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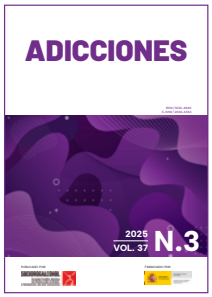

ORIGINAL

Association between emotional dependence, traumatic life events, and early maladaptive schemas in women with gambling disorder

Asociación entre dependencia emocional, sucesos vitales traumáticos, y esquemas desadaptativos tempranos en mujeres con trastorno de juego

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Abstract

Women with gambling disorder (GD) present a high number of traumatic life events, early maladaptive schemas, and emotional dependence towards the partner. The objectives of the study focused on (I) analyzing the relationships between traumatic life events, schemas, and emotional dependence in women with GD; (II) analyzing the differences in traumatic life events, emotional dependence, and schemas between women and men with GD; (III) analyzing the predictive role of traumatic life events and schemas in emotional dependence in women with GD; and (IV) analyzing the mediating role of schemas between traumatic life events and emotional dependence in a clinical sample of women with GD. The sample comprised 60 women (M = 49.07, SD = 12.70) and 48 men (M = 41.33, SD = 12.32) who were in outpatient treatment for GD. The findings reflected a significantly positive relationship between traumatic life events and early maladaptive schemas and emotional dependence (r between .31 and .57). Women reported higher scores in traumatic life events and the early maladaptive schema of self-sacrifice, whereas men did so in emotional dependence (attention-seeking) and in the early maladaptive schema of social isolation ($d \geq .34$). Finally, the mediating role of enmeshment and abandonment schemas in the relationship between traumatic life events and separation anxiety was demonstrated. The results allow the development of better interventions for women with GD. It is crucial to address enmeshment and abandonment patterns in women with GD with a history of traumatic life events to prevent them from leading to high emotional dependence on the partner.

Keywords: gambling disorder, traumatic life events, early maladaptive schemas, emotional dependence, women

Resumen

Las mujeres con trastorno de juego (TJ) presentan un elevado número de sucesos vitales traumáticos, esquemas desadaptativos tempranos y dependencia emocional hacia la pareja. Los objetivos del estudio se centraron en (I) analizar las relaciones entre sucesos vitales traumáticos, esquemas y dependencia emocional en mujeres con TJ; (II) analizar las diferencias en sucesos vitales traumáticos, dependencia emocional y esquemas entre mujeres y hombres con TJ; (III) analizar el papel predictivo de los sucesos vitales traumáticos y los esquemas en la dependencia emocional en mujeres con TJ; y (IV) analizar el papel mediador de los esquemas entre sucesos vitales traumáticos y dependencia emocional en una muestra clínica de mujeres con TJ. La muestra estuvo compuesta por 60 mujeres (M = 49,07, DT = 12,70) y 48 hombres (M = 41,33, DT = 12,32) que estaban en tratamiento ambulatorio por TJ. Los hallazgos reflejaron una relación positiva significativa entre los sucesos vitales traumáticos y los esquemas desadaptativos tempranos y la dependencia emocional (r entre ,31 y ,57). Las mujeres informaron puntuaciones más altas en sucesos vitales traumáticos y en el esquema desadaptativo temprano de autosacrificio, mientras que los hombres lo hicieron en dependencia emocional (búsqueda de atención) y en el esquema desadaptativo temprano de aislamiento social ($d \geq$,34). Por último, se demostró el papel mediador de los esquemas de enredo y abandono en la relación entre los sucesos vitales traumáticos y la ansiedad por separación. Los resultados permiten el desarrollo de mejores intervenciones para mujeres con TJ. Es crucial abordar los patrones de apego/enredo y abandono en mujeres con TJ con antecedentes de sucesos vitales traumáticos para evitar que lleven a una alta dependencia emocional hacia la pareja.

Palabras clave: trastorno del juego, sucesos vitales traumáticos, esquemas desadaptativos tempranos, dependencia emocional, mujeres

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The prevalence of gambling disorder (GD) among women has been steadily increasing in recent years (Salonen et al., 2022). This could be due, in part, to new gambling modalities such as online gambling (Chóliz, 2016). Thus, the stigma of going to physical premises has been reduced (McCarthy et al., 2022). The consumption of online gambling is anonymous, convenient, and easy, and one can be connected from any place and device (Thomas et al., 2022). In addition, the design of the games is being modified to attract the female gender (McCarthy et al., 2019). All this has promoted the normalization and social acceptance of gambling behavior among women. It is losing the negative connotation that was previously implicit for years (McCarthy et al., 2023). Consequently, the harm stemming from gambling behavior in different domains of women's lives is increasingly severe (McCarthy et al., 2018). However, because men have historically presented a higher prevalence of GD than women, previous research has predominantly and even exclusively included only men (FEJAR, 2018). This has produced a significant bias in the current knowledge about women's gambling behavior and, thus, has posed a barrier to the development of effective prevention and treatment programs. More specifically, the treatment of GD in female gamblers is based on information from studies conducted in male gamblers (Estévez et al., 2023b). Such studies do not consider the specific personal, interpersonal, and contextual characteristics of female gamblers (Esparza-Reig et al., 2022). This has led to a high dropout and treatment failure rate among women (Granero et al., 2022; Lucas et al., 2023). Understanding gender-related differential factors in gambling behaviors is important for recovery processes (Lara-Huallipe et al., 2022; Miller & Söderpalm Gordh, 2022).

In this regard, previous studies have found a substantial comorbidity between GD and traumatic life events among women, now considered one of the most relevant psychological vulnerability factors in the involvement in gambling behaviors (Gavriel-Fried et al., 2020; Horak et al., 2021; Roberts et al., 2017; Thurm et al., 2023). Along these lines, women engage in gambling behaviors as a way to escape the painful emotions produced by traumatic experiences (Wang et al., 2020). Furthermore, the importance of the cumulative presence of traumatic experiences in the development of severe gambling problems has been mentioned, particularly challenging family situations, poor mental health, substance-related problems, and low educational attainment (Buth et al., 2017). However, although traumatic experiences are associated with an increased risk of developing and maintaining GD in adulthood, studies investigating the association between trauma and GD are scarce, and even more so among women (Horak et al., 2021; Russell et al., 2022).

In this sense, it has been shown that traumatic experiences in the first years of life establish erroneous beliefs that lead to developing early maladaptive schemas (Scott et al., 2020; Young & Brown, 1994). Early maladaptive schemas are beliefs consolidated at early ages and maintained throughout life as frozen learnings that encompass lived experiences, emotions, feelings, and bodily sensations concerning oneself and others. Thus, each problem is sustained by specific maladaptive schemas that guide the way of thinking, feeling, and behaving toward others throughout life (Young et al., 2013). Previous studies have shown that early maladaptive schemas are linked with behavioral addictions and, more specifically, with GD (Vieira et al., 2023). However, although it has been proven that both early maladaptive schemas and childhood trauma may lead to alcohol and substance use in women, there is no previous research on this topic on female gamblers (Ozgu & Isil, 2024).

