren et al., 2018; Karaer & Akdemir, 2019; Stavropoulos et al., 2017; Yen et al., 2018). Leading a life dominated by the Internet means less social interaction, less social support (Karaer & Akdemir, 2019), and more impulsivity (Reed et al., 2015), which all-in return result in impaired cognitive reappraisal, identification and expression of emotions, and self-control. As a result, we expected that Internet addiction would inflate difficulties in emotion regulation, which in return would lead to increased aggression and diminished happiness.

Present Study

Psycho-social symptoms of the COVID-19 pandemic seem to be more resistant over time compared to its physical symptoms, especially through Internet addiction in a young population. The current study aimed to understand these effects on happiness and aggression through difficulties in emotion regulation. Like the number of Internet users, the number of studies on

excessive Internet use has also been increasing, but still more empirical explorations are needed for effective prevention programs and treatment offers (Arslan & Coşkun, 2022b; Kuss et al., 2021). Moreover, despite the worldwide pervasiveness of the Internet; several social, cultural, and economic factors create cross-cultural differences regarding people's happiness (Oishi & Gilbert, 2016), emotion regulation (Potthoff et al., 2016), and aggression (Fry, 2017). As publication bias toward Western societies is also included in the equation, culturally diverse samples other than non-Western ones would enable more robust and generalizable findings (Tindle, 2021). Furthermore, to the best of our knowledge, no study has examined the indirect effect of Internet addiction on happiness and aggression through emotion regulation. Considering all the above, the current work is believed to shed light on both the literature and the field for prevention and intervention strategies against the detrimental effects of Internet addiction.

Method

Participants

This research was carried out with university students studying at a state university in Turkey. In this study, 325 participants aged 18-50 years were included ($M = 21.20$, $SD = 3.09$). Sixty-nine males (21.2%) and 256 females (78.8%) participated, and participants were selected using the convenience sampling method in this research. The convenience sampling method is one of the non-probability sampling methods. The researchers announced the study, and participants self-select participation in the convenience sampling (Emerson, 2015; Stratton, 2021). The data were collected in January and February of 2022. An informed consent form stating the details of the research was provided to all participants. Those participants who volunteered for the study, approved the form, and consented to participate were included in the study sample.

Data Collection Tools

Young Internet Addiction Scale Short-Form

This scale was developed by Young (1998) and converted into short-form by Pawlikowski et al (2013). The psychometric properties of the Turkish language version of this scale were assessed by Kutlu et al (2016), and Cronbach's alpha value of the scale was .91 in the university student sample. The scale has a single-factor structure, 12 items, and a 5-point Likert-type scale ranging from *does not apply* (1) to *always* (5). The psychometric properties of the scale show that it is suitable for the Turkish sample. High scores from on the scale indicate a tendency towards internet addiction. Additionally, this scale's Cronbach's alpha value was .87, and Omega reliability was .87 in the current study.

Oxford Happiness Scale Short-Form

This scale was developed by Hills and Argyle (2002) and the psychometric properties of the Turkish language version of the scale were assessed by Doğan and Akıncı Çötök (2011). Cronbach's alpha value of the scale was calculated as .74 in the university student sample. The scale has a single-factor structure, 7 items, and a 5-point Likert-type scale ranging from *strongly disagree* (1) to *strongly agree* (5). The psychometric properties of the scale show that it is suitable for the Turkish sample. Additionally, this scale's Cronbach's alpha value was .77, and Omega reliability was .80 in the current study.

Difficulties in Emotion Regulation Scale Brief-Form

This scale was developed by Gratz and Roemer, 2004, and a brief form of this scale was developed by Bjureberg et al (2016). The psychometric properties of the Turkish language version of this scale were assessed by Yiğit and Yiğit (2019). The Turkish language version of the scale demonstrates good psychometric properties. The scale has a five-factor structure (clarity, goals, impulse, strategies, nonacceptance), 16 items, and a 5-point Likert-type scale ranging from *almost never* (1) to *almost always* (5). The scale also gives a total score, and the total score was used in this study. Moreover, this scale's

Cronbach's alpha value was .92, and Omega reliability was .92 in the current study.

Buss-Perry Aggression Questionnaire

This scale was developed by Buss and Perry (1992) and the psychometric properties of the Turkish language version of the scale were assessed by Demirtaş-Madran (2013). The Turkish language version of this scale demonstrates good psychometric properties. The scale has a four-factor structure (physical aggression, verbal aggression, anger, and hostility), 29 items, and a 5-point Likert-type scale ranging from *strongly agree* (1) to *strongly disagree* (5). The scale also gives a total score, and the total score was used in this study. Furthermore, this scale's Cronbach's alpha value was .91, and Omega reliability was .92 in the current study.

