

ORIGINAL ARTICLE

Problematic Pornography Use, Psychopathology, and Body Connection: Associations and Sex Differences

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Main Points

- Sex differences in the association between psychological distress and PPU among male and female US university students.
- The BPS is a valid screening tool to assess PPU in male and female US university students.
- Body connection is associated with PPU in US university students.

Abstract

Problematic pornography use is an increasingly relevant phenomenon in the United States. Especially young and male individuals seem to be vulnerable to experiencing problems with their pornography use. Previous research suggests that additional psychological symptoms may relate to problematic pornography use in some populations, and little is known about associations with body connection. Therefore, the current study examined associations between problematic pornography use and symptoms of psychological distress, impulsivity, and body connection in a large sample of male and female US university students ($n = 1525$). Results indicated positive associations between problematic pornography use on the one hand and psychological symptoms and body dissociation on the other hand. However, when predicting problematic pornography use by all variables in a regression model, the association with body dissociation became negative in male and unrelated in female students while associations with body awareness became statistically significant and positive in both groups. In addition, a sex difference for the association with psychological distress was found. Further work is needed to examine the association between problematic pornography use and body connection, as well as the potential sex effect found in relation to psychological distress. Therefore, we recommend further sex-informed and longitudinal analyses investigating problematic pornography use. **Keywords:** Addictive behavior, body connection, compulsive sexual behavior, pornography, psychological distress, psychopathology

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Introduction

Pornography use is prevalent in the United States (US). In a recent nationally representative sample, a 12-month prevalence of 59.1% in men and 20.5%

in women was reported (Grubbs et al., 2022). In a sample of adults using the internet (aged 18 – 73 years), a one-month prevalence of 91.5% in men and 60.2% in women was observed (Solano et al., 2020). Problematic pornography use (PPU) is

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characterized by functional or psychological impairments and poor behavioral control (Grubbs & Kraus, 2021; Fernandes & Griffiths, 2021). Young individuals (Lim et al., 2017; Shirk et al., 2021) and college students specifically (Cooper et al., 2000) may be experiencing PPU, with men, relative to women, generally more likely to experience PPU (Böthe et al., 2019; Böthe et al., 2021; Okabe et al., 2021).

Mental-health-related concerns have been associated with PPU across different populations. For instance, PPU has been linked to depression and anxiety symptoms in Asian (college) students (Chen L. et al., 2021; Okabe et al., 2021; Ye et al., 2021) and to impulsivity in Croatian men (Rousseau et al., 2021). These associations have also been demonstrated in US veterans (Shirk et al., 2020; Kraus et al., 2020) and within a mixed US sample ($n = 757$) including university students (Borgogna et al., 2018). As for impulsivity, specifically negative urgency seems to be PPU-related (Kraus et al., 2020; Zhang et al., 2022). These results need further replication, though, as similar correlations in mixed populations from the US as well as in Asian college students were observed, we expected them to also emerge in samples of US university students.

In addition to impulsivity, anxiety, and depression, another construct appears to be potentially relevant. In research over the last two decades, body connection has been proposed and demonstrated to contribute importantly to sexual health and psychopathology (Price, 2005; 2007; Silverstein et al., 2011; Blycker & Potenza, 2018). Much research has been dedicated to body-oriented therapy in recovery from sexual abuse (Price, 2003; 2005; 2006; 2007). Other research has examined the role of body connection in sexual dysfunction (Seal & Meston, 2007; Silverstein et al., 2011). Carvalheira et al (2017) demonstrated that participants who reported various sexual difficulties were more dissociated from their bodies. However, PPU was not assessed among these sexual difficulties. Due to the current lack of research examining the association between body connection and PPU, we reviewed mindfulness research as a proxy because mindfulness, by definition, may represent a related construct (Bishop et al., 20024; Baer et al., 2006; Mehling, 2009; Carvelheira et al., 2017), enabling us to form hypotheses on the association between body connection and PPU. Carvalheira et al (2017) posited that being connected to and aware of the body are central to mindfulness. Appropriately, mindfulness skills may contribute to shaping body connection (Mehling, 2009). Dispositional mindfulness generally seems to predict positive sexual outcomes (Pepping et al., 2018). Accordingly, mindfulness-based approaches may be an effective treatment approach for problematic sexual behavior (Fraumeni-McBride, 2019; Blycker & Potenza, 2018; Holas et al., 2021; Reid et al., 2014). Based on these mindfulness outcomes, we assume that body connection would similarly associate with PPU. Specifically, we expected that body awareness would be negatively, and body dissociation positively, associated with PPU.

