

Attachment Styles as Mediators Between Self-Perceived Addiction to Pornography and Psychological Distress: Findings and Implications from a Romanian Cross-Sectional Study

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Abstract: *The present research aimed to examine the relationship between self-perceived addiction to pornography and psychological distress related to pornography use in a Romanian sample, highlighting the potential indirect effects of the three attachment styles (i.e., anxious, avoidant, and secure) on this relationship. The study involved 659 Romanian volunteers (M = 26.83, SD = 9.61), the majority of whom identified as female (75.4%). Our findings revealed that psychological distress related to pornography use was positively associated with anxious attachment, avoidant attachment, and self-perceived addiction to pornography, and negatively associated with secure attachment. Regarding the mediation models, avoidant attachment exhibited a significant indirect effect in the relationship between self-perceived addiction to pornography and psychological distress. Secure attachment also has a significant indirect effect, whereas anxious attachment did not show a statistically significant mediating effect. The study discusses both theoretical and practical implications of these findings.*

Keywords: *attachment style; self-perceived addiction to pornography; psychological distress related to the use of pornography; pornography use; Romania.*

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Introduction

With the widespread development of the Internet over the past 25 years, access to pornography has become almost instantaneous and available from virtually any home (Grubbs et al., 2020a; Huțul & Karner-Huțuleac, 2024a; Karner-Huțuleac & Huțul, 2023; Willoughby et al., 2021). Pornography is generally regarded as any type of content, whether text or video, created with the purpose of eliciting sexual arousal in individuals (Willoughby & Dover, 2022). In this regard, it is not surprising that an increasing body of research indicates that some pornography users may develop problematic usage patterns (Alves & Cavalhieri, 2020; Bóthe et al., 2018; Gola & Potenza, 2016; Grubbs et al., 2019b; Grubbs et al., 2020b; Huțul & Karner-Huțuleac, 2024b; Kor et al., 2014; Twohig et al., 2009). This problematic consumption is defined as the use of pornographic material in inappropriate contexts, such as during school, university, work, or other social settings, as well as using pornography as a coping mechanism for stress or negative affect (Bóthe et al., 2019; Grubbs & Perry, 2019; Huțul, 2023; Kraus & Sweeney, 2019).

However, an important aspect that must be noted is that 'pornography addiction' is not officially recognized by any diagnostic manual, as the existing literature lacks sufficient empirical evidence to support the inclusion of such criteria for this type of addictive behavior disorder (APA, 2013; Fong et al., 2012; Garcia & Thibaut, 2010; Gola et al., 2017). In this regard, the negative consequences experienced by consumers should be discussed within the context of self-perceived addiction to pornography (Grubbs et al., 2019b). This construct refers to a pornography user's own perception of their potential addiction and their personal belief that they belong to a group of individuals who are addicted (Huțul & Karner-Huțuleac, 2025). This belief held by a user that they belong to a group of addicts stems from a subjective evaluation of what constitutes addiction, without any quantitative assessment of the behavioral manifestation (Lewczuk et al., 2020). Under the umbrella of self-perceived addiction to pornography, the negative outcomes experienced by pornography users have been extensively studied in recent years (Alves & Cavalhieri, 2020; Huțul & Karner-Huțuleac, 2025; Lewczuk et al., 2021; Mennig et al., 2022; Sommantico et al., 2021; Vaillancourt-Morel & Bergeron, 2019; Willoughby & Dover, 2022). This label of self-perceived addiction to pornography is particularly important, as it can lead to self-stigmatization (Corrigan et al., 2016), treatment-seeking behavior, and even distress related to pornography use (Grubbs et al., 2019a; Grubbs et al., 2019b; Huțul & Karner-Huțuleac, 2024b).

Building on the aspects previously discussed, and particularly considering the negative outcomes associated with pornography use, it becomes increasingly important to gain a deeper understanding of the relationship between self-perceived addiction to pornography and psychological distress related to the use of pornography. Understanding this relationship is essential for informing clinical psychologists, psychotherapists, and other mental health professionals who encounter this issue in their practice. By clarifying the psychological mechanisms underlying this association, future intervention programs may be better equipped to reduce both the stigma and the psychological distress linked to pornography use.