Procedure & Data Analysis Plan

Before the study, an informed consent form stating the details of the research was provided to all participants. The data were collected through an online platform in which questionnaires were presented in random order to prevent order effect. In the data analysis part, first, preliminary analyses were performed, such as data screening, checking normality assumption, descriptive analyses, and correlation analysis. For the normality assumption, cut-off values ($< |1|$) of skewness and kurtosis were considered (Tabachnick et al., 2013). Then, Pearson correlation analysis was run to see the correlations between the study variables. Finally, direct and indirect effects from Internet addiction to happiness and aggression through difficulties in emotion regulation were calculated by using Jamovi statistics program (Jamovi, 2023). The significance of indirect effects was questioned by using the bootstrapping method with 2000 resampling and 95% CI.

Results

Descriptive statistics and correlations

Correlation analysis results, means, standard deviations, reliability coefficients, skewness, and kurtosis values are given in Table 1. There is a

significant and negative correlation between internet addiction and happiness. Difficulties in emotion regulation positively correlated with internet addiction, and aggression and negatively correlated with happiness. Aggression is negatively associated with happiness. To test the normal distribution assumption, skewness and kurtosis values were examined. All variables' skewness and kurtosis values were found within acceptable limits (see also Table 1).

Table 1

Correlations and descriptive statistics among variables

	1	2	3	4	M	SD	α	ω	SK	KR
IA	-				28.3	8.73	.87	.87	.39	-.32
HAP	-.26***	-			23.2	5.10	.77	.80	-.31	-.24
AGG	.17**	-.31***	-		77.3	20.00	.91	.92	.47	-.23
DER	.50***	-.42***	.18***	-	43.5	13.2	.92	.92	.33	-.36

Note. IA: internet addiction, HAP: happiness, AGG: aggression, DER: difficulties in emotion regulation, M: mean, SD: standard deviation, α : Cronbach alpha reliability, ω : McDonald's omega reliability, SK: skewness, KR: kurtosis; * $p < .05$, ** $p < .01$, *** $p < .001$

Testing for mediating role of difficulties in emotion regulation

As can be seen in Table 2, the relationship between internet addiction and happiness is fully mediated by difficulties in emotion regulation (standardized indirect effect: -.19, 95% CI [-.159, -.070]). When difficulties in emotion regulation are included in the model, the direct relationship between internet addiction and happiness becomes insignificant.

Table 2

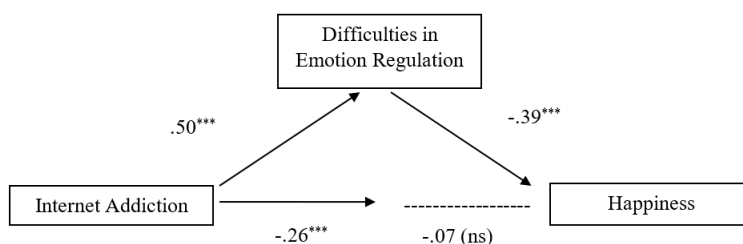
The mediating role of difficulties in emotion regulation in the relationship between Internet addiction and happiness

Effect	Label	Estimate	SE	95% Confidence Interval		Z	p	% Mediation
				Lower	Upper			
Indirect	a × b	-0.19	0.0220	-0.159	-0.0698	-5.100	< .001	74.1
Direct	c	-0.07	0.0410	-0.121	0.0395	-0.958	0.338	25.9
Total	c + a × b	-0.26	0.0348	-0.218	-0.0827	-4.353	< .001	100.0
Path Estimates								
IA→DER	a	0.50	0.0754	0.595	0.8936	9.970	< .001	
DER→HAP	b	-0.39	0.0252	-0.199	-0.1019	-5.917	< .001	
IA→HAP	c	-0.07	0.0410	-0.121	0.0395	-0.958	0.338	

Note. IA: internet addiction, HAP: happiness, AGG: aggression, DER: difficulties in emotion regulation, SE: standard error

Figure 1

The mediating role of difficulties in emotion regulation in the relationship between internet addiction and happiness



Note. ns (nonsignificant), Figure 1 displays beta coefficients that have been standardized. ***p<.001.

As can be seen in Table 3, the relationship between internet addiction and aggression is fully mediated by difficulties in emotion regulation

(standardized indirect effect: .07, 95% CI [.008, .294]). When difficulties in emotion regulation are included in the model, the direct relationship between internet addiction and aggression becomes insignificant.

Table 3

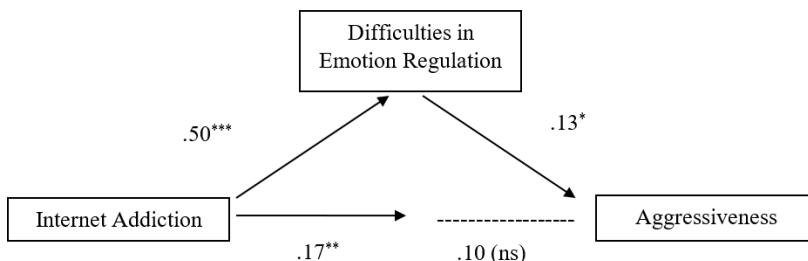
The mediating role of difficulties in emotion regulation in the relationship between Internet addiction and aggressiveness

