Originales

The impact of procrastination, prosocial behaviour, empathy and resilience on different addictive behaviours

El impacto de la procrastinación, conducta prosocial, empatía y resiliencia sobre distintas conductas adictivas

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Abstract

Behavioral addictions are characterized by a loss of self-control, a strong desire to engage in the behavior, and significant distress or discomfort associated with it. Although these issues are beginning to receive greater visibility, research on the topic remains limited. This study aims to examine the relationships between protective factors (empathy, prosocial behavior, and resilience) and coping styles (procrastination) in connection with a series of maladaptive behaviors, such as problematic pornography consumption and the problematic use of new technologies (Internet, social media, and instant messaging). The sample consisted of 855 participants (65.8% women) with a mean age of 24.3 years (SD= 9.03). Various scales were employed to measure the mentioned variables, and group comparisons as well as multiple linear regression analyses were conducted. The three protective factors yielded varied results, acting as predictors in certain cases depending on the group (men/women). These findings provide valuable insights that may contribute to the design and implementation of prevention and intervention programs aimed at addressing problematic engagement in specific behaviors.

Keywords

Behavioural addictions, problematic consumption of pornography, problematic use of new technologies, regression models, Gender.

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Resumen

Las adicciones comportamentales se caracterizan por la pérdida de control sobre la propia conducta, la existencia de un fuerte deseo por llevarla a cabo y la presencia de un fuerte malestar o angustia asociada. Actualmente, aunque se les está empezando a dar una mayor visibilidad a dichas problemáticas, el estudio sobre estas todavía es escaso. En la presente investigación se pretende ver cómo se relacionan distintos factores de protección (empatía, conducta prosocial y resiliencia) y estilos de afrontamiento (procrastinación), con una serie de conductas desadaptativas, como son el consumo problemático de la pornografía y de las nuevas tecnológicas (Internet, redes sociales y mensajería instantánea). La muestra se compuso por 855 sujetos (65,8% mujeres) con una edad media de 24,3 (DT= 9,03). Se emplearon distintas escalas para medir las variables mencionadas; y se realizaron análisis de comparaciones entre grupos y una serie de regresiones lineales múltiples. Por su parte, los tres factores de protección mostraron resultados variados, actuando como predictores en algunos casos dependiendo del grupo, (hombres/mujeres). Estos hallazgos aportan información relevante que puede ser útil en diferentes programas de prevención e intervención dirigidos al tratamiento del uso problemático de conductas específicas.

Palabras clave

Adicciones comportamentales, consumo problemático de la pornografía, uso problemático de nuevas tecnológicas, modelos de regresiones, Género.

INTRODUCTION

Behavioral addictions are a type of addiction in which no specific substance is involved; however, they share a symptomatic framework characterized by a loss of control over one's own behavior, the presence of a strong desire to engage in it (craving), and the experience of significant distress or discomfort associated with the behavior, despite the severe or unpleasant consequences it may entail (Rodríguez et al., 2023). These behaviors may even lead to withdrawal-like symptoms when not performed, such as nervousness or irritability (Petry et al., 2018), and are influenced by psychological, biological, and social factors (Rodríguez et al., 2023).

Although the term *"behavioral addiction"* was coined by Marks (1990), it is only in the last decade that this issue has begun to gain greater visibility (Andreassen et al., 2015). An example of this progress is the recognition and inclusion of a new category in the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-5; American Psychiatric Association [APA], 2013), referred to as "substance-related and addictive disorders." Although, to date, only "gambling disorder" has been included in this section (APA, 2013), increasing attention is being given to other types of behaviors that may function in a similar way, such as problematic pornography use (Ballester-Arnal et al., 2023) or problematic use of new technologies (Pedrero-Pérez et al., 2018), partially acknowledged by the current ICD-11 through the inclusion of "gaming disorder" within the category of "disorders due to substance use

or addictive behaviors" (World Health Organization [WHO], 2021). These types of addictions, together with the already recognized gambling disorder, have been shown to trigger consequences as severe as those caused by substance addictions (Grant, 2010). Nevertheless, debate regarding their categorization persists (Mestre-Bach et al., 2017; Müller et al., 2015).

It is worth noting that there is currently no consensus regarding the recognition of the concept of *"behavioral addiction"* (Sinclair et al., 2016). Therefore, it is often considered more appropriate to refer to these cases as compulsive or maladaptive behaviors, or as problematic use of the specific behavior (Potenza, 2015).