Thus, the affective deficiencies experienced in childhood and the abandonment schema, that encompasses beliefs related to the possibility of breaking up with the partner at any time, may lead to emotional dependence towards the partner (Huerta et al., 2016; Momeñe et al., 2021). Emotional dependence towards the partner is characterized by an extreme need for the partner's contact and affection (Momeñe et al., 2022). People with dependence tend to prioritize their partner, assume submissive behaviors in the relationship, and present an intense terror of rejection or breakup. It has been shown that through emotional dependence, they disfunctionally fulfill early unsatisfied affective deficiencies: lack of support, lack of feeling alive, lack of self-acceptance, and low self-esteem (Castelló, 2019; Urbiola et al., 2017). For its part, this abandonment belief produces considerable anxiety, as it involves being constantly alert and performing checking behaviors that ensure the continuity of the relationship. This fear of loss, loneliness, and/or abandonment contaminates the affective bond, making it dysfunctional and pathological (Sirvent & Moral, 2018). Very few studies analyzed the relationship between emotional dependence and GD. It has been found that those gamblers with high gambling severity and poor mental health present greater emotional dependence (Aonso-Diego et al., 2024). Macía et al. (2023) also concluded that gamblers presented greater emotional dependence compared to no gamblers, but no significant differences in emotional dependence based on sex have been found in gamblers. Sex differences on emotional dependency remain unclear, since very few studies address this topic in GD, and previous studies in community samples present mixed results and are non conclusive on whether males or females present higher rates of emotional dependency (Castillo-Gonzáles & Terán-Andrade, 2024; Estevez et al., 2017). Consequently, the role of emotional dependence in women's GD is still unknown.

The strong link between gambling problems, traumatic life events, early maladaptive schemas, and emotional dependence is well known. However, although previous studies show that early maladaptive schemas mediate the relationship between traumatic life events and psychological distress, and that intimate partner violence mediates the relationship between emotional dependency and addictive behaviors such as gambling (Gong & Chan, 2018; Macía et al., 2022), there is no previous research that assesses the mediating role of early maladaptive schemas among traumatic life events and emotional dependency in GD. Additionally, there are very few studies that include clinical samples of women with GD. It is important to conduct studies with women with GD to identify gender-specific needs and understand the extent of these relationships, and to design effective prevention and intervention programs. Consequently, the study aimed to (I) analyze the relationships between traumatic life events, early maladaptive schemas, and emotional dependence in female gamblers; (II) analyze the differences in traumatic life events, emotional dependence, and early maladaptive schemas among female and male gamblers; (III) analyze the predictive role of early maladaptive schemas and traumatic life events in emotional dependence; (IV) analyze the mediating role of early maladaptive schemas between traumatic life events and emotional dependence.

Method

Participants

A cross-sectional study was carried out with a Spanish sample of 60 women (age: M =49.07; SD = 12.70) and 48 men (age: M = 41.33; SD = 12.32) with GD as a clinical group, recruited by convenience sampling in GD treatment associations belonging to FEJAR (Spanish Federation of Rehabilitated Gamblers). The age range of participants was 21-79 years old. The sample was recruited in both individual and group settings. Inclusion criteria included attending outpatient treatment addressing GD and scoring as a problem gambler on the South Oaks Gambling Screen (SOGS; Lesieur & Blume, 1987) (see instruments section for further details) and being of legal age to participate in the study. Exclusion criteria included not scoring as a problem gambler on the SOGS (i.e., < 4 points) and not being of legal age.

The group of women gamblers (Mean SOGS score = 9.13, SD = 2.17) had the next characteristics: (1) Employment status: active workers (45%), unemployed (26.6%), retired (15%), students (1.7%), student and active worker (1.7%), other status (10%); (2) Marital status: single (41.7%), married (31.7%), separated or divorced (16.7%), widow (6.7%), other status (3.3%); (3) Education level: primary studies (33.3%); professional training (30%); university studies (16.7%), secondary studies (16.7%), and no studies (3.3%).

The group of men gamblers (Mean SOGS score = 9.42, SD = 2.30) had the next characteristics: (1) Employment status: active workers (68.8%), unemployed (6.3%), retired (8.3%), students (6.3%), and other status (10.4%); (2) Marital status: single (35.4%), married (33.3%), separated or divorced (14.6%), common-law partnership (12.5%), widow (2.1%), and other status (2.1%); (3) Education level: professional training (47.9%), university studies (18.8%), secondary studies (14.6%), primary studies (8.3%), no studies (8.3%) and other status (2.1%) (see Table 1).

Instruments

All participants completed an ad-hoc questionnaire in which they provided sociodemographic information relative to age, sex, employment status, civil status and educational level.

Gambling disorder. *South Oaks Gambling Screen* [SOGS] (Lesieur & Blume, 1987). The Spanish version was adapted by Echeburúa et al. (1994). The SOGS is a screening tool for GD that was developed for its detection in clinical populations. It consists of 20 items, which content is related to gambling patterns, sources of money to gamble, debt repayment, and involved emotions. Scores above 4 points suggest the possible presence of GD. Regarding its reliability, the SOGS has high internal consistency, with a Cronbach α of .94. In this study, Cronbach's α for the SOGS was .63.

Traumatic life events. *Centrality of Event Scale* (CES; Berntsen & Rubin, 2006, adapted to Spanish by Fernández-Alcántara et al., 2015). It comprises 20 items rated on a 5-point Likert scale (1 = *completely disagree*, 5 = *completely agree*). The instrument measures the centrality of a traumatic event in the respondents' life. At the beginning, participants are asked to remember their most traumatic life event to complete the questionnaire. The scale items are designed to assess how respondents interpret that traumatic event, whether it is perceived as a component of their personal identity, if it was a turning point in their life, and whether it is used by respondents to interpret other life events (Berntsen & Rubin, 2006). The authors reported a good reliability index (Cronbach's α = .91 - .94). In the present study, Cronbach's alpha was also excellent (α = .94).

Emotional Dependence. *Emotional Dependence Questionnaire* ("Cuestionario de Dependencia Emocional"; Lemos & Londoño, 2006) evaluates emotional dependence on the partner as a global construct through the sum of the items. It consists of 23 items distributed in six subscales: (1) *Separation anxiety* evaluates the emotional expression of fear of the possible breakup of the relationship; (2) *Affective expression of the partner* assesses the need for constant expressions of affection from the partner; (3) *Modification of plans* evaluates the change of plans and behaviors to satisfy the partner or to spend more time with them; (4) *Fear of loneliness* assesses the fear of not having a partner relationship and feeling

unwanted; (5) *Borderline expression* evaluates impulsive actions or manifestations of self-harm in the face of a possible breakup of the relationship; and (6) *Attention-seeking* assesses the respondent's seeking the attention of their partner to ensure their permanence in the relationship and to try to be the center of attention in their life. The response format is a 6-option Likert-type scale, ranging from 0 (*completely false*) to 5 (*describes me perfectly*). The original questionnaire presents good psychometric properties, with a Cronbach's alpha of .93. In the present study, Cronbach's alpha was .92.