Effect	Label	Estimate	SE	95% Confidence Interval		Z	p	% Mediation
				Lower	Upper			
Indirect	a × b	0.07	0.0729	0.008	0.294	2.07	0.039	38.6
Direct	c	0.10	0.1437	-0.042	0.521	1.67	0.095	61.4
Total	c + a × b	0.17	0.1255	0.144	0.636	3.11	0.002	100.0
Path Estimates								
IA→DER	a	0.50	0.0728	0.609	0.894	10.33	< .001	
DER→AGG	b	0.13	0.0950	0.014	0.387	2.11	0.035	
IA→AGG	c	0.10	0.1437	-0.042	0.521	1.67	0.095	

Note. IA: internet addiction, HAP: happiness, AGG: aggression, DER: difficulties in emotion regulation, SE: standard error

Figure 2

The mediating role of difficulties in emotion regulation in the relationship between internet addiction and aggression



Note. ns (nonsignificant), Figure 2 displays beta coefficients that have been standardized. ***p<.001, **p<.01, *p<.05.

Discussion

The current study investigated the mediating role of difficulties in emotion regulation in the relationship between Internet addiction, happiness, and aggression. The repercussions of the pandemic cannot be ignored when researching Internet addiction. While current literature highlights an uptick in Internet addiction during the pandemic (Evli & Şimşek, 2022; Putri et al., 2022; Siste et al., 2020), there is a pressing need for post-pandemic data. Overall, the results showed that Internet addiction is negatively related to happiness and positively related to aggression and difficulties in emotion regulation. Moreover, difficulties in emotion regulation fully mediated the relationship between Internet addiction and happiness. Similarly, the relationship between Internet addiction and aggression is fully mediated by difficulties in emotion regulation.

Existing studies support the association of Internet addiction with emotion regulation challenges (Evren et al., 2018; Karaer & Akdemir, 2019), aggression (Agbaria, 2021; Ko et al., 2009), and reduced happiness (Evli & Şimşek, 2022; Hew et al., 2023). Yet, to the best of our knowledge, this research pioneers the investigation of the indirect effect of Internet addiction on happiness and aggression via emotion regulation. These findings emphasize the importance of considering emotion regulation as a key mediating factor when examining the dynamics between internet addiction, happiness, and aggression. Therefore, it does not seem possible to discuss the results related to the mediating role of emotion regulation difficulty comparatively. The findings of this research indicate the significance of evaluating difficulties in emotion regulation as a mediating factor in the association between internet addiction, happiness, and aggression. These findings have several implications for both research and practice. First, the present study contributes to the expanding body of literature on internet addiction by establishing its negative effect on happiness (e.g., Baltacı, 2019; Muusses et al., 2014) and its positive effect on aggression (e.g., Agbaria, 2021; Caner & Evgin, 2021). Consistent with prior studies, this conclusion indicates the need for further investigation into the potential negative effects of excessive internet use on mental health and well-being.

This research underscores the importance of addressing difficulties in emotion regulation when treating internet addiction and associated mental

health challenges. The broader literature suggests that excessive internet use diminishes happiness and heightens aggressive behaviors. This study delves deeper, shedding light on the underlying mechanisms connecting internet addiction to shifts in happiness and aggression. Emotions serve as a barometer for our interactions with the social realm. They equip individuals to communicate, empathize, make decisions, and sidestep potential threats (Hwang & Matsumoto, 2019; Kavakli, 2019). Yet, they may also cause poor intrapersonal and interpersonal functioning (Gratz & Roemer, 2004) and various problems such as decreased happiness or increased aggression levels. Having problems with emotion regulation skills can make it difficult to cope with the negative effects of internet addiction. In other words, internet addiction causes problems with emotion regulation. Excessive use of the Internet can lead to difficulties in emotion regulation. Poor skills related to emotion regulation may also catalyze unhappiness and violent behavior (Kim et al., 2022; Schuster et al., 2022; Tamir, 2009).

The current findings also shed light on possible future implications. Foremost, enhancing emotion regulation skills stands out as a promising intervention to counter the negative impacts of internet addiction (both excessive Internet usage and for individuals who meet diagnostic criteria for addiction) on happiness and aggression. Building on prior research, it is evident that excessive internet use hinders one's ability to identify, describe, and manage emotions (Karaer & Akdemir, 2019). Consequently, mental health professionals may focus on training emotion regulation strategies while working on people with Internet addiction. In addition to mental health workers, other groups of people like educators in schools and employers in workplaces can facilitate training programs for promoting effective emotion regulation skills. This will make these people more resilient against the adverse effects of their addiction. From a clinical standpoint, strategies like cognitive restructuring of the thought processes fueling internet addiction (Brand et al., 2014), psychoeducational tools for bolstering parenting competencies (Karaer & Akdemir, 2019), and policy guidelines promoting purposeful internet use over inadvertent browsing (Dhir et al., 2015) are paramount. These measures aim to help individuals better control their emotions, thus diminishing aggressive online interactions and fostering a more positive online discourse. In addition,

online platforms and social media companies should be responsible for monitoring and moderating online material, as exposure to aggressive or inflammatory content can lead to aggressive behavior among internet users.