Problematic Pornography Use (PPU)

Compulsive sexual behavior disorder (WHO, 2021), also referred to as hypersexuality disorder (APA, 2013), presents different subtypes, one of which involves the use of pornographic material, generally in online formats (Echeburúa, 2012). However, its terminology and classification continue to generate controversy within the scientific community (Mauer-Vakil & Bahji, 2020).

Pornography consumption is widespread in the population and is part of the sexual lives of many individuals, ranging from preadolescents to adults (Ballester-Arnal et al., 2023). However, excessive use can lead to serious health consequences (Wéry & Billieux, 2017), being associated with feelings of inadequacy and frustration in relationships, depression (Böthe et al., 2020), an inability to cease the problematic behavior, and a strong and persistent desire to satisfy sexual urges (Briken et al., 2022). Although there is currently no unified clinical classification for this behavior, some associated symptoms have been identified, such as excessive time spent consuming pornography, impaired self-control, neglect of certain family, social, or work responsibilities due to overinvestment in the behavior, and persistence in the habit despite its negative consequences (Efrati, 2020; Wéry & Billieux, 2017).

Recent studies report high prevalence rates of pornography use, ranging from 60% to 98% in men and from 30% to 90% in women (Ballester-Arnal et al., 2021; Grubbs et al., 2017; Rissel et al., 2017; Solano et al., 2020). In a study conducted with an adolescent sample in Spain (Ballester-Arnal et al., 2017), 8.6% were found to be at high risk of developing a disorder related to PPU, with this risk being more common in males (Ballester-Arnal et al., 2023; Böthe et al., 2020), showing an approximate ratio of 3.6:1 (Rissel et al., 2017). Böthe (2020) reports similar figures in her study, in which 8.2% of participants exhibited signs of PPU.

Problematic use of new technologies

The digital revolution has brought about a systemic change and a significant increase in the use of information and communication technologies (ICTs), with an estimated 5.3 billion Internet users worldwide in 2022, representing 66% of the global population (International Telecommunication Union [ITU], 2023). As research on ICTs has advanced, a notable increase in their excessive use has been observed, giving rise to what is now known as the problematic use of new technologies (Rodríguez et al., 2023). This type of problematic behavior exhibits well-defined characteristics similar to those

observed in individuals with substance use disorders, such as tolerance or the need to increase technology use to achieve the same initial effects; withdrawal syndrome or emotionally negative reactions when access to these technologies is restricted; escalating use, which can interfere with various areas of daily life; and difficulty in stopping use despite awareness of the associated negative consequences (Baggio et al., 2018; Stepien, 2014).

Regarding the problematic use of technologies, different subtypes have been identified depending on the focus of the behavior (Pedrero-Pérez et al., 2018). The broadest category could be problematic Internet use (PIU), which encompasses other modalities, as most individuals exhibiting problematic Internet use tend to do so more specifically with certain applications. Social networks show the highest prevalence, such as Facebook, Instagram, YouTube, or TikTok, as well as instant messaging platforms like WhatsApp (Echeburúa, 2012). Some of the possible criteria characterizing this behavior include excessive time spent on the Internet or social media, disturbances in sleep patterns, fatigue, concealment of the problematic behavior, and impaired performance in other areas of life, among others (Echeburúa, 2012).

Smartphone use is widespread worldwide (Zeerak et al., 2024). Within the scope of problematic ICT use, it is important to highlight excessive smartphone use, which shares numerous similarities with other forms of problematic technology use, as the mobile phone is the primary tool facilitating access to these applications or the Internet. For this reason, some authors (Baggio et al., 2018) suggest the possibility of assessing them simultaneously in clinical practice. This issue is defined as an impulse control disorder, manifested through a strong urge to use a mobile phone despite awareness of its negative effects (Kim & Kho, 2018), and may present as impatience, sensation seeking, and impulsivity (Secades-Villa et al., 2014). Furthermore, excessive use of these devices has been observed to negatively affect psychosocial behavior, mental health, interpersonal relationships, physical health, and academic performance (Achangwa et al., 2022).

A meta-analysis estimated that PIU affects 14.22% of the population (Meng et al., 2022). The Spanish Observatory on Drugs and Addictions (OEDA, 2021) provides specific figures on the possible prevalence associated with various addictions that could be considered technological, such as PIU, which, according to the report, occurs in 3.5% of women and 3.9% of men. Additionally, a study conducted in Spain by Marcos & Chóliz (2020) revealed that adolescent girls exhibited higher rates of problematic smartphone use (9.9%) and problematic use of social media (PUSM; 5%).