As discussed elsewhere (Grubbs & Kraus, 2023), further research is needed to standardize and test screening tools for those reporting issues with PPU in both clinical and nonclinical populations (Fernandez & Griffiths, 2021). However, ongoing debates surrounding the diagnostic classification of PPU complicate current

standardization efforts. For example, PPU may be subsumed within a diagnosis of Compulsive Sexual Behavior Disorder (CSBD; Kraus & Sweeney, 2019; Gola & Kraus, 2021) or may reflect an addictive disorder (Brand et al., 2022). Unlike many other PPU-related measures, the Brief Pornography Screen (BPS) was initially developed as a brief screening tool for probable PPU in clinical and nonclinical samples and in response to debates about classification (Kraus et al., 2020; Lew - Starowicz et al., 2022). BPS items seem to largely cover the overlapping domains between all 3 approaches (Kraus et al., 2020; Carnes et al., 2014; Kafka, 2010; WHO, 2018), though its central focus assesses features of PPU characterized by impaired control (i.e., failures to stop/moderate one's pornography use) and craving (Chen L. et al., 2021; Kraus et al., 2016). Since the BPS appears to be a particularly promising screening tool for future research and has not yet been widely validated in university populations, we sought to evaluate the factor structure of the BPS within this population before applying it to examine associations with PPU. Based on frequently observed sex differences between PPU in men and women (Böthe et al., 2019; Böthe et al., 2021; Okabe et al., 2021), we aimed to separate the main analyses of this study according to sex and also explore potential group differences.

Present Study

The current study had several aims. First, we examined the factor structure of the BPS. We evaluated measurement invariance across sex groups (males, females). In keeping with prior work (Kraus et al., 2020), we hypothesized that the confirmatory factor analysis (CFA) would support a single-factor solution. We then performed correlation analyses between psychological distress (i.e., anxiety and depression symptoms), impulsivity (i.e., negative urgency), and body connection (i.e., body awareness, body dissociation) in men and women. We hypothesized that the associations would be statistically significant and positive, except for body awareness, which we hypothesized would be associated negatively with BPS scores. Since differences have been noted between men and women with regard to PPU, we hypothesized more PPU (i.e., scores exceeding BPS cut-off and higher scores) in men compared to women. We tested structural invariance between BPS scores, psychological distress, negative urgency, and body awareness as moderated by sex. We expected to find stronger relationships between BPS scores and psychological distress and negative urgency for men relative to women. We also explored differences in associations between body connection and PPU.

Material and Methods

Procedure and Participants

Data was collected from a cross-sectional online survey, performed between March 2020 and May 2021, involving students at two US universities: one in the Intermountain West and the other in the Deep South. Others have previously published from this dataset on different topics (Habashy et al., 2023; Borgogna et al., 2023). Ethics approval for this study was obtained from the IRB at the University of Nevada, Las Vegas (#1545894-5). Written informed consent was obtained within the survey for anonymized participant information to be published. The original sample consisted of 2288 participants. Upon data cleaning (mainly involving instances with >80% of data missing), 2186 participants remained. Of these, 1525 (609 men and 916 women

according to sex assigned at birth) reported having used pornography during the past year, completed the BPS, and were included in further analyses. The average age was 20 years ($SD = 3.9$; median = 19). Sample demographics are presented in Table 1.

Measures

The BPS is a five-item tool assessing PPU during the past six months (Kraus et al., 2020). Participants were asked to rate their problems with pornography use. Response options for items (e.g., “You find yourself using pornography more than you want to”) range on a three-point scale from 0 “never” to 2 “very often.” A previous nationally representative US sample and other multinational populations indicated a unidimensional factor structure (Kraus et al., 2020). Tests on normal distribution resulted in the rejection of the normal distribution hypothesis (Kolmogorov – Smirnov test: $p < .001$; Shapiro – Wilk test: $p < .001$) and indicated a floor effect (skewness = 1.08; kurtosis = 0.24). Cronbach’s alpha of the BPS in this sample was .87 in all participants, .87 in men, and .86 in women.

