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ORIGINAL ARTICLE

# Shame and Blame in Gambling: Relationship with Emotion Regulation and Gambling Motives

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**Abstract**
Gambling disorder is a problem that is affecting increasingly more people. It is associated with difficulties in emotion regulation, gambling motives, blame, and shame. This study aims to study the relationship between gambling severity, blame, and shame, independently and together with emotion regulation and gambling motives; to analyse the mediating role of emotion regulation in the relationship between gambling severity and shame; and to compare mean differences in the study variables according to the sample group. For this purpose, a clinical and non-clinical sample of 158 individuals (119 males and 39 females) ranging in age from 12 to 30 years ($M = 19.70$, $SD = 5.35$) was divided into three groups. The questionnaires were administered online and on paper. The results showed that blame and shame are related to the severity of gambling. In the case of shame, this relationship was found to be partially mediated by the emotion regulation strategy of self-blame. Gambling severity, blame and shame were also found to be related to various gambling motives and different emotion regulation strategies. All this information can be of great use in the prevention and treatment of gambling problems.

**Keywords** Blame · Shame · Gambling disorder · Gambling motives · Emotion regulation

Gambling disorder is characterised as a persistent and recurrent pattern of gambling that is associated with substantial distress or impairment. Its aetiology is complex, involving both genetic and environmental factors (Potenza et al., 2019). Gambling disorder was reclassified as an addictive disorder in the *Diagnostic and Statistical Manual of Mental Disorders* 5th edition (DSM-5) instead of an impulse control disorder, making it the first and only formal behavioural addiction in the manual (American Psychiatric Association [APA], 2013). Furthermore, the World Health Organization (WHO, 2018) has reclassified gambling disorder as an addictive disorder in the *International Classification of Diseases* (ICD-11). The great impact this disorder has on the lives of those who suffer from it is evidence of the need for further research into it. This is reflected, for example, in the high suicide rate of people with gambling disorder: 15 times higher than in the general population (Karlsson & Håkansson, 2018). In addition, this disorder shows a high comorbidity with substance use disorders, depressive disorders and anxiety disorders, among others (American Psychiatric Association, 2013).

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The most popular forms of gambling include casino gambling, lotteries and internet gambling (Potenza et al., 2019). The availability of these forms of gambling has proliferated worldwide and, as a consequence, a prevalence of gambling disorder was found to be 3.4% in Spanish adolescents in a study conducted in 2021 (Observatorio Español de las Drogas y las Adicciones - OEDA, 2022). It has been shown that being male (Dowling et al., 2017; Welte et al., 2017) and being young or adolescent (Calado et al., 2017; Sancho et al., 2019; Welte et al., 2017) could be risk factors for developing gambling disorder.

Studies have found that gambling motives are linked to the occurrence of problematic gambling. Stewart & Zack, (2008) proposed that people might gamble with the motivation to escape/avoid negative affect (coping motives), to increase positive affect (enhancement motives), and to obtain social rewards (social motives). Later, Dechant, (2014) added the motivation to gamble to earn money (financial motives). In particular, coping, financial (Barrault et al., 2019) and enhancement motives (Jauregui et al., 2020) have shown to be strongly linked to problem gambling.

Similarly, emotion regulation has been associated with problem gambling. It has been shown that it is common to find a deficit in emotion regulation in people with gambling disorder (Marchica et al., 2019; Rogier & Velotti, 2018; Sancho et al., 2019). Several studies show that gamblers often use gambling to regulate their emotions (Jacobs, 1986; Weatherly & Cookman, 2014), so emotion regulation could play a predictive role in gambling disorder (Estévez et al., 2017; Jauregui et al., 2016). Furthermore, it has been found that the relationship between gambling motives and gambling severity could be mediated by emotion regulation (Jauregui & Estevez, 2019).

On another hand, research has shown that gambling disorder also correlates positively and significantly with anxiety and depression (Barrault et al., 2017; Jauregui et al., 2016; Sloan et al., 2017). The literature suggests that the emotion regulation difficulties of people with gambling disorder could be the triggers for depressive and anxiety disorders (Barrault et al., 2019). Shame and blame are important features of these disorders (Cândea & Szentagotai-Tătar, 2018; Vázquez & Andrade, 2020). In the meta-analysis conducted by Cândea & Szentagotai-Tătar, (2018), it was concluded that, in most cases, shame was more strongly associated with anxiety symptoms (overall, medium effect sizes) than blame (overall, small effect sizes). In contrast, blame is more closely linked to depression, as it is one of its component factors (Vázquez & Andrade, 2020). That is why, in the diagnostic criteria for major depressive disorder of the DSM-5 (American Psychiatric Association, 2013), guilt is included as one of the possible symptoms.