Related Factors

Both substance-related and behavioral addictions share similar mechanisms and are influenced by numerous psychological variables, which often overlap due to their shared characteristics (Rodríguez et al., 2023). These problematic behaviors are frequently associated with comorbid psychological disorders, such as anxiety disorders, mood disorders, impulse-control disorders, attention-deficit/hyperactivity disorder, and personality disorders (Black & Shaw, 2019).

Procrastination is understood as a behavior characterized by the voluntary postpone-

ment of a representative activity, where failure to complete the activity may lead to negative consequences (Mann, 2016). Negative emotions such as anxiety or depression can promote procrastination, which is considered a maladaptive coping style (Sirois et al., 2019), and it has already been shown to be associated with certain problematic behaviors, including those related to pornography (Pérez & Hand, 2022), Internet use (Ramos-Galaraza et al., 2017), smartphone use (Zhu et al., 2023), and social media use (Huanca et al., 2016).

Among the protective factors related to addictive behaviors, empathy stands out. Empathy is defined as the ability to understand others' perspectives, recognize their subjective reality, and respond appropriately in an affective manner (Batchelder et al., 2017). Evidence regarding its relationship with certain problematic behaviors is mixed: some authors argue that empathy is negatively correlated with problematic social media use (Dailey et al., 2020; Dalvi-Esfahani et al., 2021), whereas others suggest a neutral relationship (Sharma et al., 2020). Concerning PPU, an inverse relationship has been observed, with lower empathy associated with greater severity of PPU (Cogoni et al., 2018) and problematic smartphone use (Mark et al., 2018).

Another protective factor is prosocial behavior, defined by Eisenberg et al. (2015) as engaging in voluntary actions intended to help others without expecting any reward in return. Research on the relationship between prosocial behavior and behavioral addictions is scarce, as in the case of technological addictions (López-Mora et al., 2024). Nevertheless, several authors have confirmed a negative relationship between prosocial behavior and problematic smartphone use or gambling disorder (Esparza-Reig et al., 2021b; López-Mora et al., 2024).

Finally, resilience is noteworthy. Ryff et al. (2012) define resilience as an individual's capacity to maintain or regain psychological well-being in the face of adversity. Resilience has been shown to be a strong protective factor against various addictions, both substance-related (Van Gils et al., 2022; Yang et al., 2019) and behavioral, including gambling (Oei & Goh, 2015), video gaming (Lin et al., 2021; Yen et al., 2019), and Internet use, with which it is negatively associated (Dinç & Topçu, 2021; Öztürk & Kundakçı, 2021).

The present study aims to investigate whether, as observed in other addictions (Esparza-Reig et al., 2021b), those examined in this research are related to maladaptive coping styles such as procrastination, as well as to protective factors including empathy, resilience, and prosocial behavior. Based on this, the specific objectives of the study are, first, to examine whether certain coping styles and protective factors are associated with problematic pornography use. The second objective is to determine whether a similar relationship exists between the aforementioned variables and the problematic use of ICTs. Based on the aforementioned objectives, the following hypotheses are proposed: the first hypothesis posits that procrastination, empathy, prosocial behavior, and resilience will predict PPU in both male and female participants. The second hypothesis proposes that these same variables will also predict problematic use of ICTs, specifically PIU, PUSM, and problematic instant messaging use (PUIM), in both men and women (Shi et al., 2021).

METHOD

Participants

For the present study, a sample of 855 participants was selected from the general population. Inclusion criteria required participants to be of legal age in Spain and to reside in the country.

Regarding the distribution by sex, 65.8% of participants were female (n = 563), while 34.2% were male (n = 292). Concerning age, participants were at least 18 years old (according to the inclusion criterion) and up to 68 years old, with a mean age of 24.3 years (SD = 9.03). Table 1 presents the remaining sociodemographic characteristics of the sample.

Instruments

A battery of instruments was administered, including sociodemographic questions and a series of scales designed to measure the study variables:

To assess online PPU in young people, the Sex Techno-Addiction Scale was used (Serrano, 2022), a unidimensional instrument consisting of 11 items scored on a five-point Likert scale ranging from "No, never" to "Always." The scale demonstrated good psychometric properties, with a reliability of $\alpha = 0.9$ in the current sample.