Psychological distress (Cronbach’s alpha = .87) was assessed by a five-item scale derived from the DSM-5 Cross-Cutting Symptom Measures (CCSM) for depression and anxiety over the prior two weeks. Symptom frequency was rated for items such as “Feeling nervous, anxious, frightened, worried, or on edge?” on a five-point Likert scale from 0 “none at all” to 4 “nearly every day” (Narrow et al., 2013; Clarke & Kuhl, 2014).

The Short Version of the Urgency, Lack of Premeditation, Lack of Perseverance, Sensation Seeking, and Positive Urgency Impulsive Behavior Scale (S-UPPS-P) Negative Urgency subscale (Cronbach’s alpha = .73) assesses the impulsivity dimension of negative urgency over the prior two months with four items (e.g., “When I feel bad, I will often do things I later regret in order to make myself feel better now”). Response options range along a four-point Likert scale from 1 “agree strongly” to 4 “disagree strongly” (Cyders et al., 2014; McCredie et al., 2020).

The Scale of Body Connection (SBC) assesses body awareness (SBC-BA; Cronbach alpha = .79) with 12 items, e.g., “I listen for information from my body about my emotional state” and bodily dissociation (SBC-BD; Cronbach alpha = .78) with 8 items, e.g., “I feel separated from my body when I am engaged in sexual activity,” over the prior 2 months (Price & Thompson, 2007). We applied the SBC to measure domains of body connection due to the scale’s validity and reliability (Price & Thompson, 2007, Price et al., 2017) as well as its prior use in multiple studies of sexual health (Carvalho et al., 2017; Price, 2003; 2005; 2006; 2007; Seal & Meston, 2007; Silverstein et al., 2011). Response options ranged within a five-point Likert scale from 0 “not at all” to 4 “all of the time” (Price & Thompson, 2007, Price et al., 2017). Item 18 from the SBC-BA dimension had not been included in the original dataset, though the reliability of the subscale remained good (Cronbach’s alpha = .79). Consequently, associations were analyzed independently for both subscales, which was in alignment with our expectation that PPU would correlate positively to SBC-BD and negatively to SBC-BA. Descriptive measurement statistics in men and women are presented in Table 2.

Table 1.
Demographic Statistics of Sample ($n = 1525$)

	<i>n</i>	%	<i>M (SD)</i>
Age			20 (3.9)
Sex ¹			
Man	609	39.9	
Women	916	60.1	
Sexual orientation			
Heterosexual	891	58.4	
Bisexual to some extent	491	32.2	
Gay	36	2.4	
Lesbian	30	2.0	
Pansexual	46	3.0	
Asexual	9	0.6	
Other	22	1.4	
Religion			
Protestant	121	8.0	
Roman Catholic	392	25.9	
Mormon	19	1.3	
Orthodox	19	1.3	
Jewish	16	1.1	
Muslim	18	1.2	
Buddhist	33	2.2	
Hindu	4	0.3	
Atheist	141	9.3	
Agnostic	169	11.2	
Spiritual, but no religious commitment	321	21.2	
Something else	261	17.2	
Race			
White	440	28.9	
Hispanic/Latino	265	17.4	
Black	150	9.8	
Asian	338	22.2	
Native American	8	0.5	
Middle Eastern	21	1.4	
Multiple races	285	18.6	
Prefer not to share	7	0.5	
Other	11	0.7	

¹Sex was assessed according to the assignment at birth.
SD, standard deviation

Data Analysis

Using IBM Statistical Package for Social Sciences (SPSS) Statistics Version 28.0.1.0 (IBM SPSS Corp.; Armonk, NY, USA), we examined variable statistics including frequencies, means (M), standard deviations (SD), and internal consistency, as well as preparatory Kolmogorov – Smirnov and Shapiro – Wilk tests.