Attachment style, pornography use and psychological distress related to the use of pornography

One of the potential factors that may mediate the relationship between self-perceived addiction and psychological distress related to the use of pornography, as highlighted in the literature, is attachment style, which is often discussed in the context of pornography consumption (Contreras et al., 2024; Jones, 2022; Kató et al., 2024). The relationship between attachment styles and pornography use is complex and may have significant implications for consumers' well-being (Akbari et al., 2024), with attachment conceptualized as *“a dynamic system of attitudes and behaviors that contribute to the formation of a specific bond between two people; a constraint whose roots can be traced in the primary relationships established between child and adult”* (Giulio, 2020).

The primary attachment styles identified in the literature are (I) *secure*—characterized by the ability to form strong bonds with others while also maintaining autonomy when necessary (Levine et al., 2021), (II) *anxious*—marked by the belief that significant others are available yet respond inconsistently and unpredictably (Garofalo & Bogaerts, 2019), and (III) *avoidant*—defined by a deactivated attachment system that results in the chronic suppression of psychological and social connection needs (Akbari et al., 2024). The literature reveals positive associations between the two insecure attachment styles (e.g., anxious and avoidant) and both general pornography use (Ferron et al., 2017) and problematic pornography use (Kor et al., 2014), with meta-analytic evidence by Akbari et al. (2024) suggesting that individuals with insecure attachment tend to engage in behaviors such as pornography consumption as coping mechanisms for regulating undifferentiated internal emotions (Di Trani et al., 2017) and as a form of compensation when perceiving a lack or deficiency in their external environment (Eichenberg et al., 2017).

Zhang (2022) highlights that several studies have shown individuals with an avoidant attachment style tend to suppress or deny their sexual desire toward their partners, often seeking sexual gratification through activities that enhance self-confidence—such as pornography use and masturbation—rather than through intimate relational contact (Mark et al., 2018). When employing avoidant strategies, individuals frequently disconnect from their partners, demonstrating emotional indifference, heightened independence, and self-sufficiency in their sexual behaviors (Alperin, 2001). These patterns of disengagement may contribute to significant psychological distress related to the use of pornography. Zhang (2022) also notes that such individuals are commonly resistant to and fearful of emotional intimacy, which can hinder the development of a fulfilling sexual relationship with their partners, resulting in interpersonal distress. As a coping strategy, some may resort to consuming various forms of pornography—including films, images, or erotic literature (Wood, 2021; Yoder et al., 2005).

In contrast, individuals with an anxious attachment style may interpret pornography use differently. Maas et al. (2018) found that anxious users of pornography tend to view their behavior more negatively than users with a secure attachment style. Furthermore, anxious men who consume pornography may be more likely to experience negative affect (Tylka, 2015). Gouvernet et al. (2017) reported that sexually explicit materials appear to reduce sexual satisfaction among individuals with anxious attachment. This population often experiences heightened fears of rejection (Dewitte, 2012) which may render pornography particularly distressing by amplifying anxieties about failing to meet their partner's sexual expectations. However, findings in the literature are mixed. For example, Maas et al. (2018) found that men with anxious attachment styles who use more pornography report greater relationship satisfaction. Similarly, Jain et al. (2021) observed that anxious attachment levels were higher among pornography users than non-users, possibly due to the fear of engaging in real-life relationships. These authors concluded that pornography use may impact mental health by interacting with and potentially shaping attachment styles.

Regarding avoidantly attached individuals, Tylka (2015) found that men with this attachment style are more likely to experience negative affect compared to securely attached men. Szymanski and Stewart-Richardson (2014) also suggested that pornography use among men may be associated with attachment styles, particularly that men with an avoidant attachment style may exhibit a greater propensity for pornography consumption. Interestingly, while individuals with anxious attachment tend to fear rejection, those with avoidant or even secure attachment styles may be more tolerant of coercive

relationship dynamics (Mikulincer & Shaver, 2007). Finally, individuals with a secure attachment style are less likely to perceive their pornography use as problematic (Maas et al., 2018). Across all attachment styles—secure, anxious, and avoidant—increased feelings of loneliness have been associated with higher levels of pornography consumption (Efrati & Amichai-Hamburger, 2019).

The present study

Building on existing literature and the observed links between attachment styles, pornography consumption, and various mental health outcomes, it is essential to explore more deeply the psychological mechanisms through which individuals may come to experience psychological distress related to pornography use. We propose that attachment styles may function as potential mediating variables that help explain how individuals come to perceive themselves as addicted to pornography and, consequently, experience emotional suffering. These internalized relational patterns may shape the way individuals relate to their pornography use—whether through avoidance, anxiety, or security—thus influencing the degree of psychological distress they report. Accordingly, the present study aims to investigate the potential mediating role of attachment styles (i.e., anxious attachment, avoidant attachment, and secure attachment) in the relationship between self-perceived addiction to pornography and psychological distress related to pornography use.