Furthermore, shame and blame have been directly related to problem gambling (De Ridder & Deighton, 2021; Schlagintweit et al., 2017). In Miller and Thomas' (2017) qualitative study, it was found that the majority of participants with gambling problems blamed themselves for the problems they had developed by gambling. Much of the language used by these participants was strongly moralised, and the words 'blame' and 'shame' were used repeatedly in these participants' accounts. Moreover, it has been shown that persecution, tolerance, excessive gambling and guilt (four symptoms of problem gambling) appear to have prognostic validity in the assessment of gambling-related risk (Sleczka & Romild, 2021). Shame was also found to play a mediating role in the relationships between depression and problem gambling (Bilevicius et al., 2018). However, the blame and shame felt by individuals may be conditioned by the culture around them. For example, shame is a more prevalent feeling in Eastern culture (characterised by the fact that they care a lot about what others say, think and speak, so their behaviour will be regulated and constrained by these external social norms), whereas in Western culture, blame predominates (Cozens, 2018; Zhai, 2022).

Although shame and blame have been studied in relation to pathological gambling, their relationship to other factors associated with pathological gambling has not yet been sufficiently studied. As stated before, previous studies show the relationship among gambling and emotion regulation (Rogier & Velotti, 2018), and gambling and shame and blame (Yi & Kanetkar, 2011). The analysis of emotion regulation might be of great importance for understanding this relationship, since emotion regulation efficiency and the use of adaptive or maldaptive emotion regulation strategies are related to shame and blame proneness (Hughes et al., 2011). Additionally, the use of maladaptive emotion regulation strategies for shame and blame can lead to the appearance of internalising and externalising psychopatological symptoms (Velotti et al., 2014). Some studies highlight that emotion regulation may mediate among shame and eating disorders or psychological distress (Gupta et al., 2008; Velotti et al., 2017). Nevertheless, no studies have been found linking emotional regulation, pathological gambling and shame and blame, although the literature suggests that they may be related (De Ridder & Deighton, 2021; Schlagintweit et al., 2017). Additionally, the mediating effect of emotion regulation between gambling severity and shame and blame has not been tested to the knowledge of the authors. Furthermore, it may be enriching to study this in a sample comprised of a general and clinical population. Comparing the results of participants with variability in gambling severity could offer interesting results. Comparing, for example, a group at risk of developing pathological gambling and one that already has it, offers information that could be relevant to understanding the process of increasing severity of gambling and could be applied in the prevention of gambling addiction.

Accordingly, this study has the following aims: (1) to study the relationship between gambling severity, blame and shame; (2) to study the relationship between gambling severity, blame and shame with emotion regulation and gambling motives; (3) to analyse the mediating role of emotion regulation in the relationship between gambling severity and shame and blame in the present moment; (4) to analyse the mediating role of emotion regulation in the relationship between gambling severity and shame and blame in the past two weeks; and (5) to compare mean differences in the study variables as a function of the sample group. Consistent with previous research, cited above, it is hypothesised that gambling severity, blame and shame, emotion regulation and gambling motives will be positively correlated with each other. Furthermore, based on the literature reviewed (De Ridder & Deighton, 2021; Jauregui & Estevez, 2019; Schlagintweit et al., 2017; Sleczka & Romild, 2021; Weatherly & Cookman, 2014), it is expected to find that emotion regulation mediates the relationship between gambling severity and shame and blame at the present time and in the past 2 weeks. Finally, the clinical population is expected to show the highest levels of shame and blame (De Ridder & Deighton, 2021), gambling motives (Jauregui et al., 2020) and difficulties in emotional regulation (Marchica et al., 2019; Sancho et al., 2019).

## Methods

### Participants

A total sample of 158 adolescents and young adults participated in this study. The sample consisted of 119 males and 39 females aged between 12 and 30 years ($M = 19.70$, $SD = 5.35$). This sample was divided into three groups according to the SOGS-RA scores (Winters et al., 1993): (1) non-clinical at-risk gamblers (participants from community

sample that scored as at-risk gamblers; $n=48$); (2) non-clinical problem gamblers (participants from community sample that scored as problem gamblers; $n=53$); and (3) clinical problem gamblers (participants from clinical sample that scored as problem gamblers; $n=57$). One hundred and one participants were recruited in educational settings and 57 participants were recruited in centres for the treatment of gambling. All the participants from the clinical sample scored as problem gamblers. Those participants whose results were considered 'non-problem gambling' ($n=643$) were excluded from the analyses of this study. That is, a sample of 801 adolescents and young adults was recruited, and then 643 were excluded as non-problem gamblers, so the final sample for this study was 158. In terms of educational level, 50 had completed or were completing secondary education, 38 had primary education, 33 had vocational training, 17 had university studies, 17 had high school, 2 had no education and 1 did not respond. The age at the onset of gambling ranged from 7 to 27 years ($M=15.82$, $SD=3.02$).

## Instruments

### Positive and Negative Mood

We used the positive and negative affect schedule (PANAS; Watson et al., 1988), adapted to Spanish by Sandín et al., (1999). The scale is made up of 20 words that describe different feelings and emotions, divided into two subscales: positive affect (PA) and negative affect (NA), with 10 items each. The respondent indicates whether they have experienced each of these emotions or affects on a five-point Likert scale ranging from 1 (not at all/very slightly) to 5 (very much), during the specified time interval. In this study, participants were asked to respond to the items 'guilty' and 'ashamed', both corresponding to the negative affect (NA) subscale, at the present time and in the last 2 weeks. In this study, Cronbach's alpha coefficient was 0.85 for the global scale at present and 0.89 for the global scale in the last 2 weeks.