Limitations and Future Suggestions

Along with its contributions, the current study findings should be considered with its limitations, as well. First of all, unbalanced gender representation is one of the limitations of this study, and it is a correlational study that lacks cause and effect relationship. Furthermore, we included the overall Internet-based addictions, and differentiating between the contents of Internet use like social media, games, and the type of their content (whether violent or non-violent) might have provided more robust findings in explaining the consequences of Internet addiction. Moreover, the COVID-19 pandemic was not a one-point traumatic event, and it seriously affected our lives for a long time with strict measures that burdened people's lives. That is why its social and psychological effects should also be investigated by following individuals for years in their different life points.

Taken together, designing and carrying out experimental and longitudinal research in different age groups will enable us to come up with more robust and generalizable findings. Finally, in terms of implications, the need to develop prevention and intervention strategies has become more urgent after the hit by the pandemic. Despite some limitations, the present findings gave valuable information about the risk of problems in emotion regulation. In that sense, stakeholders in the field should put more emphasis on strengthening the emotion regulation abilities of individuals so that they can become more resilient against the negative effects of Internet addiction, and in return, it facilitates a flourishing society that is open to positive development with less antisocial characteristics.

Funding

The authors have no funding to disclose.

Conflict of Interest

We have no conflicts of interest to disclose.

Data availability statement

Data used in this paper are available upon a reasonable request.

References

- Agbaria, Q. (2021). Internet addiction and aggression: The mediating roles of self-control and positive affect. *International Journal of Mental Health and Addiction*, 19(4), 1227-1242. <https://doi.org/10.1007/s11469-019-00220-z>
- Alimoradi, Z., Lin, C. Y., Broström, A., Bülow, P. H., Bajalan, Z., Griffiths, M. D., ... & Pakpour, A. H. (2019). Internet addiction and sleep problems: A systematic review and meta-analysis. *Sleep Medicine Reviews*, 47, 51-61. <https://doi.org/10.1016/j.smrv.2019.06.004>
- Allen, J. J., & Anderson, C. (2017). Aggression and violence: Definitions and distinctions. In P. Sturmey (Ed.), *the wiley handbook of violence and aggression* (pp. 4–16). John Wiley & Sons.
- Arslan, G., & Coşkun, M. (2022a). Coronavirus–related stressors, resilient mindset, loneliness, depressive symptoms in college students: Testing a moderated mediation model. *Psychological Reports*. <https://doi.org/10.1177/00332941221139721>
- Arslan, G., & Coşkun, M. (2022b). Social exclusion, self-forgiveness, mindfulness, and internet addiction in college students: A moderated mediation approach. *International Journal of Mental Health and Addiction*, 20, 2165-2179. <https://doi.org/10.1007/s11469-021-00506-1>
- Baltacı, Ö. (2019). The predictive relationships between the social media addiction and social anxiety, loneliness, and happiness. *International Journal of Progressive Education*, 15(4), 73-82. <https://doi.org/10.29329/ijpe.2019.203.6>
- Bjureberg, J., Ljótsson, B., Tull, M. T., Hedman, E., Sahlin, H., Lundh, L. G., ... & Gratz, K. L. (2016). Development and validation of a brief version of the difficulties in emotion regulation scale: the DERS-16. *Journal of Psychopathology and Behavioral Assessment*, 38(2), 284-296. <https://doi.org/10.1007/s10862-015-9514-x>
- Brand, M., Laier, C., & Young, K. S. (2014). Internet addiction: coping styles, expectancies, and treatment implications. *Frontiers in Psychology*, 5, 1256. <https://doi.org/10.3389/fpsyg.2014.01256>
- Buss, A. H., & Perry, M. (1992). The aggression questionnaire. *Journal of Personality and Social Psychology*, 63(3), 452-459. <https://doi.org/10.1037/0022-3514.63.3.452>