The instrument used to assess potential problematic use of various new technologies was the MULTICAGE-TIC (Pedrero-Pérez et al., 2018). It consists of five factors, each fo-

Table 1. Sociodemographic characteristics of the sample and group differences

	Men	Women	Differences
Sample size	n= 292 (34,2%)	n= 563 (65,8%)	-
Nationality (n, %)			-
Spanish	280 (32,7%)	515 (60,2%)	-
Other	12 (1,4%)	48 (5,6%)	-
Marital status (n, %)			-
Single	141 (16%)	261 (30,5%)	-
Partnered	125 (14,6%)	264 (30,9%)	-
Married	25 (2,9%)	28 (3,3%)	-
Divorced	1 (0,1%)	9 (1,1%)	-
Widowed	0 (0%)	1 (0,1%)	-
Mean age (SD)	25,2 (9,72)	23,7 (8,62)	-
PPU (SD)	16,3 (6,13)	12,7 (4,01)	U= 43892, p < .001
PIU (SD)	13,1 (4,8)	14,8 (4,86)	U= 66312, p < .001
PUIM (SD)	9,63 (4,95)	12,5 (5,46)	U= 57070, p < .001
PUSM (SD)	10,3 (5,36)	13,7 (5,78)	U= 54228, p < .001

*Note. **p < 0.001; U = Mann-Whitney U; SD = Standard Deviation.*

cusing on a specific problem, including PUIM, smartphones, video games, PIU and PUSM. The instrument comprises 20 dichotomous items and is divided into five subscales. Reliability analyses were conducted for each selected subscale, yielding $\alpha = 0.78$ for PIU, $\alpha = 0.86$ for PUIM, and $\alpha = 0.88$ for PUSM.

To assess the presence of procrastination, the General Procrastination Scale (Blas, 2010), a Spanish adaptation of the original Busko scale (1998), was used. This instrument is designed to measure both general and academic procrastination; however, only general procrastination was assessed in this study. The scale is unidimensional and consists of 13 items, evaluated on a five-point Likert scale ranging from "never occurs to me" to "always occurs to me." The Cronbach's alpha for this questionnaire was 0.9 in the current sample.

Empathy was measured using the Interpersonal Reactivity Index (IRI; Salavera & Usán, 2020). This instrument comprises three factors, although it also provides a global score, and consists of 12 items. Reliability in the study sample was $\alpha = 0.85$.

Resilience was measured using the Brief Resilient Coping Scale (BRCS; Moret-Tatay et al., 2015), the Spanish adaptation of the original scale by Sinclair & Wallston (2004). This unidimensional instrument is designed to assess resilience through four brief items, rated on a five-point Likert scale ranging from "does not describe me at all" to "describes me very well." Cronbach's alpha for this scale in the study sample was 0.7.

Finally, prosocial behavior was assessed using the Prosocialness Scale for Adults (PSA; Mieres-Chacaltana et al., 2020), the Spanish adaptation of the original scale (Caprara et al., 2005). This unidimensional instrument consists of 16 items, rated on a five-point Likert scale ranging from "never/almost never" to "always/almost always". Cronbach's alpha for the scale in the study sample was 0.93.

Procedure

Data collection for this cross-sectional study was conducted between October 2022 and April 2024, targeting a sample of the general population residing in Spain and aged 18 years or older. Data were collected through an online survey using Google Forms. Participants were provided with a link granting access to the questionnaire battery associated with the study. Completion time ranged from 20 to 25 minutes. All participants took part voluntarily and received no compensation. Prior to completing the questionnaire, all participants signed an informed consent form, which explained the purpose of the study and guaranteed anonymity and confidentiality of the data provided.

This study was approved by the Human Research Ethics Committee of the Experimental Research Ethics Commission at the University of Valencia (2023-MAG-3157295).