### Gambling Severity

We used the South Oaks Gambling-Revised Adolescents (SOGS-RA; Winters et al., 1993), adapted to Spanish by Secades & Villa, (1998). This instrument comprises 12 items that describe gambling behaviour within the past 12 months. All items except for item 1 have dichotomous responses (i.e., '*yes*' or '*no*'). Item 1 has four possible answers. The scores for SOGS-RA are interpreted as follows: 0–1, non-problem gambling; 2–3, at-risk gambling; and 4 or more, problem gambling. In this study, participants who showed risky gambling and problem gambling were selected. Psychometric properties were adequate, with an overall Cronbach's alpha of 0.81 in the original study and 0.81 in the present study.

### Gambling Motives

We used the Gambling Motives Questionnaire (GMQ; Stewart & Zack, 2008), adapted to Spanish by Jauregui et al., (2018). This questionnaire is composed of three subscales: enhancement motives (referring to positive internal reinforcement to increase positive emotions; e.g., 'To get a "high" feeling'), coping motives (referring to negative internal reinforcement, to avoid or decrease negative emotions; e.g., 'Because it helps you when you feel nervous or depressed'), and social motives (referring to positive external reinforcement

such as increased social affiliation; e.g., 'Because that's what most of your friends do when they are together'). Each subscale has five items that are rated on a 4-point Likert-type scale ranging from 1 (rarely/never) to 4 (almost always). These items were adapted from the Drinking Motives Questionnaire (Cooper et al., 1992). All subscales showed good internal consistency: enhacenment motives: $\alpha = 0.91$; social motives: $\alpha = 0.84$; coping motives: $\alpha = 0.92$. In the present study, the total scale obtained a Cronbach's alpha coefficient of 0.91.

### Emotion Regulation

We used the Cognitive Emotion Regulation Questionnaire (CERQ; Garnefski et al., 2001), adapted to Spanish by Domínguez-Sánchez et al. (2013). The CERQ assesses the degree to which nine emotion regulation strategies (ERS) are employed to cope with negative life events. The questionnaire consists of 27 items rated on a 5-point Likert-type response scale ranging from 1 (almost never) to 5 (almost always). The nine strategies are grouped into two different factors. The first factor refers to emotional well-being and adaptive behaviours: putting into perspective, positive refocusing, positive reappraisal, acceptance and refocus on planning. The second factor includes the maladaptive strategies associated with distress and psychopathological disorders: self-blame, other-blame, rumination, and catastrophising. The nine strategies consist of the following: (1) putting into perspective consists of thoughts brushing aside the seriousness of the event or considering its relativity when compared to other events; (2) positive refocusing refers to redirecting attention to joyful or pleasant themes; (3) positive reappraisal refers to reinterpreting the event in positive terms of personal growth; (4) acceptance includes thoughts of non-judgmental resignation; (5) refocus on planning refers to thinking about the steps that should be taken to handle the situation resulting from the event; (6) self-blame refers to thoughts blaming oneself for what one has experienced; (7) other-blame refers to thoughts blaming the environment or another person for what one has experienced; (8) rumination consists of obsessively focusing on the feelings and thoughts associated with a negative event; and (9) catastrophising refers to emphasising and overestimating the negative experience or its consequences. The original instrument presents adequate psychometric properties ($\alpha = 0.92$ for the global scale and $\alpha = 0.89$ and 0.82, respectively, for the adaptive ERS and MERS subscales). In this study, Cronbach's alpha of the global scale was 0.90. and $\alpha = 0.91$ for self-blame; $\alpha = 0.64$ for acceptance; $\alpha = 0.75$ for rumination; $\alpha = 0.80$ for positive refocusing; $\alpha = 0.79$ for refocus on planning; $\alpha = 0.51$ for positive reappraisal; $\alpha = 0.76$ for putting into perspective; $\alpha = 0.86$ for catastrophizing; $\alpha = 0.82$ for blaming others.

### Procedure

Clinical and non-clinical samples were collected. The non-clinical sample was obtained through educational institutions of the Basque country (northern Spain) and other nearby educational institutions, using convenience sampling. In total, 545 school directors were contacted, of whom 18 responded and 10 agreed to participate. The clinical sample was recruited from treatment centres for gambling disorder.

Data were collected through paper-and-pencil and online assessments. According to previous meta-analysis data, there would be not significant differences among both ways of completing self-report questionnaires (Herrero-Fernández, 2015). Paper-and-pencil data was collected in the classroom in the case of educational institutions and in treatment

rooms in the case of clinical sample. The online assessment in educational settings was conducted in classrooms that included computers. A researcher attended to the classroom or treatment room, presented the study and facilitated the link or the paper-and-pencil questionnaire. The questionnaire included general information about the main goals of the study. Confidentiality, anonymity and voluntary participation were guaranteed for all participants. Furthermore, details to contact the research team were provided. The participants did not receive any compensation for participating in the study. To be eligible, participants were requested to give informed consent. In the case of underage participants, a letter was sent to their parents which they had to send back signed; in the case of adult participants, they had to click on their agreement to participate in the study (online assessment) or sign the informed consent (paper-and-pencil assessment). The Institutional Review Board of the first author's university approved the study.