- Caner, N., & Evgin, D. (2021). Digital risks and adolescents: The relationships between digital game addiction, emotional eating, and aggression. *International Journal of Mental Health Nursing, 30*(6), 1599-1609. <https://doi.org/10.1111/inm.12912>
- Carmassi, C., Foghi, C., Dell'Oste, V., Cordone, A., Bertelloni, C. A., Bui, E., & Dell'Osso, L. (2020). PTSD symptoms in healthcare workers facing the three coronavirus outbreaks: What can we expect after the COVID-19 pandemic. *Psychiatry Research, 292*, 113312. <https://doi.org/10.1016/j.psychres.2020.113312>
- Cheng, C., Sun, P., & Mak, K. K. (2015). Internet addiction and psychosocial maladjustment: Avoidant coping and coping inflexibility as psychological mechanisms. *Cyberpsychology, Behavior, and Social Networking, 18*(9), 539-546. <https://doi.org/10.1089/cyber.2015.0121>
- Davis, R. A. (2001). A cognitive-behavioral model of pathological Internet use. *Computers in Human Behavior, 17*(2), 187-195. [https://doi.org/10.1016/S0747-5632\(00\)00041-8](https://doi.org/10.1016/S0747-5632(00)00041-8)
- de Leeuw, J. R. J., de Bruijn, M., de Weert-van Oene, G. H., & Schrijvers, A. J. (2010). Internet and game behaviour at a secondary school and a newly developed health promotion programme: a prospective study. *BMC Public Health, 10*, 1-8. <https://doi.org/10.1186/1471-2458-10-544>
- Demirtaş-Madran, A. D. (2013). Buss-Perry Saldırganlık Ölçeği'nin Türkçe formunun geçerlik ve güvenilirlik çalışması. *Türk Psikiyatri Dergisi, 24*(2), 124-129. <https://doi.org/10.5080/u6859>
- Dhir, A., Chen, S., & Nieminen, M. (2015). Predicting adolescent Internet addiction: The roles of demographics, technology accessibility, unwillingness to communicate and sought Internet gratifications. *Computers in Human Behavior, 51*, 24-33. <https://doi.org/10.1016/j.chb.2015.04.056>
- Dodd, R. H., Dadaczynski, K., Okan, O., McCaffery, K. J., & Pickles, K. (2021). Psychological wellbeing and academic experience of university students in Australia during COVID-19. *International Journal of Environmental Research and Public Health, 18*(3), 866. <https://doi.org/10.3390/ijerph18030866>
- Doğan, T. ve Akıncı Çötök, N. (2016). Oxford Mutluluk Ölçeği Kısa Formu'nun Türkçe uyarlaması: Geçerlik ve güvenilirlik çalışması. *Türk Psikolojik Danışma ve Rehberlik Dergisi, 4*(36), 165-172.
- Emerson, R. W. (2015). Convenience sampling, random sampling, and snowball sampling: How does sampling affect the validity of research?. *Journal of Visual Impairment & Blindness, 109*(2), 164-168. <https://doi.org/10.1177/0145482X1510900215>

- Evli, M., & Şimşek, N. (2022). The effect of COVID-19 uncertainty on internet addiction, happiness and life satisfaction in adolescents. *Archives of Psychiatric Nursing, 41*, 20-26. <https://doi.org/10.1016/j.apnu.2022.07.008>
- Evren, B., Evren, C., Dalbudak, E., Topcu, M., & Kutlu, N. (2018). Relationship of internet addiction severity with probable ADHD and difficulties in emotion regulation among young adults. *Psychiatry Research, 269*, 494-500. <https://doi.org/10.1016/j.psychres.2018.08.112>
- Fry, D. P. (2017). Cross-cultural differences in aggression. In P. Sturmei (Ed.), *The Wiley handbook of violence and aggression* (pp. 1–12). Wiley. <https://doi.org/10.1002/9781119057574.whbva007>
- Fumero, A., Marrero, R. J., Voltes, D., & Penate, W. (2018). Personal and social factors involved in internet addiction among adolescents: A meta-analysis. *Computers in Human Behavior, 86*, 387-400. <https://doi.org/10.1016/j.chb.2018.05.005>
- Gica, S., Kavakli, M., Durduran, Y., & Ak, M. (2020). The Effect of COVID-19 Pandemic on psychosomatic complaints and investigation of the mediating role of intolerance to uncertainty, biological rhythm changes and perceived COVID-19 threat in this relationship: a web-based community survey. *Psychiatry and Clinical Psychopharmacology, 30*(2), 89-96. <https://doi.org/10.5455/PCP.20200514033022>
- Gratz, K. L., & Roemer, L. (2004). Multidimensional assessment of emotion regulation and dysregulation: Development, factor structure, and initial validation of the difficulties in emotion regulation scale. *Journal of Psychopathology and Behavioral Assessment, 26*, 41-54. <https://doi.org/10.1023/B:JOBA.0000007455.08539.94>
- Gross, J. J., & Thompson, R. A. (2007). Emotion Regulation: Conceptual Foundations. In J. J. Gross (Ed.), *Handbook of emotion regulation* (pp. 3–24). The Guilford Press.
- Hayes, N. L., Marsee, M. A., & Russell, D. W. (2021). Latent profile analysis of traditional and cyber-aggression and victimization: Associations with dark triad traits and psychopathology symptoms. *Journal of Psychopathology and Behavioral Assessment, 43*, 399-412. <https://doi.org/10.1007/s10862-020-09835-2>
- Hew, J. J., Lee, V. H., T'ng, S. T., Tan, G. W. H., Ooi, K. B., & Dwivedi, Y. K. (2023). Are online mobile gamers really happy? On the suppressor role of online game addiction. *Information Systems Frontiers, 1-33*. <https://doi.org/10.1007/s10796-023-10377-7>