Early maladaptive schemas. *Schema Questionnaire – Short Form* (Young & Brown, 1994) adapted to Spanish by Calvete et al. (2013). This questionnaire evaluates 18 schemas proposed by Young classified into four domains. This study evaluated the following 11 schemas according to the purpose of the study, grouped into four domains:

Domain of Disconnection/Rejection: (1) Emotional Deprivation includes beliefs that others will not adequately meet one's emotional needs or understand one's feelings. These people believe that they will be deprived of care (affection, affection, companionship, or attention), empathy (absence of listening and understanding), and protection (absence of determination, direction, guidance or guidelines from others); (2) Abandonment: People who develop this schema believe that they will be abandoned for someone better; (3) Abuse includes the belief that others will use one for their own purposes, hurt, deceive, or intentionally lie to one; (4) Defectiveness comprises the belief that one is imperfect, not valuable or loved, and inferior in important life aspects. Defects can be both private (e.g., aggression, unacceptable sexual desires) and public (e.g., appearance, social awkwardness); (5) Social Isolation refers to the feeling that one is isolated from the rest of the world.

Domain of Impaired Autonomy: (6) Failure includes the belief that one has failed, will inevitably fail, or is fundamentally inadequate compared to one's peers in terms of achievement; (7) Dependence refers to the belief that one is incapable of carrying out the activities of daily living competently without the help and approval of others; (8) Enmeshment includes the belief that it is impossible to be happy without the support and continuous and extreme proximity of a significant person. Excessive emotional involvement and closeness with one or more significant others at the expense of individuation or normal social development.

Domain of Other-Directedness: (9) Subjugation refers to excessive surrendering of control to others because one feels coerced, usually to avoid anger, retaliation, or abandonment; (10) Self-sacrifice comprises the belief that one must voluntarily satisfy the needs of others by postponing or giving up one's own needs.

Domain of Overvigilance and Emotional Inhibition: (11) Emotional Inhibition refers to the excessive inhibition of spontaneous action, feelings, or communication, usually to avoid others' disapproval, feelings of shame, or losing control of one's impulses. Emotionally inhibited people believe that it is necessary to control spontaneous feelings and behaviors to avoid making mistakes.

The Spanish version presents good psychometric properties, with a Cronbach's alpha coefficient for the entire scale of .97 (Iruarrizaga et al., 2019). In this study, Cronbach's alpha coefficients were excellent in each subscale: Enmeshment (α = .78), Abandonment (α = .87), Abuse (α = .85), Emotional Deprivation (α = .89), Emotional Inhibition (α = .84), Social Isolation (α = .78), Subjugation (α = .83), Self-Sacrifice (α = .86), Failure (α = .87), Defectiveness (α = .80), and Dependence (α = .78).

Procedure

The study participants had a diagnosis of GD. All of them were outpatients recruited through GD treatment associations belonging to FEJAR (Spanish Federation of Rehabilitated Gamblers). An invitation to participate was extended to all the associations, 23 in total, which recruited woman to participate in the study in individual and group settings in which woman were attending treatment. A total of 21 centers participated in the study.

They completed the questionnaires through two routes, online and face-to-face pencil-and-paper format. Firstly, to access the questionnaire, participants had to read the information about the main objectives of the study and give their informed consent. They were reminded that all the responses were anonymous and confidential and that their participation was voluntary and that they could leave the study at any time. The duration for completion of the study was approximately 30 minutes. No compensation was provided for participation in this study.

Ethics

The research obtained the ethics committee's approval from the first author's university (ref: ETK-17/20-21).

Data analysis

First, mean differences between male and female gamblers in gambling, traumatic life events, emotional dependence, and early maladaptive schemas were analyzed using Student's t-test to analyze the differences in traumatic life events, emotional dependence, and early maladaptive schemas among female and male gamblers. T-test results were chosen according to Levene's test of homoscedasticity, which controlled for the homogeneity of variance. Then, effect size was calculated using Cohen's *d* (1992), whose parameters establish that values below .20 correspond to a small effect size, around .50, to a medium effect size, and above .80, to a large effect size.

The correlations between the study variables were then analyzed using Pearson's *r* in the clinical sample of female gamblers to analyze the relationships between traumatic

life events, early maladaptive schemas, and emotional dependence in female gamblers. The results were contrasted by bootstrapping 1000 samples (95% Confidence Interval-CI). Next, hierarchical regression analyses were performed to test the predictive role of early maladaptive schemas and traumatic life events in emotional dependence, controlling for the effect of age in this sample. In the first step, age was introduced to control for its effect; in the second step, early maladaptive schemas were added; and in the third step, traumatic life events were added, verifying the changes in R^2 at each step. In total, six models were analyzed, one for each subscale of emotional dependence (separation anxiety, fear of loneliness, borderline expression, attention-seeking, affective expression, and plan modification).

Finally, multiple mediation analyses were conducted to analyze the mediating role of early maladaptive schemas between traumatic life events and emotional dependence in the clinical sample of female gamblers (Preacher & Hayes, 2008). First, the relationship between traumatic life events (independent variable [IV]) and mediating variables (early maladaptive schemas) (a-path), and between mediating variables (early maladaptive schemas) and emotional dependence (dependent variable [DV]) (b-path) were found to be significant. Then, the total effect between traumatic life events (IV) and emotional dependence (DV) along with the mediator variables (c-path) and the direct effect between traumatic life events (IV) and emotional dependence (DV), while controlling for the effect of mediator variables, were found to be significant. When both the c-path and the c'-path are significant, a partial mediation effect is shown, whereas if the c-path is significant and the c'-path is not, a total mediation effect is shown. A model was run for each of the six subscales of emotional dependence.