Hypotheses

H1. There are significant associations between self-perceived addiction to pornography, anxious attachment, avoidant attachment, secure attachment, and psychological distress related to the use of pornography.

H2. There is an indirect effect of anxious attachment, avoidant attachment, and secure attachment on the relationship between self-perceived addiction to pornography and psychological distress related to the use of pornography.

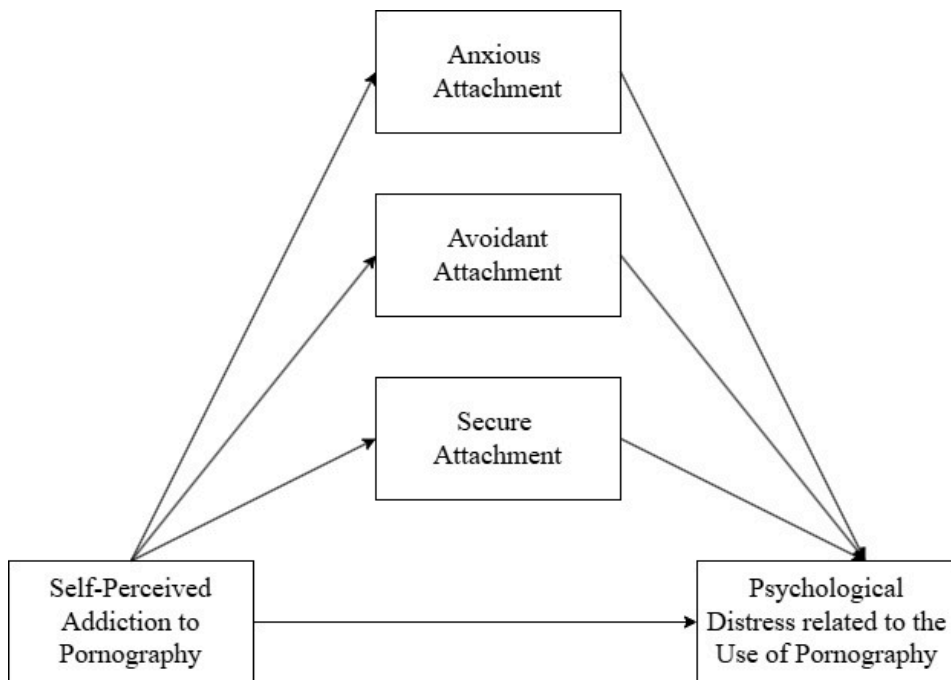


Figure 1. The proposed model

Method

Participants and procedure

The surveys were administered between December 1st and December 31st, 2022. A convenience sampling method was used, specifically employing the snowballing technique. The questionnaires were distributed via Google Forms, with the survey link shared in Facebook and Telegram groups. Prior to completing the questionnaires, participants were asked to read an informed consent form. To be eligible for participation, individuals had to confirm that they had watched an adult film at least once in the past six months. The form also clearly stated that participants could withdraw at any time without consequence. Participation was anonymous and voluntary, and confidentiality of the collected data was assured. The average completion time for the questionnaire was between 7 and 10 minutes. The study was approved by the Ethics Committee of the Faculty of Psychology and Educational Sciences at Alexandru Ioan Cuza University of Iași, Romania (No. 1568/29.07.2022).

The participants' characteristics are detailed in Table 1.

Table 1. The characteristics of the participants

		N	%
Sex	Male	162	24.6
	Female	497	75.4
Place of origin	Rural	275	41.7
	Urban	384	58.3
Education level	Pre-university education	269	40.8
	In-progress university studies	268	40.7
	Postgraduate studies	122	18.6
Marital status	In a relationship	290	44
	Married	163	24.7
	Without relationship	206	31.3
		M	SD
Age		26.83	9.61
Duration of the relationship		47.01	81.82
N		659	100

Measures

The tools were translated from English into Romanian using the Backward method. Recommendations for translation and adaptation of the scales were made according to protocol (Maneesriwongul & Dixon, 2004; Sousa & Rojjanasrirat, 2011).