- Hills, P. & Argyle, M. (2002). The Oxford Happiness Questionnaire: A compact scale for the measurement of psychological well-being. *Personality and Individual Differences*, 33(7), 1073-1082. [https://doi.org/10.1016/S0191-8869\(01\)00213-6](https://doi.org/10.1016/S0191-8869(01)00213-6)
- Hou, J., Jiang, Y., Chen, S., Hou, Y., Wu, J., Fan, N., & Fang, X. (2019). Cognitive mechanism of intimate interpersonal relationships and loneliness in internet-addicts: An ERP study. *Addictive Behaviors Reports*, 10, 100209. <https://doi.org/10.1016/j.abrep.2019.100209>
- Hwang, H., & Matsumoto, D. (2019). Functions of emotions. *Noba textbook series: Psychology*, 44(6), 849-873.
- Karaer, Y., & Akdemir, D. (2019). Parenting styles, perceived social support and emotion regulation in adolescents with internet addiction. *Comprehensive Psychiatry*, 92, 22-27. <https://doi.org/10.1016/j.comppsy.2019.03.003>
- Kavaklı, M. (2019). Why do we have emotions? The social functions of emotions. *Research and Education and Psychology (REP)*, 3(1), 11-20.
- Kavaklı, M., Ak, M., Uğuz, F., & Türkmen, O. O. (2020). The mediating role of self-compassion in the relationship between perceived COVID-19 threat and death anxiety. *Turkish Journal of Clinical Psychiatry, Supp 1*, 15-23. <https://doi.org/10.5505/kpd.2020.59862>
- Kim, E. L., Gentile, D. A., Anderson, C. A., & Barlett, C. P. (2022). Are mindful people less aggressive? The role of emotion regulation in the relations between mindfulness and aggression. *Aggressive Behavior*, 48(6), 546-562. <https://doi.org/10.1002/ab.22036>
- Ko, C. H., Yen, J. Y., Liu, S. C., Huang, C. F., & Yen, C. F. (2009). The associations between aggressive behaviors and Internet addiction and online activities in adolescents. *Journal of Adolescent Health*, 44(6), 598-605. <https://doi.org/10.1016/j.jadohealth.2008.11.011>
- Kuss, D. J., Kristensen, A. M., & Lopez-Fernandez, O. (2021). Internet addictions outside of Europe: A systematic literature review. *Computers in Human Behavior*, 115, 106621. <https://doi.org/10.1016/j.chb.2020.106621>
- Kutlu, M., Savcı, M., Demir, Y., & Aysan, F. (2016). Young İnternet Bağımlılığı Testi Kısa Formunun Türkçe uyarlaması: Üniversite öğrencileri ve ergenlerde geçerlilik ve güvenilirlik çalışması. *Anadolu Psikiyatri Dergisi*, 17(1), 69-76. <https://doi.org/10.5455/apd.190501>
- Li, Y. Y., Sun, Y., Meng, S. Q., Bao, Y. P., Cheng, J. L., Chang, X. W., ... & Shi, J. (2021). Internet addiction increases in the general population during COVID-19:

- Evidence from China. *The American Journal on Addictions*, 30(4), 389-397. <https://doi.org/10.1111/ajad.13156>
- Lozano-Blasco, R., Robres, A. Q., & Sánchez, A. S. (2022). Internet addiction in young adults: A meta-analysis and systematic review. *Computers in Human Behavior*, 107201. <https://doi.org/10.1016/j.chb.2022.107201>
- Mak, K. K., Lai, C. M., Watanabe, H., Kim, D. I., Bahar, N., Ramos, M., ... & Cheng, C. (2014). Epidemiology of internet behaviors and addiction among adolescents in six Asian countries. *Cyberpsychology, Behavior, and Social Networking*, 17(11), 720-728. <https://doi.org/10.1089/cyber.2014.0139>
- Marroquín, B., & Nolen-Hoeksema, S. (2015). Emotion regulation and depressive symptoms: Close relationships as social context and influence. *Journal of Personality and Social Psychology*, 109(5), 836–855. <https://doi.org/10.1037/pspi0000034>
- McRae, K., & Gross, J. J. (2020). Emotion regulation. *Emotion*, 20(1), 1–9. <https://doi.org/10.1037/emo0000703>
- Muusses, L. D., Finkenauer, C., Kerkhof, P., & Billedo, C. J. (2014). A longitudinal study of the association between compulsive internet use and wellbeing. *Computers in Human Behavior*, 36, 21-28. <https://doi.org/10.1016/j.chb.2014.03.035>
- Oishi, S., & Gilbert, E. A. (2016). Current and future directions in culture and happiness research. *Current Opinion in Psychology*, 8, 54-58. <https://doi.org/10.1016/j.copsyc.2015.10.005>
- Özmen, A., Coşkun, M., & Emine, E. (2023). Psikolojik sağlık ile COVID-19 fobisi arasındaki ilişkide ruminatif düşüncenin aracı etkisi. *MANAS Sosyal Araştırmalar Dergisi*, 12(3), 1078-1086. <https://doi.org/10.33206/mjss.1289562>
- Pawlikowski, M., Altstötter-Gleich, C., & Brand, M. (2013). Validation and psychometric properties of a short version of Young's Internet Addiction Test. *Computers in Human Behavior*, 29(3), 1212-1223. <https://doi.org/10.1016/j.chb.2012.10.014>
- Potthoff, S., Garnefski, N., Miklósi, M., Ubbiali, A., Domínguez-Sánchez, F. J., Martins, E. C., ... & Kraaij, V. (2016). Cognitive emotion regulation and psychopathology across cultures: A comparison between six European countries. *Personality and Individual Differences*, 98, 218-224. <https://doi.org/10.1016/j.paid.2016.04.022>
- Putri, A., Setiawati, Y., Shieh, Y. T., & Lin, S. H. (2022). High-Risk Internet Addiction in Adolescents during Pandemic COVID-19 and Parent's Role. *Jurnal Berkala Epidemiologi*, 10(1), 11-20. <http://repository.unair.ac.id/id/eprint/116375>