Table 2.
Brief Pornography Screen—Clinical Cut-Off and Group Differences

	Clinical Cut-Off > 4 (%)	Mean (SD)	Mann – Whitney <i>U</i> test		
All	452 (29.6)	2.40 (2.75)			
			Middle range	<i>U</i>	Asymp. Sign.
Men	266 (43.7)	3.34 (2.97)	910.03	189,378	< .001
Women	186 (20.3)	1.78 (2.41)	665.24		

SD, standard deviation.

Significant group differences between men and women in BPS scores were examined by non-parametric Mann – Whitney *U* tests. Degrees of asymptotic significance were evaluated as statistically significant if $p < .05$, very significant if $p < .01$, and extremely significant if $p < .001$.

In R Statistics, multigroup CFA was used to examine the factor structure of the BPS in male and female college students. Fit indices were interpreted following standard structural equation modeling (SEM) guidelines (c.f., Kline, 2023). Latent variables were then estimated for all variables of interest using maximum likelihood estimation with robust standard errors. Problematic pornography use was estimated by BPS items, psychological distress by CCSM items, and negative urgency by S-UPPS-P-N items. To adjust for high item count on the SBC-BA and SBC-BD subscales, a parceling procedure was employed. This involved conducting an exploratory factor analysis fitted to a one-factor solution. Items were then assigned to one of three parcels per subscale iteratively in a counterbalanced fashion (Little et al., 2002). This ensured that both subscales were estimated with a minimal number of indicators (three in each case) that maximized covariance coverage. Structural equation modeling was then

used to estimate the bivariate correlations between the latent variables, followed by regression analyzes in which BPS scores were regressed on each of the other latent variables simultaneously split by group. We completed our analyzes by conducting structural invariance tests to examine if path strengths differed between groups (i.e., moderation). These were conducted by subtracting unstandardized paths in the female group from the male group and estimating the bias-corrected bootstrapped confidence intervals (CIs) around the difference (1,000 samples). A 95% CI that does not contain “0” is roughly equivalent to $p < .05$. Because structural invariance assumes equality of factor loadings between groups for all indicators, measurement invariance was tested across all variables simultaneously. Measurement invariance was determined by testing a constrained model against a freely estimated one, with a non-significant Chi-square difference test suggesting no significant degradation, and thus, measurement invariance.

Results

Men reported more PPU (i.e., numerically higher BPS scores and higher cut-off exceedance frequency) than women. Approximately 44% of men and 20% of women reported BPS scores that reached or exceeded the suggested clinical cut-off score of 4. BPS scores were statistically different between the sexes (see Table 2).

The multigroup CFA (Figure 1) yielded an excellent fit $\chi^2(18) = 55.84$, $p < .001$, CFI = .981, TLI = .979, RMSEA = .053 (90% CI: .037, .068), and SRMR = .033. We then tested measurement invariance to ensure correlational analyzes were appropriate across latent variables. The initial configural measurement model evidenced good fit: $\chi^2(1,100) = 2,376.09$, $p < .001$, CFI = .929, TLI = .919, RMSEA = .039 (90% CI: .037, .041), and SRMR = .047. Next, we constrained all factor loadings to be equal between groups. This model also evidenced good fit: $\chi^2(1,125) = 2401.82$, $p < .001$, CFI = .929, TLI = .921, RMSEA = .039 (90% CI: .036, .041), and SRMR = .048. The Chi-square difference testing suggested no significant difference between models: $\chi^2(25) = 26.84$, $p = .364$,