### Data Analysis

First, the relationship between gambling severity, blame and shame, emotion regulation and gambling motives was assessed through Pearson's *r.* Second, after bivariate relationships were verified between the variables, a mediation analysis was conducted to analyse how the independent variable *X* (gambling severity) affects the dependent variable *Y* (shame) through mediator *M* (emotion regulation). The analysis was conducted by using bootstrapping, which is an adequate technique for multiple mediation models and can be used in small and moderate samples (Preacher & Hayes, 2008). Four separate models were examined by using the macro INDIRECT for SPSS (Preacher & Hayes, 2008); shame now and shame in 2 weeks, and blame now and blame in 2 weeks. First, the significance of the effect of the independent variable on the mediator variables (*a*-path) and the effect of mediator variables on the dependent variable (*b*-path) was tested. Then, the total effect of *X* on *Y* along with the mediator variables (*c*-path) and the direct effect of *X* on *Y* while controlling for the effect of mediator variables (*c*'-path) were measured. Second, the indirect effect of the mediator variables was measured by bootstrapping with a sample of 5000 bootstraps, and the indirect effect of each mediator variable on the relationship between *X* and *Y* was analysed. The indirect effect is considered significant if 95% of the confidence intervals (CI) of the bootstraps do not include the zero—that is, if both the lower (LLCI) and the upper (ULCI) CI of the measured variable are higher or lower than zero. A total mediation effect is obtained when the *c*'-path is not significant, while a partial mediation effect is obtained when the *c*'-path remains significant. Finally, mean differences among the three groups that composed the sample were measured through analysis of variance (ANOVA). Then, Scheffe's post-hoc comparisons were made to check for intergroupal differences.

## Results

First, the relationships between gambling severity, blame and shame at present and in the last two weeks were analysed (Table 1). The results revealed positive relationships between gambling severity, shame and blame at present and over the past 2 weeks.

Secondly, the relationships between gambling severity, blame and shame with gambling motives and emotion regulation ability at present and in the last 2 weeks were analysed (Table 2). As can be seen, gambling severity was positively related to the gambling motives of enhancement and coping and to the capacity for emotion regulation based on self-blame,

**Table 1** Correlations between gambling, blame and shame

| | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| 1. Gambling severity | – | | | | |
| 2. Shame now | .29** | – | | | |
| 3. Shame last two weeks | .43** | .63** | – | | |
| 4. Blame now | .35** | .67** | .69** | – | |
| 5. Blame last two weeks | .35** | .56** | .70** | .66** | – |

$p < .001$**

acceptance, rumination, positive reappraisal and catastrophising. In contrast, it was negatively related to the emotion regulation ability based on blaming others. Shame at present and in the last 2 weeks was positively related to enhancement, social and coping motives and the emotion regulation ability based on self-blame, acceptance, rumination, positive reappraisal and catastrophising. Finally, blame at present and during the last 2 weeks was related to coping gambling motives and the emotion regulation ability based on self-blame, acceptance and rumination. Blame at present was also related to refocus on planning and positive reappraisal.

Next, the mediating role of emotion regulation in the relationship between gambling severity and shame and blame was tested. Mediation analyses showed that emotion regulation mediated among gambling severity and shame (now and in 2 weeks). In the case of blame (now and in 2 weeks), there were not significant mediation models. In the case of shame (now), gambling severity was associated with self-blame (*a*-path), and self-blame was associated with shame at present (*b*-path) (Fig. 1). The indirect effect test based on the bootstrap procedure was significant. Bootstrap analyses confirmed the results by testing the associated confidence interval (LLCI = 0.10, ULCI = 0.66 for the total model; LLCI = 0.02, ULCI = 0.37 for self-blame), which confirms that the effect of gambling severity on shame

**Table 2** Correlations between gambling severity, blame and shame with emotion regulation and gambling motives

| | Gambling severity | Shame now | Shame last 2 weeks | Blame now | Blame last 2 weeks |
|---|---|---|---|---|---|
| Enhancement motives | .24** | .20* | .17* | .15 | .13 |
| Social motives | − .09 | .17* | .17* | .13 | .11 |
| Coping motives | .31** | .31** | .32** | .34** | .18* |
| Self-blame | .39** | .27** | .38** | .46** | .36** |
| Acceptance | .39** | .24** | .27** | .31** | .20* |
| Rumination | .20* | .27** | .35** | .42** | .30** |
| Positive refocusing | .07 | .03 | .02 | .04 | .05 |
| Refocus on planning | .14 | .16 | .14 | .20* | .12 |
| Positive reappraisal | .28** | .20* | .19* | .24** | .16 |
| Putting into perspective | .05 | .08 | .09 | .06 | .06 |
| Catastrophising | .18* | .30** | .33** | .41** | .27** |
| Other-blame | − .27** | − .07 | − .04 | − .05 | − .06 |