Table 1
Sociodemographic data of the sample

	Male gambler	Female gambler
Age (M, SD)	41.33(12.32)	49.07(12.70)
Gambling – SOGS (M, SD)	9.42(2.30)	9.13(2.17)
Employment situation		
Working	68.8%	45%
Unemployment benefits	4.2%	23.3%
Student	6.3%	1.7%
Retired	8.3%	15%
Student and worker	0%	1.7%
Unemployed	2.1%	3.3%
Others	10.4%	10%
Civil status		
Single	35.4%	41.7%
Married	33.3%	31.7%
Common-law couple	12.5%	0%
Separated-Divorced	14.6%	16.7%
Widowed	2.1%	6,7%
Others	2.1%	3.3%
Education level		
Without studies	8.3%	3.3%
Primary	8.3%	33.3%
Secondary	8.3%	6.7%
High school	6.3%	10%
Vocational training	47.9%	30%
University studies	18.8%	16.7%
Others	2.1%	-

Results

The results related to correlations showed that traumatic life events correlated positively and significantly with early maladaptive schemas (enmeshment, abandonment, abuse, and emotional deprivation) and emotional dependence (total, separation anxiety, and borderline expression). Early maladaptive schemas correlated positively and significantly with emotional dependence. Specifically, total emotional dependence correlated with early maladaptive schemas of abandonment, abuse, emotional deprivation, social isolation, subjugation, and defectiveness (see Table 2).

Secondly, mean differences between traumatic life events, emotional dependence, and early maladaptive schemas between female and male gamblers were analyzed (Table 3). Females scored significantly higher on traumatic life events and the early maladaptive schema of self-sacrifice, whereas males scored significantly higher on emotional dependence/attention-seeking and the early maladaptive schema of social isolation. The effect size of the significant differences found was moderate in traumatic life events, emotional dependence/attention seeking, and the maladaptive schemas of social isolation, and self-sacrifice.

Thirdly, hierarchical regression analyses of the predictive role of early maladaptive schemas and traumatic life events in emotional dependence were performed controlling for the effect of age (Tables 4, 5, 6, 7 and 8). In the case of separation anxiety, early maladaptive schemas of enmeshment, abandonment, subjugation, and dependence were predictors, with a significant effect of age. In the case of affective expression, early maladaptive schemas of enmeshment, abandonment and subjugation were predictors, with a significant effect of age. Furthermore, when introducing traumatic life events in the third step, they were also predictors, with a significant change in R^2 at that step. In the case of fear of loneliness, early maladaptive schemas of subjugation and self-sacrifice were predictors. In the case of borderline expression, the early maladaptive schema of subjugation was predictive. In the case of attention-seeking, neither early maladaptive schemas nor

Table 2

Correlations between traumatic life events, early maladaptive schemas, and emotional dependence in female gamblers

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1. Traumatic life events	-																	
CI 95% LL																		
CI 95% UL																		
2. EMS - Enmeshment	.31*	-																
CI 95% LL	.02																	
CI 95% UL	.54																	
3. EMS - Abandonment	.46**	.63**	-															
CI 95% LL	.26	.38																
CI 95% UL	.64	.83																
4. EMS- Abuse	.47**	.40**	.64**	-														
CI 95% LL	.25	.12	.44															
CI 95% UL	.64	.64	.82															
5. EMS- Emotional Deprivation	.37*	.19	.434**	.69**	-													
CI 95% LL	.09	-.07	.22	.49														
CI 95% UL	.56	.45	.65	.86														
6.EMS- Emotional Inhibition	.05	.11	.22	.18	.08	-												
CI 95% LL	-.24	-.30	-.05	-.10	-.19													
CI 95% UL	.34	.49	.50	.47	.38													
7. EMS- Social Isolation	.21	.04	.21	.48**	.51**	.31*	-											
CI 95% LL	-.05	-.19	-.06	.16	.25	.10												
CI 95% UL	.41	.29	.47	.75	.76	.51												
8. EMS- Subjugation	.26	.45**	.38*	.40**	.43**	.27	.52**	-										
CI 95% LL	-.01	.18	.08	.03	.11	-.08	.24											
CI 95% UL	.49	.65	.62	.68	.70	.62	.74											
9. EMS- Self-sacrifice	.03	.29	.10	.20	.11	.01	-.15	.41**	-									
CI 95% LL	-.33	.03	-.24	-.12	-.24	-.32	-.50	.15										
CI 95% UL	.41	.54	.39	.45	.44	.32	.25	.64										
10.EMS- Failure	.22	.10	.15	.19	.29	.35*	.33*	.17	-.20	-								
CI 95% LL	-.04	-.22	-.11	-.10	-.03	.10	-.10	-.09	-.50									
CI 95% UL	.43	.44	.44	.49	.58	.62	.65	.46	.16									
11. EMS- Defectiveness	.21	.05	.11	.22	.35*	.41**	.52**	.37*	-.02	.46**	-							
CI 95% LL	-.03	-.23	-.18	-.04	.06	.08	.19	.10	-.40	.07								
CI 95% UL	.42	.40	.42	.51	.65	.69	.79	.62	.430	.74								
12. EMS-Dependence	.04	.18	.41**	.21	.10	.32*	.19	.22	.23	.11	.38*	-						
CI 95% LL	-.22	-.16	-.03	-.10	-.20	.12	-.09	-.03	-.11	-.15	.08							
CI 95% UL	.26	.43	.65	.51	.37	.59	.51	.42	.47	.47	.65							
13. Total Emotional Dependence	.25	.11	.57**	.37*	.44**	.23	.45**	.49**	-.10	.19	.34*	.21	-					
CI 95% LL	.01	-.19	.33	-.01	.08	-.001	.23	.25	-.41	-.10	.12	-.14						
CI 95% UL	.46	.42	.75	.69	.72	.49	.65	.72	.29	.45	.56	.48						
14. ED- Separation anxiety	.36*	.12	.66**	.46**	.46**	.38*	.44**	.40**	-.10	.24	.34*	.23	.92**	-				
CI 95% LL	.09	-.17	.47	.13	.13	.15	.24	.12	-.40	-.03	.12	-.10	.84					
CI 95% UL	.57	.43	.82	.73	.74	.60	.65	.65	.26	.50	.57	.49	.95					
15. ED- Emotional expression	.09	.01	.48**	.27	.32*	.09	.355*	.351*	-.093	.19	.38*	.23	.85**	.73**	-			
CI 95% LL	-.16	-.27	.20	-.10	-.05	-.18	.08	.08	-.44	-.10	.07	-.18	.77	.55				
CI 95% UL	.37	.31	.71	.56	.62	.34	.57	.56	.33	.45	.63	.53	.91	.86				

Table 2 (cont.)
Correlations between traumatic life events, early maladaptive schemas, and emotional dependence in female gamblers