Analysis

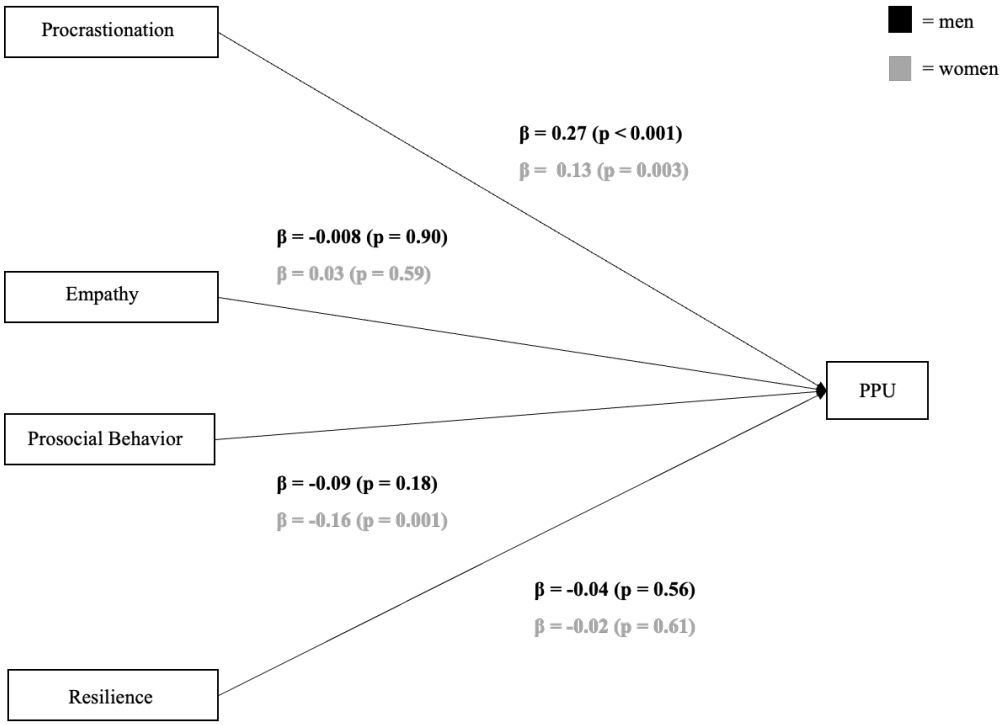
First, the distribution and response frequencies for each of the studied variables were analyzed. Reliability analyses were also conducted for all scales and subscales used. For subsequent analyses, two subgroups were created by separating the sample into men and women to examine group differences. Based on this, tests were conducted to assess the assumptions of normality and homoscedasticity. Next, a group comparison

for all problematic behaviors was performed using the nonparametric Mann–Whitney U test. Finally, a series of multiple linear regression analyses were conducted among the study variables. Statistical analyses were carried out using the Jamovi software.

RESULTS

First, a multiple linear regression analysis was conducted using PPU as the dependent variable and procrastination, empathy, prosocial behavior, and resilience as independent variables. The regression model (Figure 1) was performed separately for the male and female subsamples, with both models reaching statistical significance ($p < 0.001$). In the model for the male sample, the adjusted R^2 was 0.0771, indicating that 7.71% of the variance in PPU among men was explained by the predictor variables. Similarly, in the model for the female sample, the adjusted R^2 was 0.0407, meaning that the predictor variables explained 4.07% of the variance in PPU. Residual analyses indicated that the data met the assumptions of linear regression models for both this and the subsequent models.

Figure 1. Multiple linear regression model for PPU

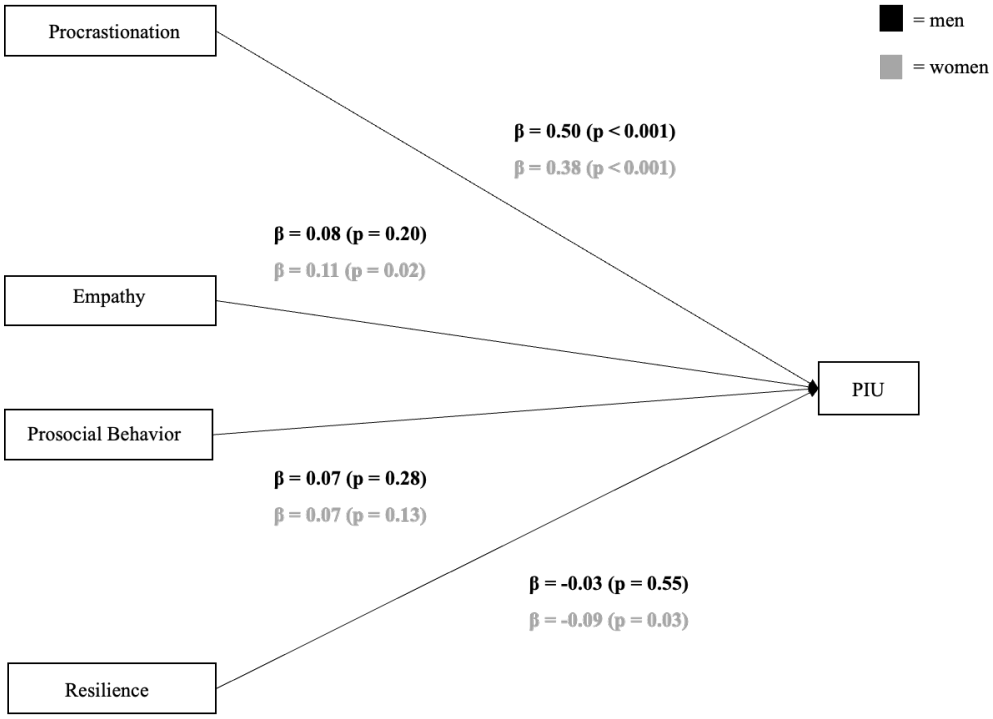


Note. $^{**}p < 0.001$.