$p < .05$*. $p < .001$**

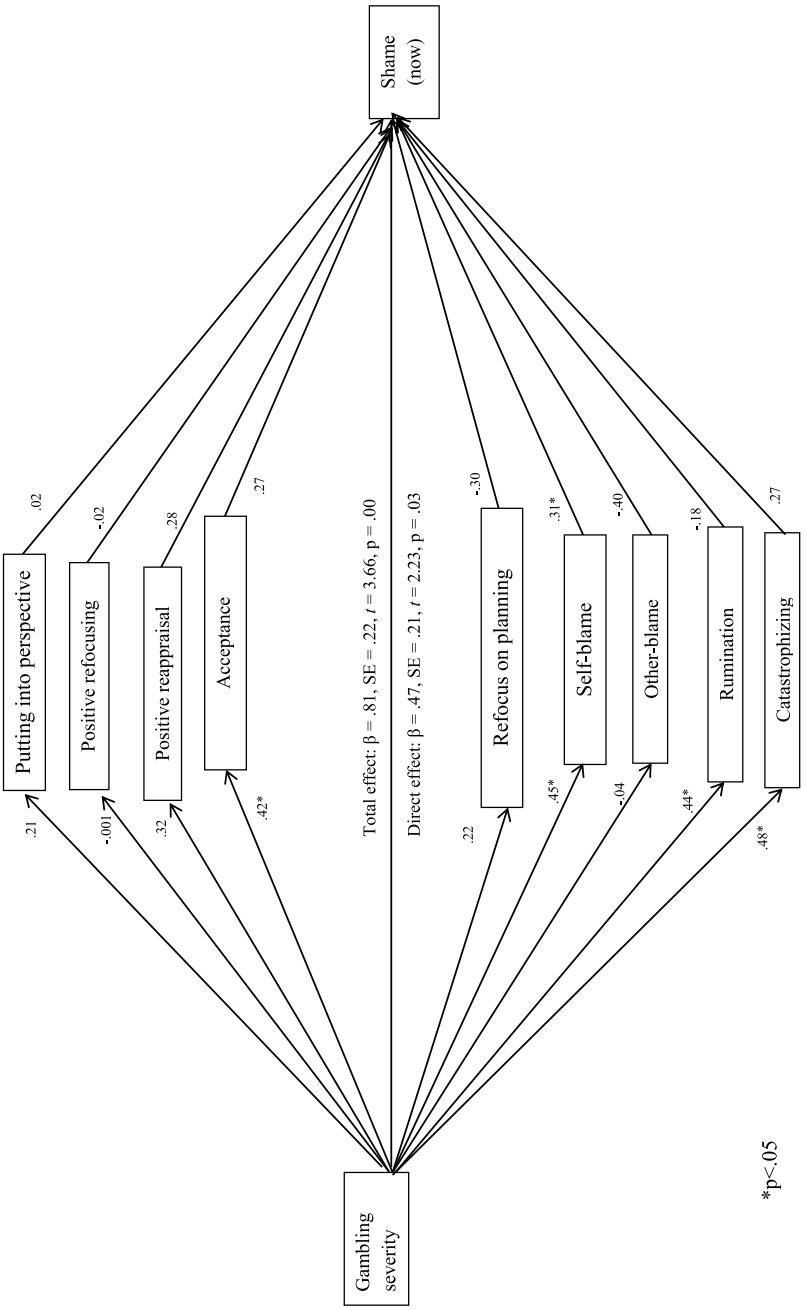


**Fig. 1** Mediation model of emotion regulation capacity between gambling severity and shame at present

in the present can be explained by emotion regulation, and specifically, by self-blame. In relation to the total effect (*c*-path), gambling severity was related with shame at present with emotion regulation as a mediator and, as indicated by the direct effect, after controlling for the effect of emotion regulation as a mediating variable (*c*'-path), this relationship remained significant, showing a partial mediation effect. That is, the effect of gambling severity on shame in the present is partially mediated by self-blame. This model explained a 36% of the variance.

Furthermore, the mediating role of emotion regulation in the relationship between gambling severity and shame in the past 2 weeks was tested. As shown in the model (Fig. 2), gambling severity was associated with self-blame (*a*-path), and self-blame was related with shame in the last 2 weeks (*b*-path). The indirect effect test based on the bootstrap procedure was significant. Bootstrap analyses confirmed the results by testing the associated confidence interval (LLCI = 0.03, ULCI = 0.68 for the total model; LLCI = 0.02, ULCI = 0.49 for self-blame), which confirms that the effect of gambling severity on shame in the last 2 weeks can be explained by emotion regulation, and specifically, by self-blame. The total effect was significant (*c*-path) and, after controlling for the effect of the emotion regulation as a mediating variable (*c*'-path), the relationship remained significant, showing a partial mediation effect. That is, the effect of gambling severity on shame in 2 weeks is partially mediated by self-blame. This model explains a 43% of variance.