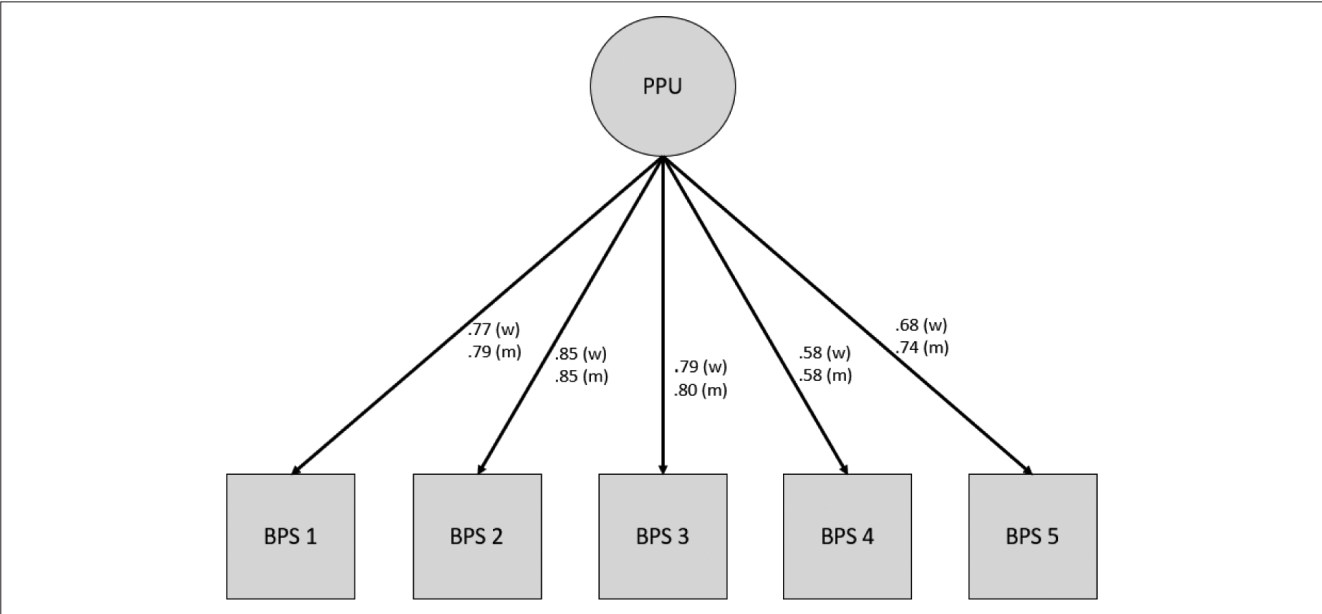


Table 3.
Bivariate Correlations Across Latent Variables

Variable	1	2	3	4	5
BPS ¹	–	.18***	–.04	.22***	.26***
CCSM ²	.30***	–	.14***	.63***	.48***
SBC-BA ³	.05	.10	–	.16***	–.01
SBC-BD ⁴	.26***	.59***	.24***	–	.55***
S-UPPS-P-N ⁵	.37***	.40***	–.05	.53***	–

Scoring has been adjusted such that higher scores indicate more negative urgency. Men below the diagonal, women above.

¹Brief Pornography Screen, ²Cross-Cutting Symptom Measures, ³Scale of Body Connection-Body Awareness, ⁴Scale of Body Connection-Body Dissociation, ⁵Short-Urgency-Premeditation-Perseverance-Sensation Seeking-Positive Urgency-Negative Urgency.

*** $p < .001$.

BPS, brief pornography screen; CCSM, cross-cutting symptom measures, SBC-BA, scale of body connection-body awareness; SBC-BD, scale of body connection-body dissociation; S-UPPS-P-N, short-urgency-premeditation-perseverance-sensation seeking-positive urgency-negative urgency.

meaning metric invariance was evident and between-group correlational tests can be employed.

As shown in Table 3, bivariate correlations across the latent variables suggested the BPS scores were modestly positively correlated (i.e., small or moderate) with all other variables in the measurement model, with the exception of SBC-BA scores, which were uncorrelated with BPS scores for men or women. In addition, CCSM scores depicted a small positive correlation with body awareness in women, and this relationship was statistically insignificant in men. Intercorrelations between CCSM scores, body dissociation, and impulsivity were moderate and positive in both men and women.

Results from regression analyses are shown in Table 4. S-UPPS-P-Negative Urgency remained the strongest correlate for both groups. CCSM scores remained a positive correlate for males but not females. Suppression effects were evident for body connection scales such that SBC-BA became a significant (weak) positive correlate of BPS scores in men and women, and SBC-BD demonstrated a very weak negative correlate with BPS scores in men and was non-significantly related to BPS scores in women. Structural invariance tests indicated only the path between CCSM and BPS scores differed by sex, with the path being significantly stronger in men ($\Delta B = .17$, 95% CI: .03, .29). Altogether, the structural model accounted for 23% of the BPS variance in men and 15% in women.