Regarding the model coefficients, procrastination (β = 0.27; p < 0.01 in men; β = 0.13; *p* = 0.003 in women) and prosocial behavior in women (β = -0.16; *p* = 0.001) were significant predictors of PPU, with prosocial behavior showing an inverse relationship. The remaining variables were not significant predictors of PPU: prosocial behavior in men (β = -0.09; *p* = 0.18), empathy (β = -0.008; *p* = 0.9 in men; β = 0.03; *p* = 0.59 in women), and resilience (β = -0.04; *p* = 0.56 in men; β = -0.02; *p* = 0.61 in women).

Next, this multiple linear regression model was applied to other types of problematic behaviors. For all analyses, the same independent variables as in the previous model were used, with PIU as the dependent variable (Figure 2). The model was statistically significant for both men and women (*p* < 0.001). In men, the adjusted R^2 was 0.255, indicating that the predictor variables explained 25.5% of the variance in the dependent variable. In women, the adjusted R^2 was 0.178, meaning that the independent variables explained 17.8% of the variance in PIU.

Figure 2. Multiple linear regression model for PIU

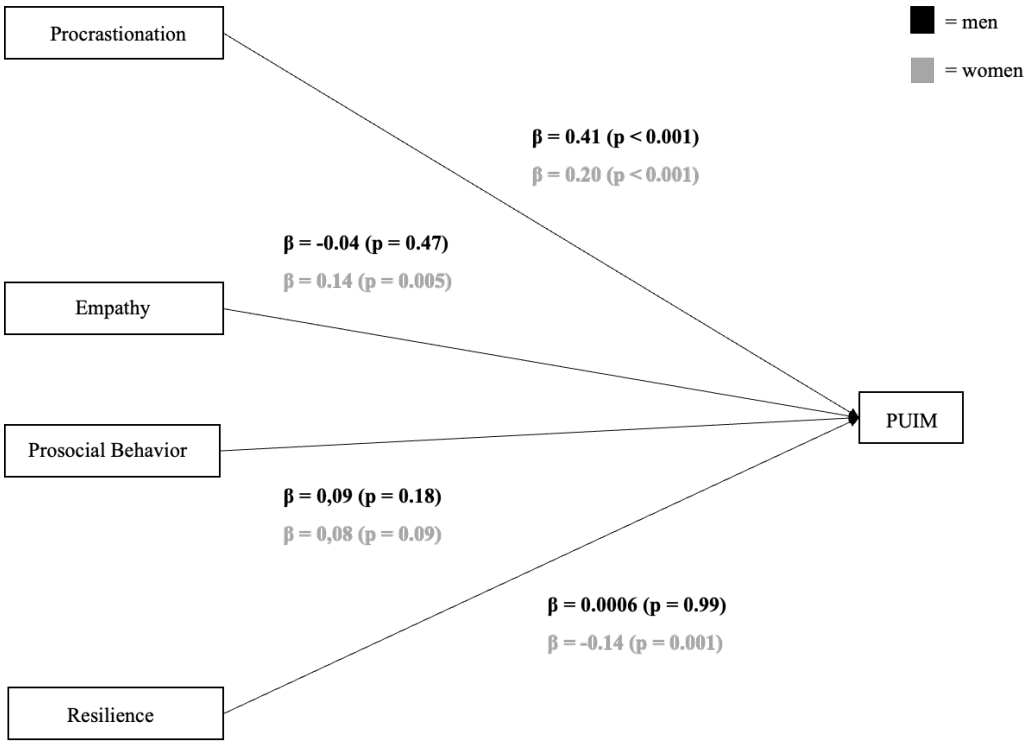


Note. **$p < 0.001$.

Regarding the model coefficients, procrastination (β = 0.50; $p < 0.01$ in men; β = 0.38; $p < 0.01$ in women), empathy in women (β = 0.11; $p = 0.02$), and resilience in women (β = -0.09; $p = 0.003$) were significant predictors of PIU, with resilience showing an inverse relationship. Empathy in men (β = 0.08; $p = 0.2$), resilience in men (β = -0.03; $p = 0.55$), and prosocial behavior (β = 0.07; $p = 0.028$ in men; β = 0.07; $p = 0.13$ in women) did not show a significant relationship with the dependent variable.