Finally, differences in the study variables were analysed according to sample type (Table 3). The results show how group 3 (clinical problem gamblers) reported higher scores on shame and blame in the present and during the last 2 weeks, on gambling severity, enhancement and coping gambling motives and emotion regulation ability based on self-blame, acceptance, rumination, positive reappraisal and catastrophising compared to group 1 (non-clinical at-risk gamblers) and group 2 (non-clinical problem gamblers). Group 1 reported higher scores on emotion regulation ability based on refocus on planning and blaming other-blame compared to the other two groups.

## Discussion

The first aim of the study was to analyse the relationship between gambling, blame and shame. The results showed that the higher the gambling severity, the higher the levels of guilt and shame at present and during the last 2 weeks. These findings are consistent with previous studies indicating a positive relationship between blame and problem gambling (Schlagintweit et al., 2017). However, studies such as that of Yi, (2012) found negative associations between these two variables. This discrepancy may be due to socio-cultural differences in the samples. Blame is more frequent in Western culture, while shame is more frequent in Eastern culture (Cozens, 2018; Zhai, 2022). This could be because, compared to Western culture, Chinese society, for example, is a collectivist culture, where the needs of the group have a higher priority than those of the individual. Therefore, Chinese-disordered gamblers do not dare to manifest their gambling problems, which would bring shame and disgrace to their families and the whole community (Chan et al., 2019), so they rarely disclose their gambling problems to others unless they are sufficiently severe and intolerable (Fong & Tsuang, 2007).

Different investigations agree that shame is positively related to gambling and may even be its precursor (De Ridder & Deighton, 2021; Schlagintweit et al., 2017). Furthermore, it