Discussion

The current study examined the factor structure of the BPS within a sample of US university students and its relation to body connection, negative urgency, and psychological distress in men and women. Overall, the CFA yielded a good fit for the one-factor model, thus extending prior results (Kraus et al., 2020). A substantial percentage of pornography-using university students (44% of men and 20% of women) met or exceeded the suggested clinical threshold, supporting previous findings indicating that many young individuals (Lim et al., 2017; Shirk et al., 2021) and college students specifically (Cooper et al., 2000) may be

Table 4.
Adjusted Regression Coefficients

BPS ¹ correlates	Males	Females
CCSM ²	.20***	–.03
SBC-BA ³	.28***	.30***
SBC-BD ⁴	–.17*	.03
S-UPPS-P-N ⁵	.40***	.27***

Scoring has been adjusted such that higher scores indicate more negative urgency. *path was significantly stronger for men relative to women.

¹Brief Pornography Screen, ²Cross-Cutting Symptom Measures, ³Scale of Body Connection-Body Awareness, ⁴Scale of Body Connection-Body Dissociation, ⁵Short-Urgency-Premeditation-Perseverance-Sensation Seeking-Positive Urgency-Negative Urgency.

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

BPS, brief pornography screen; CCSM, cross-cutting symptom measures, SBC-BA, scale of body connection-body awareness; SBC-BD, scale of body connection-body dissociation; S-UPPS-P-N, short-urgency-premeditation-perseverance-sensation seeking-positive urgency-negative urgency.

experiencing PPU. Notably, the proportion of men exceeding the cut-off was over twice as much as that observed in women. This observation aligns well with recent BPS findings (for a review see Engelhardt et al., 2025). The sex effect may in part reflect sex differences in sexual stimulation. In this regard, men seem to respond comparatively more pronouncedly to visual stimulation, while women tend to respond rather to emotional stimulation (Chung et al., 2013; Hamann et al., 2004). As pornography use might rather serve visual arousal, it might be less appealing to women compared to men. This could also explain higher frequency rates of pornography use in men compared to women (Grubbs et al., 2022; Solano et al., 2020), with frequency of use generally associated with PPU (Engelhardt et al., 2025).

BPS scores positively correlated with CCSM scores in both men and women. Associations between BPS and CCSM scores seem consistent with previous research in US veteran populations (Shirk et al., 2021) and Asian (college) students (Okabe et al., 2021; Ye et al., 2021; Chen J. et al., 2021). However, when including SBC-BA, SBC-BD, and S-UPPS-P-N scores in regression analysis, CCSM scores remained associated with BPS scores only in men, suggesting that psychological distress and PPU may relate to each other differently in both sexes. This was supported by the findings of structural invariance testing, revealing a significant difference in this path between the sexes. A common explanation for the association between psychological symptoms and PPU is that individuals may cope with their psychological distress through pornography use, which then becomes dysregulated (Testa et al., 2024). A sex difference in coping through pornography may reflect differences in amygdala activation in response to sexual stimuli. As the responsiveness of the amygdala to visual sexual stimulation appears less pronounced in women (Hamann et al., 2024), pornography use might be a less effective/distractive coping strategy for women compared to men. Furthermore, the regression model suggests that the relationship with psychological distress in women is rather determined by its shared variance with other variables than by its unique contribution to PPU. Variables such as impulsivity and body connection may serve as mediators for this relationship in women. However, further research is needed to investigate the sex-related difference, especially in longitudinal studies.

The positive correlations between S-UPPS-P-N and BPS scores in both men and women are consistent with previous research indicating associations between impulsivity and PPU in male Croatian adolescents (Rousseau et al., 2021), Polish adults (Kraus et al., 2020), and US military veterans (Shirk et al., 2021). Impulsivity remained a positive predictor in the regression model. These findings appear particularly reasonable since compulsive sexual behavior, such as PPU, involves repetitive failures to control sexual urges, consistent with CSBD's classification as an impulse control disorder (WHO, 2018). We did not find differences in the strength of this association between men and women, suggesting a relevant role for impulsivity in relation to PPU in college-attending US men and women.