- Quoidbach, J., Mikolajczak, M., & Gross, J. J. (2015). Positive interventions: An emotion regulation perspective. *Psychological Bulletin*, *141*(3), 655-693.
<http://dx.doi.org/10.1037/a0038648>
- Reed, P., Osborne, L. A., Romano, M., & Truzoli, R. (2015). Higher impulsivity after exposure to the internet for individuals with high but not low levels of self-reported problematic internet behaviours. *Computers in Human Behavior*, *49*, 512–516. <https://doi.org/10.1016/j.chb.2015.03.064>.
- Roberton, T., Daffern, M., & Bucks, R. S. (2012). Emotion regulation and aggression. *Aggression and Violent Behavior*, *17*(1), 72-82.
<https://doi.org/10.1016/j.avb.2011.09.006>
- Sabatini, F. (2014). The relationship between happiness and health: evidence from Italy. *Social Science & Medicine*, *114*, 178-187.
<https://doi.org/10.1016/j.socscimed.2014.05.024>
- Samaha, M., & Hawi, N. S. (2016). Relationships among smartphone addiction, stress, academic performance, and satisfaction with life. *Computers in Human Behavior*, *57*, 321-325. <https://doi.org/10.1016/j.chb.2015.12.045>
- Schuster, T., Bader, A. K., Bader, B., & Rousseau, D. M. (2022). Does what happens abroad stay abroad? Displaced aggression and emotional regulation in expatriate psychological contracts. *Journal of Occupational and Organizational Psychology*, *95*(4), 867-888. <https://doi.org/10.1111/joop.12405>
- Servidio, R., Bartolo, M. G., Palermi, A. L., & Costabile, A. (2021). Fear of COVID-19, depression, anxiety, and their association with Internet addiction disorder in a sample of Italian students. *Journal of Affective Disorders Reports*, *4*, 100097.
<https://doi.org/10.1016/j.jadr.2021.100097>
- Sheppes, G., Suri, G., & Gross, J. J. (2015). Emotion regulation and psychopathology. *Annual Review of Clinical Psychology*, *11*, 379-405.
<https://doi.org/10.1146/annurev-clinpsy-032814-112739>
- Siste, K., Hanafi, E., Sen, L. T., Christian, H., Siswidiani, L. P., Limawan, A. P., ... & Suwartono, C. (2020). The impact of physical distancing and associated factors towards internet addiction among adults in Indonesia during COVID-19 pandemic: a nationwide web-based study. *Frontiers in psychiatry*, *11*, 580977.
<https://doi.org/10.3389/fpsy.2020.580977>
- Skrzypiec, G., Alinsug, E., Amri Nasiruddin, U., Andreou, E., Brighi, A., Didaskalou, E., ... & Yang, C. C. (2021). Harmful peer aggression in four world regions: Relationship between aggressed and aggressor. *Journal of School Violence*, *20*(1), 1-16.
<https://doi.org/10.1080/15388220.2020.1808789>