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
16. ED – Modification of plans	-.05	-.09	.06	.14	.15	.04	.31*	.28	.004	-.10	-.01	-.10	.57**	.38*	.36*	-		
CI 95% LL	-.34	-.38	-.32	-.24	-.20	-.26	-.11	-.10	-.35	-.34	-.31	-.36	.22	-.001	.002			
CI 95% UL	.22	.19	.36	.48	.48	.37	.60	.59	.39	.14	.29	.27	.79	.65	.66			
17. ED – Fear of loneliness	.17	.10	.36*	.13	.31*	.17	.35*	.55**	-.11	.11	.30	.26	.73**	.58**	.56**	.23	-	
CI 95% LL	-.11	-.18	.11	-.19	-.03	-.09	.11	.28	-.42	-.18	.06	.003	.57	.33	.32	-.13		
CI 95% UL	.46	.39	.58	.46	.62	.46	.59	.76	.21	.37	.52	.50	.84	.76	.73	.55		
18. ED – Borderline expression	.26	.31*	.52**	.37*	.49**	.12	.33*	.47**	-.13	.31*	.20	.07	.78**	.71**	.58**	.35*	.60**	-
CI 95% LL	.06	.03	.35	.10	.17	-.13	.07	.25	-.38	-.08	-.05	-.17	.62	.48	.37	.01	.38	
CI 95% UL	.49	.57	.69	.65	.75	.42	.61	.67	.18	.64	.50	.42	.87	.84	.75	.61	.77	
19. ED – Attention-seeking	.28	.16	.45**	.26	.28	.09	.22	.25	-.03	.08	.32*	.27	.77**	.67**	.66**	.38*	.50**	.51**
CI 95% LL	.03	-.13	.09	-.09	.01	-.12	-.09	-.02	-.35	-.21	.04	-.29	.58	.40	.42	.01	.22	.17
CI 95% UL	.49	.48	.71	.59	.54	.29	.51	.48	.31	.31	.52	.60	.89	.82	.80	.68	.71	.72

Note. CI = Confidence Interval; LL = Lower Level; UL = Upper Level; EMS = Early Maladaptive Schemas; ED = Emotional Dependence.
*p < .05. **p < .01.

Table 3
Difference in means between male and female gamblers in traumatic events, early maladaptive schemas and emotional dependence

	Male gamblers M(SD)	**Female gamblers M(SD)**	***t(df)***	***p***	***d***
Traumatic life events	69.54(17.47)	75.39(14.20)	-1.78(1,91)*	.04	-.37
Emotional dependence	66.14(21.39)	61.83(23.15)	.93(1,92)	.18	.19
Separation anxiety	20.07(8.56)	18.70(8.84)	.76(1,93)	.22	.16
Emotional expression	13.70(4.77)	13.45(5.39)	.23(1,94)	.41	.05
Modification of plans	10.65(4.57)	10.08(4.83)	.60(1,94)	.28	.12
Fear of loneliness	8.56(4.52)	8.92(4.43)	-.40(1,94)	.35	-.08
Borderline Expression	6.28(3.51)	5.74(2.93)	.83(1,94)	.21	.17
Attention-seeking	6.00(2.73)	4.94(2.83)	1,83(1,93)*	.04	.38
Early Maladaptive Schemas					
Enmeshment	10.67(5.50)	11.38(6.58)	-.55(1,90)	.29	-.11
Abandonment	13.85(6.69)	13.84(7.28)	.01(1,92)	.50	.001
Abuse	12.38(6.62)	12.37(6.43)	.003(1,92)	.50	.001
Emotional Deprivation	11.28(5.76)	13.70(7.83)	-1.66(1,92)	.05	-.35
Emotional Inhibition	12.31(5.91)	11.79(6.67)	.37(1,87)	.35	.08
Social Isolation	10.85(5.80)	9.04(4.58)	1.68(1,91)*	.04	.34
Subjugation	11.40(4.90)	12.13(6.40)	-.60(1,90)	.27	-.12
Self-sacrifice	17.15(5.83)	21.37(6.21)	-3.31(1,90)*	<.001	-.70
Failure	9.18(4.35)	9.10(4.62)	.08(1,88)	.47	.02
Defectiveness	10.13(5.18)	10.31(5.62)	-.16(1, 88)	.44	-.03
Dependence	9.78(4.96)	8.52(4.56)	1.26(1,90)	.11	.26

Note. *p < .05.

Table 4
Hierarchical regression of the predictive role of early maladaptive schemas and traumatic life events in emotional dependence (separation anxiety), controlling for the effect of age

Separation anxiety	*B*	*SE B*	*B*	R^2	Change in R^2	*p*
Step 1				.15	.15*	
Age	-.32*	.12	-.38*			.02
Step 2				.80	.65*	
Age	-.24*	.11	-.30*			.04
EMS- Enmeshment	-.80*	.17	-.58*			<.001
EMS- Abandonment	1.14*	.22	.88*			<.001
EMS-Abuse	-.15	.23	-.10			.53
EMS- Emotional Deprivation	.17	.17	.14			.33
EMS- Emotional Inhibition	.27	.15	.18			.09
EMS- Social Isolation	.02	.32	.01			.96
EMS- Subjugation	.47*	.22	.31*			.04
EMS- Self-sacrifice	-.04	.18	-.03			.84
EMS- Failure	.19	.29	.07			.53
EMS- Defectiveness	-.01	.31	-.003			.99
EMS-Dependence	-.75*	.30	-.28*			.02
Step 3				.80	.00	
Age	-.25*	.11	-.30*			.04
EMS- Enmeshment	-.80*	.18	-.68*			<.001
EMS- Abandonment	1.12*	.24	.87*			<.001
EMS-Abuse	-.16	.24	-.10			.52
EMS- Emotional Deprivation	.17	.18	.14			.33
EMS- Emotional Inhibition	.27	.16	.18			.09
EMS- Social Isolation	.02	.32	.02			.96
EMS- Subjugation	.46*	.22	.31*			.05
EMS- Self-sacrifice	-.04	.18	-.03			.84
EMS- Failure	.18	.30	.07			.55
EMS- Defectiveness	-.02	.32	-.01			.95
EMS-Dependence	-.74*	.32	-.27*			.03
Traumatic life events	.02	.07	.03			.81

Note 1. * = p <.05
Note 2. EMS = Early Maladaptive Schemas.