In bivariate correlational analysis, BPS scores were also associated positively with SBC-BD scores in both men and women according to our expectations. This association might reflect coping behavior with bodily dissociative states or a tendency to dissociate from one's body as a result of pornography use. An association between dissociation and sexual addiction has been previously discussed (Griffin-Shelly et al., 1995), and mechanisms warrant further investigation. The association with SBC-BA scores, on the other hand, was not statistically significant in either men or women. In the multiple regression analysis, the association with SBC-BA scores became positively significant in both sexes, and the association with SBC-BD scores became weakly negatively associated in men, while statistically insignificant in women. SBC-Body Awareness scores became a statistically significant positive predictor in both men and women. A priori predictions for these associations were made based on mindfulness research (Chandiramani, 2017; Blycker & Potenza, 2018; Fraumeni-McBride, 2019) and were contrary to our predictions. The regression results indicate suppression effects which are difficult to interpret. They are attributable to our procedure of constructing regression models despite SBC-BA and SBC-BD demonstrating only weak, and in some cases, non-significant bivariate correlations with BPS. Indeed, some of the predictors evidenced stronger between covariate relations (e.g., SBC-BD and CCSM), meaning error variance between the covariates was suppressed, artificially increasing, and in the case of SBC-BD in men, inverting the relationships with BPS. We suggest readers interpret the suppression effects cautiously. Likely, the bivariate correlations between SBC-BA and SBC-BD with BPS are more reliable.

Body awareness might also play a role in the context of coping through pornography use (Darvish et al., 2018; Leonard, 2010). Speculatively, this may involve coping with uncomfortable body sensations through parasympathetic-sympathetic switches (Graber et al., 1991; Krüger et al., 1998; Exton et al., 1999; Meston & Brandford, 2007). This may align with Phillips (2018) who found a negative association between pornography use and mindfulness, explained through experiential avoidance. However, the extent to which features of pornography use may relate to increased bodily awareness during sexual activities more generally also warrants consideration and examination. Thus, further work assessing the association between PPU and body awareness and body dissociation in men and women is needed, particularly as motivations for using pornography vary across men and women (Böthe et al., 2021).

As expected, men and women differed notably in the average severity of self-reported PPU symptoms. The association between

CCSM and BPS scores was also more robust in the regression model and only significant in men. Other association strengths did not differ significantly between men and women. Based on findings with the CCSM, we recommend sex-separated analyses when examining PPU and its associations with mental health in future studies. Additionally, future studies should consider a wider range of sexual and gender identities.

The current study presents both limitations and strengths. As this study relies on self-reported data from a convenience sample, information bias (Althubaiti, 2016) may be a limiting factor. Due to the cross-sectional design, no assumptions of causality can be made. Results cannot be generalized to help-seeking populations. Furthermore, the only impulsivity dimension measured was negative urgency. Other impulsivity dimensions (e.g., positive urgency, sensation-seeking) warrant investigation given their links to addictive behaviors and clinically relevant phenomena (Willie et al., 2022; Tani et al., 2020; Pautrat et al., 2022). Another limitation is that all BPS correlations, with the exception of that with impulsivity, were small and should therefore be interpreted cautiously. A further limitation lies in the interpretation of the suppression effect, which might be meaningful but could also reflect a statistical reduction of error in the regression model. In particular, the interpretation of the initially statistically insignificant association with body awareness should be interpreted cautiously. In addition, the absence of participants' socioeconomic status is noted as a limitation. Since associations between body connection and PPU have not been previously demonstrated, we recommend further studies to examine the relationships between PPU and body connection. In addition, we recommend examining the demonstrated associations with psychological distress and negative urgency in longitudinal studies to better understand the underlying mechanisms. We recommend that researchers further examine potential sex differences in PPU and its associations.

In conclusion, we believe the BPS is psychometrically sound as a screening tool for PPU among university students. Problematic pornography use was related to psychological symptoms in university students. Further research is warranted specifically on the relationships between PPU and body connection, and PPU and psychological distress, especially in longitudinal studies and among help-seeking populations.

Data Availability Statement: The data that support the findings of this study are available on request from the corresponding author.

Ethics Committee Approval: This study was approved by the Ethics Committee of the University of Nevada, Las Vegas (Approval No: 1545894-5, Date: March 11, 2020).

Informed Consent: Written informed consent was obtained from the participants who agreed to take part in the study.

Peer-review: Externally peer-reviewed.

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