- Smith, B. W., de Cruz-Dixon, N., Erickson, K., Guzman, A., Phan, A., & Schodt, K. (2023). The effects of an online positive psychology course on happiness, health, and well-being. *Journal of Happiness Studies*, 1-23. <https://doi.org/10.1007/s10902-022-00577-4>
- Stavropoulos, V., Kuss, D. J., Griffiths, M. D., Wilson, P., & Motti-Stefanidi, F. (2017). MMORPG gaming and hostility predict internet addiction symptoms in adolescents: An empirical multilevel longitudinal study. *Addictive Behaviors*, 64, 294–300. <https://doi.org/10.1016/j.addbeh.2015.09.001>.
- Stephens, A. (2019). Happiness and health. *Annual Review of Public Health*, 40, 339-359. <https://doi.org/10.1146/annurev-publhealth-040218-044150>
- Stratton, S. J. (2021). Population research: convenience sampling strategies. *Prehospital and disaster Medicine*, 36(4), 373-374. <https://doi.org/10.1017/S1049023X21000649>
- Sun, Y., Li, Y., Bao, Y., Meng, S., Sun, Y., Schumann, G., ... & Shi, J. (2020). Brief report: increased addictive internet and substance use behavior during the COVID-19 pandemic in China. *The American Journal on Addictions*, 29(4), 268-270. <https://doi.org/10.1111/ajad.13066>
- Tabachnick, B. G., Fidell, L. S., & Ullman, J. B. (2013). *Using multivariate statistics* (Vol. 6, pp. 497-516). Boston, MA: Pearson.
- Tamir, M. (2009). Differential preferences for happiness: Extraversion and trait-consistent emotion regulation. *Journal of personality*, 77(2), 447-470. <https://doi.org/10.1111/j.1467-6494.2008.00554.x>
- Tateno, M., Teo, A. R., Ukai, W., Kanazawa, J., Katsuki, R., Kubo, H., & Kato, T. A. (2019). Internet addiction, smartphone addiction, and Hikikomori trait in Japanese young adult: social isolation and social network. *Frontiers in Psychiatry*, 10, 455. <https://doi.org/10.3389/fpsy.2019.00455>
- Teng, Z., Li, Y., & Liu, Y. (2014). Online gaming, internet addiction, and aggression in Chinese male students: The mediating role of low self-control. *International Journal of Psychological Studies*, 6(2), 89-97. <http://dx.doi.org/10.5539/ijps.v6n2p89>
- The jamovi project (2023). *Jamovi* (Version 2.3) [Computer Software]. Retrieved from <https://www.jamovi.org>
- Thompson, R. A. (2011). Emotion and emotion regulation: Two sides of the developing coin. *Emotion Review*, 3(1), 53-61. <https://doi.org/10.1177/1754073910380969>
- Tindle, R. (2021). Improving the global reach of psychological research. *Discover Psychology*, 1, 1-4. <https://doi.org/10.1007/s44202-021-00004-4>

- Usman, N. H., Alavi, M., & Shafeq, S. M. (2014). Relationship between internet addiction and academic performance among foreign undergraduate students. *Procedia-Social and Behavioral Sciences*, 114, 845-851. <https://doi.org/10.1016/j.sbspro.2013.12.795>
- Vakili, V., Ziaee, M., & Zarifian, A. (2015). Aggression: Is that an issue for worrying?. *Iranian Journal of Public Health*, 44(11), 1561.
- Valkenburg, P. M., & Peter, J. (2007). Online communication and adolescent well-being: Testing the stimulation versus the displacement hypothesis. *Journal of Computer-Mediated Communication*, 12(4), 1169-1182. <https://doi.org/10.1111/j.1083-6101.2007.00368.x>
- Veenhoven, R. (2015). Social conditions for human happiness: A review of research. *International Journal of Psychology*, 50(5), 379-391. <https://doi.org/10.1002/ijop.12161>
- Verzeletti, C., Zammuner, V. L., Galli, C., & Agnoli, S. (2016). Emotion regulation strategies and psychosocial well-being in adolescence. *Cogent Psychology*, 3(1), 1199294. <https://doi.org/10.1080/23311908.2016.1199294>
- Widyanto, L., & McMurrin, M. (2004). The psychometric properties of the internet addiction test. *Cyberpsychology & Behavior*, 7(4), 443-450. <https://doi.org/10.1089/cyber.2014.0568>
- Yang, Y., Li, P., Fu, X., & Kou, Y. (2017). Orientations to happiness and subjective well-being in Chinese adolescents: The roles of prosocial behavior and internet addictive behavior. *Journal of Happiness Studies*, 18, 1747-1762. <https://doi.org/10.1007/s10902-016-9794-1>
- Yen, J. Y., Yeh, Y. C., Wang, P. W., Liu, T. L., Chen, Y. Y., & Ko, C. H. (2018). Emotional regulation in young adults with internet gaming disorder. *International Journal of Environmental Research and Public Health*, 15(1), 30. <https://doi.org/10.3390/ijerph15010030>
- Yiğit, İ., & Yiğit, M. G. (2019). Psychometric properties of Turkish version of difficulties in emotion regulation scale-brief form (DERS-16). *Current Psychology*, 38(6), 1503-1511. <https://doi.org/10.1007/s12144-017-9712-7>
- Yıldırım, M., Arslan, G., & Özasan, A. (2022). Perceived risk and mental health problems among healthcare professionals during COVID-19 pandemic: Exploring the mediating effects of resilience and coronavirus fear. *International Journal of Mental Health and Addiction*, 20, 1035-1045. <https://doi.org/10.1007/s11469-020-00424-8>

Yilmaz, R., & Karaoglan Yilmaz, F (2022). Problematic Internet use in adults: the role of happiness, psychological resilience, dispositional hope, and self-control and self-management. *J Rat-Emo Cognitive-Behav Ther.*

<https://doi.org/10.1007/s10942-022-00482-y>

Young, K. S. (1998). *Caught in the net: How to recognize the signs of internet addiction-and a winning strategy for recovery.* John Wiley & Sons.