Table 5
Hierarchical regression of the predictive role of early maladaptive schemas and traumatic life events in emotional dependence (affective expression), controlling for the effect of age

Affective expression	*B*	*SE B*	*β*	R^2	Change in R^2	*p*
Step 1				.21	.21*	
Age	-.23*	.07	-.45*			.003
Step 2				.67	.47*	
Age	-.20*	.09	-.40*			.03
EMS- Enmeshment	-.54*	.13	-.64*			<.001
EMS- Abandonment	.62*	.17	.79*			.001
EMS-Abuse	-.16	.18	-.17			.40
EMS- Emotional Deprivation	.04	.13	.05			.79
EMS- Emotional Inhibition	-.19	.12	-.21			.11
EMS- Social Isolation	-.06	.25	-.05			.80
EMS- Subjugation	.40*	.17	.43*			.03
EMS- Self-sacrifice	-.01	.14	-.01			.96
EMS- Failure	.25	.23	.16			.27
EMS- Defectiveness	.16	.24	.13			.51
EMS-Dependence	-.35	.24	-.21			.15
Step 3				.72	.05*	
Age	-.18*	.08	-.36*			.04
EMS- Enmeshment	-.54*	.13	-.64*			<.001
EMS- Abandonment	.72*	.17	.92*			<.001
EMS-Abuse	-.09	.17	-.10			.61
EMS- Emotional Deprivation	.01	.13	.02			.92
EMS- Emotional Inhibition	-.23	.11	-.25			.05
EMS- Social Isolation	-.08	.23	-.07			.73
EMS- Subjugation	.41*	.16	.44*			.02
EMS- Self-sacrifice	-.01	.13	-.02			.92
EMS- Failure	.28	.21	.18			.20
EMS- Defectiveness	.27	.23	.22			.26
EMS-Dependence	-.45	.23	-.27			.06
Traumatic life events	-.11*	.05	-.27*			.04

Note 1. * $p < .05$.
Note 2. EMS = Early Maladaptive Schemas.

Table 6
Hierarchical regression of the predictive role of early maladaptive schemas and traumatic life events in emotional dependence (fear of loneliness), controlling for the effect of age

Fear of loneliness	*B*	*SE B*	*β*	R^2	Change in R^2	p
Step 1				.04	.04	
Age	-.08	.06	-.20			.20
Step 2				.62	.58*	
Age	-.02	.08	-.05			.77
EMS- Enmeshment	-.21	.12	-.31			.08
EMS- Abandonment	.22	.15	.35			.16
EMS-Abuse	-.21	.16	-.28			.20
EMS- Emotional Deprivation	.13	.12	.21			.29
EMS- Emotional Inhibition	-.03	.10	-.04			.78
EMS- Social Isolation	-.23	.21	-.22			.29
EMS- Subjugation	.63*	.15	.86*			<.001
EMS- Self-sacrifice	-.32*	.12	-.46*			.01
EMS- Failure	-.14	.20	-.11			.48
EMS- Defectiveness	.05	.21	.05			.81
EMS-Dependence	.19	.21	.14			.36
Step 3				.62	.00	
Age	-.02	.08	-.05			.78
EMS- Enmeshment	-.21	.12	-.31			.08
EMS- Abandonment	.22	.16	.35			.18
EMS-Abuse	-.21	.17	-.28			.22
EMS- Emotional Deprivation	.13	.12	.21			.30
EMS- Emotional Inhibition	-.03	.11	-.04			.79
EMS- Social Isolation	-.23	.22	-.22			.30
EMS- Subjugation	.63*	.15	.86*			<.001
EMS- Self-sacrifice	-.32*	.12	-.46*			.01
EMS- Failure	-.14	.20	-.11			.49
EMS- Defectiveness	.05	.22	.05			.82
EMS-Dependence	.19	.21	.14			.38
Traumatic live events	.00	.05	.001			.99

Note 1. * $p < .05$.
Note 2. EMS = Early Maladaptive Schemas.

Table 7
Hierarchical regression of the predictive role of early maladaptive schemas and traumatic life events in emotional dependence (borderline expression), controlling the effect of age

Borderline expression	***B***	***SE B***	***β***	***R²***	**Change in *R²***	**p**
Step 1				.02	.02	
Age	-.04	.04	-.15			.37
Step 2				.59	.57*	
Age	-.07	.05	-.28			.16
EMS- Enmeshment	-.05	.08	-.11			.53
EMS- Abandonment	.11	.10	.28			.28
EMS-Abuse	-.03	.10	-.06			.79
EMS- Emotional Deprivation	.15	.08	.39			.07
EMS- Emotional Inhibition	-.02	.07	-.04			.76
EMS- Social Isolation	-.16	.14	-.24			.26
EMS- Subjugation	.28*	.10	.61*			.01
EMS- Self-sacrifice	-.15	.08	-.33			.07
EMS- Failure	.19	.13	.24			.15
EMS- Defectiveness	-.14	.14	-.22			.32
EMS-Dependence	-.10	.14	-.12			.47
Step 3				.59	.004	
Age	-.07	.05	-.27			.18
EMS- Enmeshment	-.05	.08	-.12			.53
EMS- Abandonment	.13	.11	.32			.24
EMS-Abuse	-.02	.11	-.04			.86
EMS- Emotional Deprivation	.14	.08	.38			.08
EMS- Emotional Inhibition	-.03	.07	-.06			.71
EMS- Social Isolation	-.17	.14	-.25			.26
EMS- Subjugation	.29*	.10	.61*			.01
EMS- Self-sacrifice	-.15	.08	-.34			.07
EMS- Failure	.20	.13	.24			.15
EMS- Defectiveness	-.12	.14	-.20			.39
EMS-Dependence	-.11	.14	-.13			.43
Traumatic live events	-.02	.03	-.08			.60

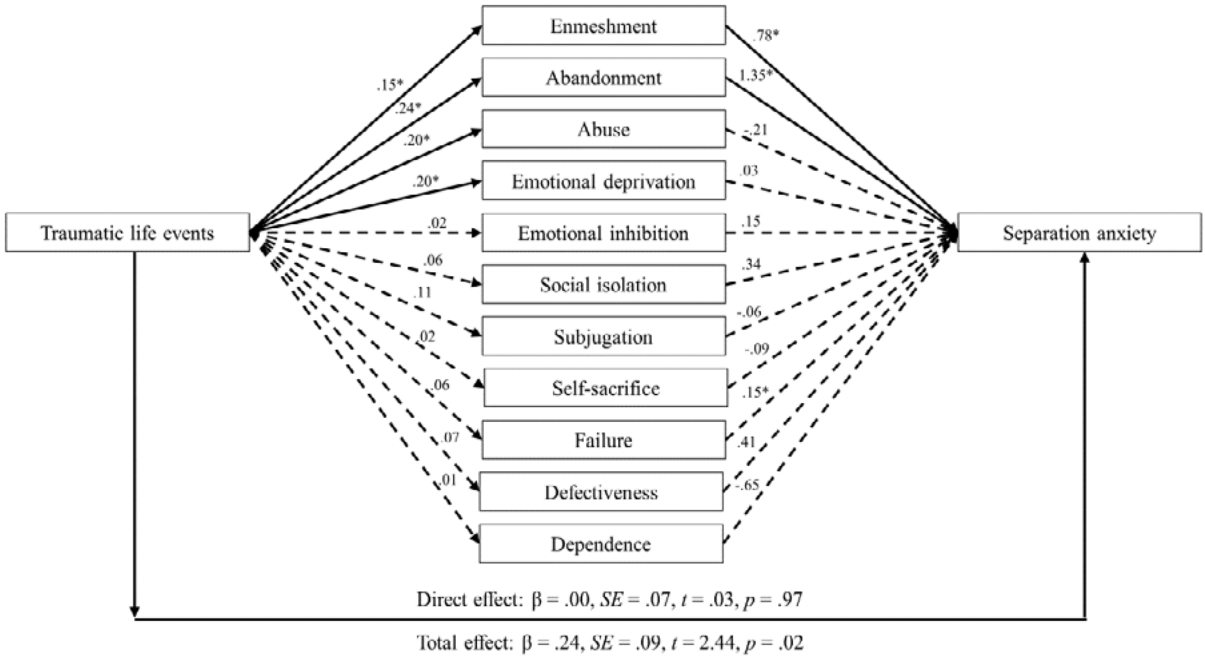
Note 1. * $p < .05$.
Note 2. EMS = Early Maladaptive Schemas.