Attachment style. To measure attachment style, we used the “State Adult Attachment Measure” (SAAM; Gillath et al., 2009). The scale consists of 21 items (e.g., “I feel alone and yet don’t feel like getting close to others”), rated on a 7-point Likert scale, ranging from 1 (“strongly disagree”) to 7 (“strongly agree”). This instrument comprises three subscales, each corresponding to one attachment style. SAAM has previously demonstrated its psychometric properties in the Romanian population (Tomescu et al., 2024). In the present study, internal consistency was satisfactory, with Cronbach’s alpha coefficients as follows: anxious attachment, $\alpha = .87$; avoidant attachment, $\alpha = .83$; and secure attachment, $\alpha = .80$. Higher scores on each subscale indicate a stronger presence of the corresponding attachment style.

Psychological distress related to the use of pornography. To measure psychological distress related to the use of pornography, we used the Kessler Psychological Distress Scale (K-6; Kessler et al., 2003). The scale consists of 6 items (e.g., “During the past 30 days, about how often did you feel that everything was an effort?”), rated on a 5-point Likert scale ranging from 0 (“none of the time”) to 4 (“all of the time”). In the present work, we utilized

the K-6 version adapted for assessing pornography use, which has been previously employed in research involving Romanian participants (Huțul & Karner-Huțuleac, 2024b). In the present study, the internal consistency of the scale was acceptable, with a Cronbach's alpha of $\alpha = .86$. Higher scores indicate greater psychological distress related to the use of pornography.

Self-perceived addiction to pornography. To measure this construct, we utilize *Cyber-Pornography Use Inventory-9* (CPUI-9; Grubbs et al., 2010). This instrument contains 9 items (e.g., “I have put off other important priorities to view pornography”), rated on a 7-point Likert scale ranging from 1 (“not at all like me”) to 7 (“extremely like me”). In the present study, internal consistency was satisfactory, with a Cronbach's alpha coefficient of .76.

Socio-demographic data. Participants provided information on the following variables: sex, place of origin, educational level, marital status, age, and relationship duration.

Overview of the Statistical Analysis

We verified the normality of data distribution and the association between the main concepts of the research, using Pearson correlation. Then, we examined the indirect effect of attachment styles (anxious, avoidant, and secure) on the relationship between self-perceived addiction to pornography and psychological distress related to the use of pornography, using PROCESS macro in SPSS 26 (George & Mallery, 2019) – Model 4 (Hayes, 2017). Statistical analyses were performed using the SPSS program, version 26 (George & Mallery, 2019).

Results

Preliminary data analyses

We computed the Skewness and Kurtosis values to assess the normality of the distributions (Table 2). All the Skewness values were within the 3/-3 limit, as suggested by Hahs-Vaughn and Lomax (2020), and Kurtosis values were within 7/-7, indicating normality, as suggested by Hair et al. (2010) and Byrne (2013).

Table 2. Descriptive statistics and the association between research variables

Variables	M	SD	Skewness (SE)	Kurtosis (SE)	1	2	3	4	5
1. Psychological distress related to the use of pornography	17.98	7.09	.48 (.09)	-.46 (.19)	-				
2. Anxious attachment	34.24	10.21	-.45 (.09)	-.53 (.19)	.27*	-			
3. Avoidant attachment	19.28	8.54	.65 (.09)	-.15 (.19)	.35*	.10*	-		
4. Secure attachment	40.25	7.72	-1.10 (.09)	1.05 (.19)	-.25*	.17*	-.35*	-	
5. Self-perceived addiction to pornography	13.08	6.66	2.32 (.09)	5.94 (.19)	.14*	-.03	.14*	-.11*	-

Note: * $p < .001$

The associations among the main variables

The results of the Pearson correlation analysis suggest that psychological distress related to the use of pornography is significantly and positively associated with anxious attachment, avoidant attachment, and self-perceived addiction to pornography, and negatively associated with secure attachment. Self-perceived addiction to pornography is significantly and positively associated with avoidant attachment and negatively associated with secure attachment. The results of the correlation analysis are presented in Table 2.

Testing the indirect effect

We used the PROCESS macro in SPSS 26 – Model 4 (Hayes, 2017) to investigate the potential indirect effect of anxious attachment, avoidant attachment, and secure attachment on the relationship between self-perceived addiction to pornography and psychological distress related to the use of pornography (see Figure 2). The results suggest that the total effect of self-perceived addiction to pornography on psychological distress related to the use of pornography was significant, $b = .15$; $SE = .04$; $p < .001$; 95% CI [.07; .23]. The direct effect was significant, $b = .10$; $SE = .03$; $p = .004$; 95% CI [.03; .17]. Avoidant attachment, $b = .03$; $SE = .01$; 95% CI [.01; .05], and secure attachment, $b = .02$; $SE = .009$; 95% CI [.007; .04], had a significant indirect effect on the relationship between self-perceived addiction to pornography and psychological distress related to the use of pornography. Anxious attachment, $b = -.01$; $SE = .01$; 95% CI [-.03; .01], had not a significant indirect

effect on the relationship between self-perceived addiction to pornography and psychological distress related to the use of pornography.