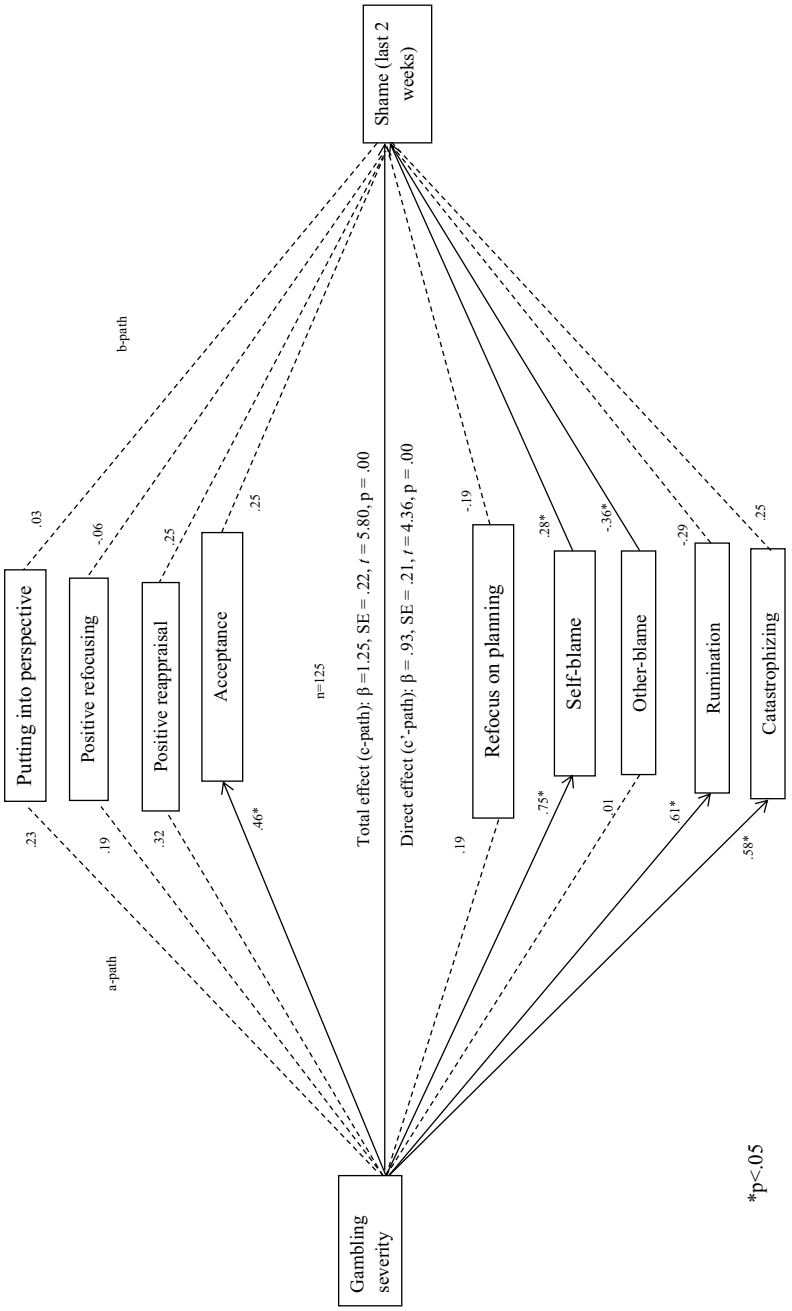


**Fig. 2** Mediation model of emotion regulation capacity between gambling severity and shame during last 2 weeks

**Table 3** Differences in the means of the study variables according to the type of sample

| | Group1: non-clinical at-risk gamblers ($n=48$) | | Group 2: non-clinical problem gamblers ($n=53$) | | Group 3: Clinical problem gamblers ($n=57$) | | Total ($n=158$) | | *F* | *Sig* | Scheffé |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | *M* | *SD* | *M* | *SD* | *M* | *SD* | *M* | *SD* | | | |
| Shame now | 1.81 | .95 | 1.92 | 1.26 | 2.64 | 1.48 | 2.15 | 1.31 | 6.80 | .00 | Group 1 to group 3**; group 2 to group 3* |
| Blame now | 1.68 | .96 | 2.04 | 1.14 | 2.81 | 1.50 | 2.21 | 1.32 | 11.31 | .00 | Group 1 to group 3**; group 2 t group 3* |
| Shame last 2 weeks | 1.41 | .75 | 1.55 | .88 | 2.49 | 1.51 | 1.87 | 1.23 | 14.12 | .00 | Group 1 to group 3**, group 2 to group 3** |
| Blame last 2 weeks | 1.64 | 1.17 | 1.83 | 1.27 | 2.58 | 1.41 | 2.05 | 1.35 | 7.77 | .00 | Group 1 to group3**; group 2 to group 3* |
| Gambling severity | 2.35 | .48 | 5.87 | 2.18 | 9.31 | 1.54 | 5.87 | 3.22 | 230.63 | .00 | Group 1 to group 2**; group 1 to group 3**; group 2 to group 3** |
| Enhancement motives | 8.92 | 3.58 | 9.69 | 4.70 | 12.68 | 4.49 | 10.56 | 4.59 | 11.44 | .00 | Group 1 to group 3**; group 2 to group 3** |
| Social motives | 7.59 | 3.04 | 7.95 | 3.32 | 7.33 | 2.62 | 7.60 | 2.97 | .55 | .58 | - |
| Coping motives | 7.33 | 3.82 | 6.59 | 2.47 | 11.23 | 4.69 | 8.59 | 4.36 | 22.07 | .00 | Group 1 to group 3**; group 2 to group 3** |
| Self-blame | 4.83 | 2.09 | 4.83 | 2.39 | 7.46 | 2.21 | 5.83 | 2.56 | 24.43 | .00 | Group 1 to group 3**; group 2 to group 3** |
| Acceptance | 5.98 | 2.15 | 6.02 | 2.55 | 8.54 | 1.63 | 6.99 | 2.43 | 25.49 | .00 | Group 1 to group 3**; group 2 to group 3** |
| Rumination | 5.93 | 2.08 | 5.89 | 2.54 | 7.24 | 1.96 | 6.42 | 2.27 | 6.52 | .00 | Group 1 to group 3*; group 2 to group 3* |
| Positive refocusing | 4.98 | 2.14 | 5.13 | 2.44 | 5.95 | 2.38 | 5.40 | 2.36 | 2.63 | .08 | - |
| Refocus on planning | 6.27 | 2.70 | 5.54 | 2.54 | 2.20 | 1.90 | 6.61 | 2.52 | 11.01 | .00 | Group 1 to group 3*; group 2 to group 3* |
| Positive reappraisal | 6.20 | 2.54 | 5.66 | 2.65 | 8.58 | 1.60 | 6.97 | 2.60 | 24.45 | .00 | Group 1 to group 3**; group 2 to group 3** |
| Putting into perspective | 5.28 | 1.94 | 5.91 | 2.56 | 5.84 | 2.21 | 5.69 | 2.25 | 1.11 | .33 | - |
| Catastrophising | 4.78 | 2.34 | 4.66 | 2.47 | 6.09 | 2.34 | 5.25 | 2.45 | 5.78 | .00 | Group 1 to group 3*; group 2 to group 3* |
| Other blame | 4.80 | 2.32 | 4.91 | 2.55 | 3.26 | 2.14 | 4.24 | 2.44 | 8.22 | .00 | Group 1 to group 3**; group 2 to group 3** |

$p<.05$*. $p<.001$**

is negatively related both to the likelihood of seeking treatment (Horch & Hodgins, 2015) and treatment efficacy (Velleman, 2015). It is worth mentioning that gambling severity has shown a stronger correlation with shame than with blame, as other studies have found (Pchajek, 2020). This may be because the way people respond to each feeling is different. Feelings of shame may motivate people to hide (Lindsay-Hartz, 1984), in this context it could translate into playing alone, sneaking around, lying about the time and money spent on it, etc. On the other hand, feelings of blame may motivate the person to engage in reparative behaviour (Tangney & Dearing, 2003; Yang et al., 2010), which could translate into decreasing or discontinuing gambling behaviour. Therefore, this study supports the importance of the differentiated analysis of shame and blame in gamblers.