Table 8
Hierarchical regression of the predictive role of early maladaptive schemas and traumatic life events in emotional dependence (attention seeking), controlling for the effect of age

Attention-seeking	***B***	***SE B***	***β***	***R²***	**Change in *R²***	**P**
Step 1				.11	.11*	
Age	-.09*	.04	-.34*			.03
Step 2				.35	.23	
Age	-.02	.06	-.08			.75
EMS- Enmeshment	-.10	.10	-.23			.32
EMS- Abandonment	.24	.13	.59			.07
EMS-Abuse	-.05	.13	-.11			.69
EMS- Emotional Deprivation	.03	.10	.07			.80
EMS- Emotional Inhibition	-.06	.09	-.12			.51
EMS- Social Isolation	-.05	.18	-.08			.77
EMS- Subjugation	.07	.13	.15			.56
EMS- Self-sacrifice	-.04	.10	-.09			.70
EMS- Failure	-.08	.17	-.10			.62
EMS- Defectiveness	.21	.18	.32			.26
EMS-Dependence	-.02	.17	-.02			.92
Step 3				.35	.003	
Age	-.02	.07	-.09			.73
EMS- Enmeshment	-.10	.10	-.22			.34
EMS- Abandonment	.23	.14	.56			.10
EMS-Abuse	-.06	.14	-.13			.65
EMS- Emotional Deprivation	.03	.10	.07			.78
EMS- Emotional Inhibition	-.05	.09	-.11			.56
EMS- Social Isolation	-.05	.19	-.07			.79
EMS- Subjugation	.07	.13	.15			.57
EMS- Self-sacrifice	-.04	.10	-.09			.71
EMS- Failure	-.09	.17	-.11			.61
EMS- Defectiveness	.19	.18	.30			.31
EMS-Dependence	-.01	.18	-.01			.97
Traumatic live events	.01	.04	.07			.72

Note 1. * $p < .05$.
Note 2. EMS = Early Maladaptive Schemas.

Figure 1
Mediational effect of early maladaptive schemas between traumatic life events and emotional dependence.



Note. *$p \leq .05$. Solid lines indicate significant indirect effects at a 95% confidence interval. Dashed lines indicate non-significant indirect effects at a 95% confidence interval.

traumatic life events were predictors. No significant effects were found in the case of plan modification.

Finally, multiple mediation analyses were conducted to analyze the mediating role of early maladaptive schemas between traumatic life events and emotional dependence (Figure 1). The results showed that there was a full mediation effect in the case of the relationship between traumatic life events and separation anxiety (a-path, b-path, and c-path were significant, whereas c'-path was not). Specifically, enmeshment and abandonment schemas were mediators of this relationship. Mediation effects were not found in the relationship between traumatic life events and the rest of the subscales of the emotional dependence.

Discussion

The first objective of the study was to analyze the relationships between traumatic life events, early maladaptive schemas, and emotional dependence in female gamblers. The results obtained showed that traumatic life events increased as early maladaptive schemas (enmeshment, abandonment, abuse, and emotional deprivation) and emotional dependence on the partner increased. These results are consistent with those reported by previous studies in general population in which childhood traumatic experiences of maltreatment were associated with early maladaptive schemas of emotional deprivation and subjugation, as well as with abandonment and dependence schemas (Zheng et al., 2022). Furthermore, it has been mentioned that specific early maladaptive schemas may be important psychological correlates of behavioral addictions, including gambling (Vieira et al., 2023), as well as other psychological disorders, such as obsessive-compulsive disorder (Dostal & Pilkington, 2023; Yoosefi et al., 2016), depression (Bishop et al., 2022), anxiety (Tariq et al., 2021) and post-traumatic stress disorder (Greenblatt-Kimron et al., 2023). Previous studies show that early maladaptive schemas mediate the relationship between post-traumatic stress disorder and illicit substance use disorder (Lecigne & Tapia, 2018); additionally, women who have experienced traumatic life events such as child sexual abuse have greater degrees of impulsive behaviors mediated by early maladaptive schemas (Estévez et al., 2017), but these results are novel in women with GD.

In turn, the results suggested that early maladaptive schemas of abandonment, abuse, emotional deprivation, social isolation, subjugation, and defectiveness increased in parallel with emotional dependence toward the partner. These results are consistent with previous studies in general population in which emotional dependence toward a partner has been linked to the presence of early maladaptive schemas (Huerta et al., 2016), with abandonment and

subjugation schemas predominating (Momeñe et al., 2021). The predominance of schemas integrating the disconnection and rejection domain is noteworthy. This domain is based on the belief that the needs for security, protection, love, and respect will not be met or satisfied by others. These schemas usually emerge in cold, distant, unpredictable, rejecting, and abusive family environments (Young et al., 2013). Thus, these schemas encompass beliefs that are very present among people with emotional dependence. That is, the fear of being abandoned at any time, adopting submissive behaviors to avoid the breakup of the relationship, isolation from other friendships to prioritize caring for the partner, and the belief of being invalid or imperfect (Pinzón & Pérez, 2014). In this line, it has been mentioned that early maladaptive schemas developed through traumatic experiences perpetuate problematic emotional responses over the years as is the case of emotional dependence (Dadomo et al., 2016). Although gambling has been found to correlate with early maladaptive schemas in clinical samples of male gamblers (Shorey et al., 2012), there are no previous studies in clinical samples of women gamblers.

The second aim of the study was to analyze differences in traumatic life events, emotional dependency, and early maladaptive schemas between women and men with GD. Women reported higher scores on stressful life events and the early maladaptive schema of self-sacrifice compared to men. These results are consistent with previous studies in which female gamblers have been found to present more pre-gambling traumatic life events than men (Russel et al., 2022; Wang et al., 2020). In fact, many women with GD begin to gamble as a way of escaping from problems that overwhelm them, such as feelings of loneliness, abusive situations, and problematic relationships (Jauregui et al., 2018; Lelonek-Kuleta, 2021; Macía et al., 2023a). In this line, stressful life events have been related to the severity of gambling differentially in men and women, as they only correlated negatively with the improvement of GD symptoms in men (Gavriel-Fried et al., 2019). These results show the importance of including the management of traumatic life events in intervention programs for women with GD.