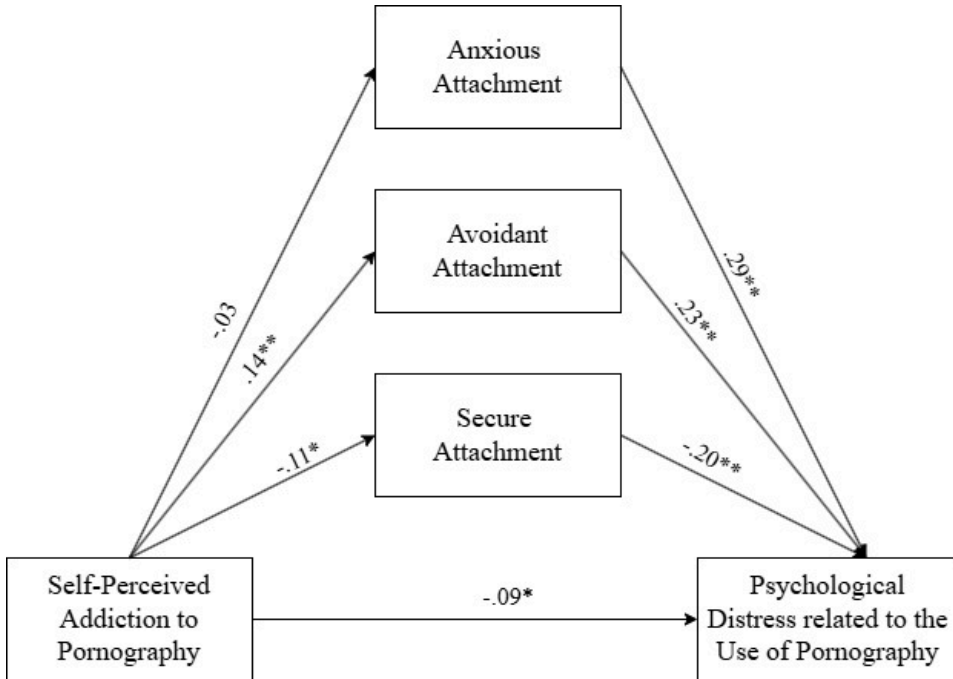


Figure 2. The indirect effect of anxious attachment, avoidant attachment, and secure attachment on the relationship between self-perceived addiction to pornography and psychological distress related to the use of pornography

Note: * $p < .05$; ** $p < .001$; The reported coefficients represent standardized coefficients

Discussions

The present study identified several noteworthy patterns. First, the findings suggest that psychological distress related to pornography use tends to be positively associated with anxious attachment, avoidant attachment, and self-perceived addiction to pornography, while being negatively associated with secure attachment. Our results are consistent with previous research that has highlighted the potential significance of attachment styles in the context of pornography consumption (Contreras et al., 2024; Jones, 2022; Kató et al., 2024). More specifically, previous studies have pointed out that individuals with anxious or avoidant attachment styles often experience difficulties with emotion regulation and, as a result, may resort to pornography as a

maladaptive coping mechanism (Akbari et al., 2024; Di Trani et al., 2017). The present findings thus extend the existing literature by suggesting that dimensions of insecure attachment styles may be linked to psychological distress related to pornography use. Additionally, the association between self-perceived addiction to pornography and psychological distress related to pornography use may be supported by previous studies that have shown that the belief of being addicted can lead to experiences of psychological distress or self-stigma (Corrigan et al., 2016; Grubbs et al., 2019a; Grubbs et al., 2019b; Huțul & Karner-Huțuleac, 2024b).

In addition, self-perceived addiction to pornography appeared to be positively associated with avoidant attachment and negatively associated with secure attachment. The association with avoidant attachment style may be explained by the tendency of these individuals to use pornography as a temporary coping strategy, seeking immediate sexual gratification without emotional intimacy (Alperin, 2001; Zhang, 2022). Such use may reflect an attempt to maintain psychological distance, which could, in turn, contribute to a self-perceived loss of control (Szymanski & Stewart-Richardson, 2014).