In the following model (Figure 3), PUIM was used as the dependent variable, with the previously mentioned variables as independent variables. The models were statistically significant for both men and women ($p < 0.001$). In men, the adjusted R^2 was 0.154, indicating that the predictor variables explained 15.4% of the variance in the dependent variable. In women, the adjusted R^2 was 0.0935, meaning that the independent variables explained 9.35% of the variance in PUIM.

Figure 3. Multiple linear regression model for PUIM

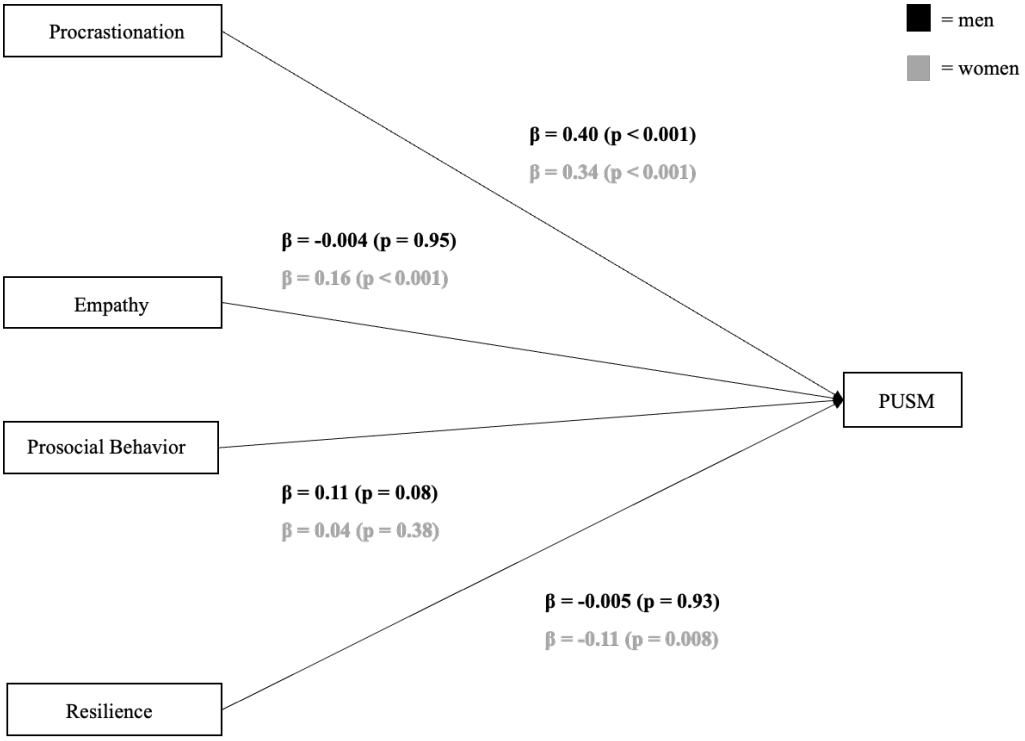


Note. $^{**}p < 0.001$.

In this case, procrastination (β = 0.41; p < 0.001 in men; β = 0.20; p < 0.001 in women), empathy in women (β = 0.14; p = 0.005), and resilience in women (β = -0.14; p = 0.001) were significant predictors of PUIM. In contrast, empathy in men (β = -0.04; p = 0.47), prosocial behavior (β = 0.09; p = 0.18 in men; β = 0.08; p = 0.09 in women), and resilience in men (β = 0.0006; p = 0.99) were not significant predictors.

Finally, for the last model (Figure 4), PUSM was used as the dependent variable, with the previously mentioned variables as independent variables. The models were statistically significant for both men and women (p < 0.001). In men, the adjusted R^2 was 0.156, indicating that the predictor variables explained 15.6% of the variance in PUSM. In women, the adjusted R^2 was 0.175, meaning that the independent variables explained 17.5% of the variance in the dependent variable.

Figure 4. Multiple linear regression model for PUSM



Note. **p < 0.001.

Regarding the model coefficients, procrastination ($\beta = 0.40$; $p < 0.001$ in men; $\beta = 0.34$; $p < 0.001$ in women), empathy in women ($\beta = 0.16$; $p < 0.001$), and resilience in women ($\beta = -0.11$; $p = 0.008$) were significant predictors of PUSM. In contrast, prosocial behavior ($\beta = 0.11$; $p = 0.08$ in men; $\beta = 0.04$; $p = 0.38$ in women), empathy in men ($\beta = -0.004$; $p = 0.95$), and resilience in men ($\beta = -0.005$; $p = 0.93$) did not show a significant relationship with the dependent variable.