The predominant self-sacrifice schema in women with GD—which encompasses beliefs related to voluntarily satisfying the needs of others by postponing or renouncing one's own needs—can be explained by the role of caregiver socially assigned to women (Estévez et al., 2023a). This role implies women's permanent postponement and constant subordination of their own health in favor of others' well-being (Bueno et al., 2020). In GD, the breaching of gender stereotypes has a very negative impact on women gamblers, increasing their feelings of guilt for not following the imposed social mandate, especially if they have children (Rius-Buitrago et al., 2021).

On the other hand, in the present study, males obtained higher scores in emotional dependence, specifically in attention-seeking and in the early maladaptive schema of social isolation. These results coincide with previous studies in other populations in which men scored higher in emotional dependence (Estévez et al., 2017; Laca & Mejía, 2017; Momeñe et al., 2017). However, these results are novel in GD, since there are very few studies that have analyzed sex differences and those studies found higher rates of emotional dependency in women (Macía et al., 2023). More studies are needed to clarify sex differences in emotional dependency in individuals with GD. Additionally, the social isolation schema—which encompasses beliefs related to not belonging to any group or being different from others—could be explained through previous studies that point to a higher presence of antisocial behaviors among men with GD compared to women with GD (Carneiro et al., 2020).

The third objective of the study was to analyze the predictive role of early maladaptive schemas and traumatic life events in emotional dependence in women gamblers. The results obtained suggest that early maladaptive schemas of enmeshment, abandonment, subjugation, and dependence are predictors of separation anxiety. Likewise, the results suggest that early maladaptive schemas of enmeshment, abandonment and subjugation are predictors of affective expression. In the case of fear of loneliness, the results reflect the predictive role of early maladaptive schemas of subjugation and self-sacrifice. Finally, the early maladaptive subjugation schema predicted borderline expression, highlighting it as a predictor of emotional dependence. Beliefs related to the need to give up one's rights, postpone or forgo one's needs, and give in to coercion and control by others to avoid negative consequences (e.g., angry reactions or abandonment and relationship breakup) are very present among persons with emotional dependence. Their needs, hobbies, friendships, and family relationships—although the latter not so abruptly—take a back seat. Thus, they tend to sacrifice their own desires and needs, avoid circumstances that may jeopardize the continuity of the relationship, such as arguments, and adopt a subordinate or submissive role in the relationship (Castelló, 2019). In addition, they tend to be excessively obedient and compliant in couple relationships and delegate decision-making to the partner (Riso, 2014). All these retentive strategies produce a sense of security due to the belief that they can control the continuity of the relationship (Markez, 2015). The highlighted role of subjugation is of great interest in women gamblers, since gambling among females has been related with factors such as stress associated with family care roles or intimate partner violence, which are also related with subjugation (Hing et al., 2024; Holdsworth et al., 2012). Also, it has been found that the crossover of social strain and its emotional consequences from husband to wife are closely related to gambling problems in females, whereas

this phenomenon is not so common from wife to husband in male gamblers (Cheung, 2015).

The fourth objective of the study was to analyze the mediating role of early maladaptive schemas in the relationship between traumatic life events and emotional dependence in women gamblers. The results revealed the mediating role of attachment and abandonment schemas in the relationship between traumatic life events and separation anxiety. These results can be explained because specific traumatic life events can install dysfunctional schemas or beliefs related to the possibility of being abandoned by someone better at any time and the impossibility of being happy without the partner's presence and extreme support. This, in turn, favors the establishment of dependent partner relationships (Roth, 2014). Furthermore, in people with ED, it has been shown that early traumatic events generate early maladaptive schemas with implicit internal dialogues, maintaining a negative view of oneself and others. This negative view, together with low self-esteem, could explain the fear of abandonment and the need to remain attached to the partner as a source of security and well-being (Markez, 2015). Likewise, the belief that one cannot be happy without the partner's support and proximity is observed in the abrupt emotional ups and downs suffered depending on the state of the relationship, and the need for the partner to feel emotionally complete (Moral et al., 2018). Thus, these individuals present depressive episodes when the relationship is not going well or when the feared breakup occurs (Macía et al., 2023). In this regard, it has been pointed out that the probability of major depressive disorder is between 10 and 25 times higher than in the population without dependence (Cano, 2006). Although previous studies show lower rates of anxiety of separation in gamblers than in population with anxiety disorders (Pozzi et al., 2014), insecure attachment has been found to be a strong predictor of gambling problems (Ghinassi & Casale, 2023). In the case of women, insecure attachment predicted gambling problems in young populations of community samples (Macía et al., 2023). Previous studies have found that insecure attachment predicted relationship with others have been signaled as both the cause and cure of gambling problems in women (Karter, 2014), and fear of separation has been highlighted as a barrier to treatment for female problem gamblers (Kaufman et al., 2017). However, these results are novel in clinical population of female gamblers.

The present study presents some limitations. The first limitation concerns the study's cross-sectional nature, making it difficult to obtain causal relationships between the variables. It is recommended that the study be replicated in the future through a longitudinal study. A second limitation involves the scarce or null awareness of the problem presented by people with emotional dependence and their tendency to conceal it if they are aware of the problem (Sirvent & Moral, 2018). The third limitation of the study is based on the use of self-report measures. Respondents can deduce what is being measured and can provide socially accepted answers, biasing the results. Finally, it is worth mentioning that the method of online sample acquisition was not considered as a relevant covariate, since previous studies show that there is no difference in the results depending on whether it has been collected online or in paper-and-pencil (Dodou & De Winter, 2014). It is also important to highlight that the romantic status has not been measured and it could have affected to the obtained results, so future studies should include and control this variable.

In conclusion, understanding the specific factors that favor the establishment of dependent partner relationships among women with GD could help to develop more effective prevention and treatment interventions. Thus, the importance of addressing enmeshment and abandonment patterns in women with GD with a history of traumatic life events has been shown to be important to prevent their leading to high emotional dependence on the partner. Furthermore, this study underlines the importance of the analysis of gender differences in gambling problems. These results can be helpful for interventions with clinical populations with GD. Clustering by sex can help to establish preventive and treatment interventions that are specific to each gender (Jiménez-Murcia et al., 2020). It has been proposed that due to the higher rates of traumatic life events such as intimate partner violence, which is also related to emotional dependency, women with GD may have a greater benefit from treatment in groups that only comprise women or individual therapeutic settings (Lamas et al., 2018). These results may provide guidance for conducting sex-specific interventions taking into account traumatic life events and psychological variables related to them.

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Ethics approval

The Institutional Review Board of the University of Deusto approved the study (ETK-17/20-21).

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