The second aim of the study was to analyse the relationship between gambling, blame and shame together with emotion regulation and gambling motives. The data obtained show that gambling severity was positively related to enhancement and coping gambling motives. These results are in line with previous studies that also found a relationship between coping and enhancement motives and gambling (Barrault et al., 2019; Jauregui et al., 2020). Regarding the relationship between gambling severity and emotion regulation, the results indicate a positive relationship with self-blame, acceptance, rumination, positive reappraisal and catastrophizing, and a negative relationship with the ability to regulate emotions based on blaming others. These results are partially consistent with other studies that relate gambling severity to maladaptive emotion regulation mechanisms (Marchica et al., 2019; Rogier & Velotti, 2018; Sancho et al., 2019), although they also show a relationship with adaptive mechanisms (acceptance and positive reappraisal). Shame at present and in the last 2 weeks was positively related to the three gambling motives studied, whereas blame at present and in the last 2 weeks was related only to the coping gambling motives. These results are novel, since no research has been found that related these variables so specifically but negative affect (which encompasses blame and shame) has been found to be positively related to social and coping motives (Jauregui et al., 2020). It has been shown that in Western culture there is a greater tendency towards blame, while in Eastern culture the tendency is towards shame (Cozens, 2018; Zhai, 2022). Consequently, it would be interesting to work on the coping motive in treatment and prevention in Western cultures, and to include all three types of motives in Eastern cultures. Finally, results showed that shame and blame at present and in the past 2 weeks were positively related both to adaptive and maladaptive emotion regulation strategies. These are novel results, since studies such as that of Belden et al., (2014) have found a positive correlation between maladaptive regulation strategies and negative affect, but the direct link with shame and blame in a sample of young gamblers has not been previously found.

The third and fourth aims of this study were to analyse the mediating role of emotion regulation in the relationship between gambling severity and shame at present and in the past 2 weeks. The results show that there is a significant and partial mediation of self-blame in the relationship between gambling severity and shame. This mediation holds both with the measures of shame at present and in the last 2 weeks. Along these lines, although no studies were found that measured the mediating role of emotion regulation in the relationship between gambling severity and shame, making these results novel, studies were found that indicated that coping motives fully mediated the relationship between shame and problem gambling when controlling for feelings of blame (Schlagintweit et al., 2017).

The fifth and final aim of this study was to compare mean differences in the study variables according to the sample group: (1) non-clinical at-risk gamblers, (2) non-clinical problem gamblers and (3) clinical problem gamblers. The results show that group 3 reported higher scores than the other two groups on shame and blame at present and during the last 2 weeks, on gambling severity, enhancement and coping gambling motives and emotion regulation

ability based on self-blame, acceptance, rumination, positive reappraisal and catastrophising. These results are consistent with previous findings because group 3 was the only group in the clinical population and the one with the highest gambling severity. Therefore, as previously mentioned, this group was expected to be associated with the highest levels of shame and blame (De Ridder & Deighton, 2021; Schlagintweit et al., 2017), enhancement and coping gambling motives (Barrault et al., 2019; Jauregui et al., 2020) and difficulties in emotion regulation (Marchica et al., 2019; Rogier & Velotti, 2018; Sancho et al., 2019). However, these results are novel, since few studies have tackled the differences among different profiles of risk in these variables, and including both clinical and non-clinical profiles.

This research is not without limitations. Firstly, due to the cross-sectional nature of the study, it is impossible to obtain causal relationships. A second limitation is the effect of social desirability, as participants may have completed the questionnaires attempting to portray a positive image of themselves, not answering honestly. It should also be noted that the sample size is small and may not be representative of the general population. Finally, as mentioned above, no information has been collected on socio-cultural factors that may be particularly related to the variables of guilt and shame. It would be interesting to take this into account in future studies.

## Conclusions

Summing up, the results indicate that blame and shame are related to gambling severity. In the case of shame, this relationship was found to be partially mediated by the emotion regulation strategy of self-blame. In addition, gambling severity, blame and shame have been related to various gambling motives and different emotion regulation strategies (both adaptive and maladaptive).

All this information can be of great use in the prevention and treatment of gambling problems. Including the variables of blame and shame in the assistance offered to people with problematic gambling is important because they have been related to all the variables in this study (gambling severity, gambling motives and emotion regulation) and to depression and anxiety disorders (Cândea & Szentagotai-Tătar, 2018; Vázquez & Andrade, 2020). It should be recalled that guilt, among others, seems to be a valid criterion for predicting the development of problem gambling (Sleczka & Romild, 2021). Therefore, identifying guilt and shame in people with pathological gambling will facilitate offering better psychological assistance by controlling these variables that can affect, through emotional regulation, the severity of gambling.

However, the role of blame and shame in pathological gambling should continue to be examined in future studies, as blame may also have self-punishment components that may be associated with addictive behaviours (Nelissen & Zeelenberg, 2009).

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**Data Availability** The datasets generated during and/or analysed during the current study are available from the corresponding author on reasonable request.

## Declarations

**Ethics Approval** This study was performed in line with the principles of the Declaration of Helsinki. Approval was granted by the Ethics Committee of University of Deusto.

**Consent to Participate** All participants signed a consent form, including parents for minors participating in the study.

**Conflict of Interest** The authors declare no competing interests.



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