DISCUSSION

The present study aimed to expand knowledge on various problematic behaviors, specifically PPU and problematic use of ICTs, and their relationship with different protective factors and coping styles, in order to contribute to the improvement and development of new strategies for existing prevention and intervention programs, addressing relatively recent issues associated with modern times.

Regarding the first hypothesis of the study, it was proposed that procrastination, empathy, prosocial behavior, and resilience would be predictors of PPU for both men and women. The results obtained are partially consistent with this hypothesis. Prosocial behavior (in women) and procrastination (Pérez & Hand, 2022) were found to be significant predictors, whereas prosocial behavior (in men), empathy, and resilience were not. Therefore, it can be stated that there is insufficient empirical evidence to fully support this hypothesis.

The second hypothesis proposed that procrastination, empathy, prosocial behavior, and resilience would be predictors of problematic ICT use, specifically Internet use, social media, and instant messaging, for both men and women. The results obtained are also partially consistent with this hypothesis. Procrastination was the only variable that significantly predicted all problematic behaviors, regardless of gender (Huanca et al., 2016; Ramos-Galaraza et al., 2017). Empathy and resilience were also significant predictors in the female group (Dinç & Topçu, 2021; Öztürk & Kundakçı, 2021; Sharma et al., 2020), but not in men. Prosocial behavior, on the other hand, did not predict any problematic ICT behaviors in either men or women.

Adopting a more holistic view of the results, it can be concluded that, in the male group, procrastination was the only variable that emerged as a predictor for all problematic behaviors. In the female group, procrastination also predicted all problematic behaviors; however, the pattern was not replicated for the other variables acting as protective factors. These variables showed associations with one or two problematic behaviors but did not predict all four behaviors analyzed, unlike procrastination and contrary to what was proposed in the study hypotheses.

CONCLUSIONS

One of the main limitations of this study is that the majority of the sample consisted of university-aged participants, with limited representation of older adults, who may also experience some of the clinical frameworks examined (Esparza-Reig et al., 2021a). Another sample-related limitation is the uneven distribution between men and women, as their proportions were not balanced. The lack of clinical representa-

tion in the sample can also be considered a limitation, compounded by the difficulty of accessing this type of population, since at present there is no specific diagnosis available for most of these problematic behaviors (Marcos & Chóliz, 2023). This may have influenced the results, which are not fully consistent with findings reported in previous research, possibly because the analyzed sample did not include a significant proportion of individuals with clinical issues related to the studied problematic behaviors. Along the same lines, another potential limitation is the difficulty in differentiating some of the problematic behaviors mentioned (such as those associated with social media, instant messaging, or Internet use), due to the absence of specific diagnoses for each behavior. This may lead to overlap or confusion among behaviors, or to treating a dysfunctional or maladaptive behavior as a mental disorder (Marcos & Chóliz, 2023).

The limitations outlined make it difficult to generalize the results. It is worth noting that such limitations are common in studies on these types of addictions (Esparza-Reig et al., 2021a). Therefore, for future research, it would be beneficial to replicate the analyses with an older population and a more balanced distribution of participants according to biological sex. This highlights the importance of conducting descriptive studies that provide data on the prevalence and sociodemographic and clinical characteristics associated with behavioral addictions (Rodríguez et al., 2023). In conclusion, the findings contribute to understanding how maladaptive coping styles and protective factors relate to the problematic behaviors analyzed, which may be useful in the field of clinical psychology. Consequently, these results represent an advancement regarding different theoretical models related to the variables measured, aiding in the development of prevention and intervention programs targeting these pathologies.

These findings may facilitate the development of more effective strategies for the prevention and treatment of the problematic behaviors analyzed. Currently, psychosocial approaches have demonstrated effectiveness in managing some of these maladaptive behaviors, particularly through self-help groups similar to those used in programs like “Alcoholics Anonymous” (Rodríguez et al., 2023). However, it is necessary to develop tailored interventions rather than applying those designed for other types of addictions (such as gambling or substance use), whose effectiveness has not yet been demonstrated for the problematic behaviors examined in this study.

Furthermore, it is important to continue studying these behaviors, which affect thousands of people on a daily basis (Meng et al., 2022), with the aim of increasing their visibility and developing specific treatments adapted to their particular characteristics. Despite their growing relevance, global research on some of these maladaptive behaviors remains limited (Zeerak et al., 2024).

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