Avoidant attachment was found to have a significant indirect effect on the association between self-perceived addiction to pornography and psychological distress related to pornography use. This finding may suggest that avoidant attachment could function as a psychological mechanism through which self-perceived addiction to pornography contributes to psychological distress. Avoidantly attached individuals may frequently engage in emotionally detached sexual behaviors—such as pornography use—as a means of preserving autonomy and minimizing intimacy (Alperin, 2001; Zhang, 2022). Furthermore, avoidant individuals may experience internal conflict when their need for emotional distance clashes with societal norms or personal values, which may, in turn, intensify the psychological conflict they experience (Szymanski & Stewart-Richardson, 2014).

Regarding secure attachment, it also showed a significant indirect effect on our main association. This finding suggests that individuals with higher levels of secure attachment are less likely to translate self-perceived addiction to pornography into psychological distress related to its use. In this sense, we consider that secure attachment may function as a protective factor, buffering against the negative emotional impact. This observation aligns with previous findings indicating that securely attached individuals tend to engage in more adaptive emotion regulation strategies (Efrati & Amichai-Hamburger, 2019; Maas et al., 2018). At the same time, another potential explanation may lie in the fact that individuals with secure attachment tend to view themselves as worthy of love and others as trustworthy and supportive (Levine et al.,

2021). As a result, they may be more likely to contextualize their own patterns of pornography use without moral judgment or self-blame.

In contrast, anxious attachment did not show a statistically significant indirect effect on the relationship between self-perceived addiction to pornography and related psychological distress. The absence of a mediating effect of anxious attachment in this study may suggest that its role functions more as a general vulnerability factor contributing to emotional instability. Individuals with an anxious attachment style tend to experience chronic concerns about rejection or abandonment (Dewitte, 2012), which may lead them to interpret their own behaviors, including pornography use, in a negative light. However, their psychological distress may not be directly related to self-perceived addiction to pornography, but rather to a preexisting relational insecurity linked to heightened emotional reactivity.

In conclusion, the present findings highlight the complex interaction between attachment styles, self-perceived addiction to pornography, and psychological distress related to pornography use. These results may contribute to a deeper understanding of the psychological mechanisms underlying pornography consumption and emphasize the importance of considering attachment-related factors in both clinical and research contexts addressing problematic sexual behaviors.

Limitations and future directions

Despite the strengths of the current study, it is important to acknowledge several key limitations. First, the cross-sectional nature of the research design limits the ability to draw causal inferences. Future studies should address this limitation by employing alternative research designs, such as longitudinal or experimental approaches. Second, participant recruitment was conducted using snowball sampling via social media platforms, which may limit the generalizability of the findings due to potential sampling biases and lack of representativeness. Third, the use of self-report instruments may have introduced response biases, including social desirability effects. Future research could benefit from incorporating additional assessment methods, such as behavioral observations or reports from family members. Moreover, the study was conducted within a Romanian cultural context, where pornography use is often perceived as taboo (Gergely & Rusu, 2023; Huțul et al., 2024; Huțul & Karner-Huțuleac, 2023a, 2023b), potentially influencing participants' responses. Lastly, future work may expand upon the present findings by including other relevant variables in the context of addiction, such as difficulties in emotion regulation (Antoniac et al., 2024; Antons et al., 2023; Berking & Wupperman, 2012), as well as exploring the role of attachment

styles in relation to other prevalent addictions in contemporary Romanian society, such as alcohol use or gambling (Huțul et al., 2024; Huțul & Holman, 2023; Matei-Mitacu et al., 2024).

Theoretical and practical implications

From a theoretical perspective, the present work contributes to the growing body of literature addressing the psychological mechanisms underlying self-perceived addiction to pornography by highlighting the indirect effect of attachment styles. A more nuanced understanding based on specific attachment styles may deepen existing models of behavioral addiction and support the conceptualization of self-perceived addiction to pornography as a subjectively constructed experience, rather than one rooted solely in behavioral frequency.

From a practical perspective, the current findings underscore the importance of assessing attachment style in psychotherapy and clinical settings when addressing pornography use among individuals seeking help for related concerns. These findings may serve as a starting point for the development of targeted psychological interventions.

Disclosure statement

The authors report no conflicts of interest. The authors alone are responsible for the content and writing of the paper.

Data availability statement

The data supporting the findings of this research are available from the corresponding author upon request.

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