

Estévez, A., Jauregui, P., López, N., López-González, H. & Griffiths, M. (2019). Difficulties in emotion regulation, coping, and dysfunctional psychological symptoms in family members of people with gambling disorder. *International Journal of Mental Health and Addiction*, in press

Abstract

Gambling disorder not only affects those who suffer from it, but also has consequences for their families. Considering such repercussions are often understudied, and the aim of the present study was to evaluate the main differences between family members of people with gambling disorder (GDFMs), and those with no relatives diagnosed with gambling disorder (non-GDFMs). The variables examined in the present study included emotion regulation, coping strategies, depression, and anxiety. The sample ($N=203$) was divided into two groups. This comprised a clinical group ($n=89$ participants, 43.8% of the sample), with 69.7% of women ($M_{age}=48.63$, $SD=13.36$), and a community sample (i.e., no gambling-related problems in their family; $n=114$, representing 56.2% of the sample), containing 64% of women ($M_{age}=35.89$, $SD=11.45$). Results showed that GDFMs scored significantly higher than non-GDFMs (i) on anxiety and depression scales, (ii) on difficulties in emotion regulation, and (iii) on maladaptive coping strategies. Additionally, difficulties in emotion regulation and coping strategies correlated with anxiety and depression. Regression analyses showed that difficulties in emotion regulation and coping strategies predicted anxiety and depression for GDFMs. These findings highlight the importance of including family members as part of the target group in gambling disorder treatment protocols.

Keywords: gambling disorder, family, depression, emotion regulation, coping strategies.

Gambling disorder (GD) has increasingly become an issue of public health with serious implications for those who suffer from it (Capetillo-Ventura & Jalil-Pérez, 2014). Although the gambler is the primary recipient of the suffering, close family members also experience the secondary detrimental consequences of GD (Wenzel, Oren, & Bakken, 2008). The problems derived from GD have mid- and long-term effects on the daily lives of family members (Ferland et al., 2008; Black, Shaw, McCormick, & Allen, 2012). GD-related problems have an impact, on average, on more than one family member (Wenzel et al., 2008). Recent research estimates the average number of individuals affected by an adult with GD is six (Goodwin, Browne, Rockloff, & Rose, 2017; although the number of individuals affected by an adolescent with GD is usually lower at two to four [Griffiths, 2002]), involving varying degrees of severity depending on how close the family members are, and their relationship with the gambler (Fernández-Montalvo & Castillo, 2004).

Family members of gamblers with GD (GDFMs) show a high probability of experiencing physical and/or mental health issues, as well as other difficulties including financial, occupational, and social problems (Salonen, Castrén, Alho, & Lahti, 2014). Wood and Griffiths (2007) noted that GD entails a number of negative consequences such as debts or interpersonal problems, which have repercussions on GDFMs. Such repercussions have been associated with a higher prevalence of anxiety and depression symptoms among this group (Jauregui, Onaindia, & Estévez, 2017). In some cases, GDFMs report more detrimental consequences than gamblers themselves, particularly psychosomatic symptoms, anxiety and depression, mood swings, compulsive thoughts and behaviors, and eating and sleeping disorders (Wenzel et al., 2008). Nevertheless, it should be taken into consideration that mental health problems may be self-limiting, and

they could simply be a reaction to specific psychosocial situations, such as having a relative with GD (Frances, 2013).

Some authors have argued that many of the issues that GDFMs experience during the gamblers' treatment occur as a direct result of their lack of adequate coping strategies (Calvo, 2007). This becomes apparent when examining the lack of emotional and relational resources that some GDFMs face in order to cope with gambling-related problems (Rychtarik & McGillicuddy, 2006). As a consequence, it is believed that some personal resources to buffer the effects of stress are more efficient than others (Orford, Copello, Velleman, & Templeton, 2010), meaning that the coping style adopted by GDFMs might have intrapersonal as well as interpersonal consequences on the gambler undergoing treatment (Suomi et al., 2013).

Maladaptive coping strategies are considered to be associated with psychopathological problems (Asselmann, Wittchen, Lieb, Höfler, & Beesdo-Baum, 2015). It has been argued that coping strategies are an essential part of personal functioning (Cano, Rodríguez, & García, 2007), given their role as emotional regulators (Aldao, Nolen-Hoeksema, & Schweizer, 2010). Gratz and Roemer (2004) defined emotion regulation as the conscience, understanding, and acceptance of emotions, positing that adequate emotional regulation would entail the ability to adapt to different environmental demands. According to those authors, the lack of emotion regulation skills may contribute to an enhanced perception of daily life situations as stressors, leading (in some cases) to increased emotional distress even in the absence of stressors (Compas et al., 2014). Consequently, both coping strategies and emotion regulation skills are paramount in determining the likelihood of suffering a number of psychopathologies (Aldao et al., 2010; Jáuregui, Herrero-Fernández, & Estévez, 2016). In this regard, it has been found that emotional distress in female GDFMs could be due

to their frustration after repeated attempts to cope with problems brought on by their partner's gambling (Rychtarik & McGillicuddy, 2006). This study explored the effects of an intervention to train coping strategies in GDFMs, showing preliminary support for its efficacy for improving coping effectiveness, and reducing anxiety, and depression (Rychtarik & McGillicuddy, 2006).

Despite the relative consensus regarding the detrimental consequences of gambling problems among those close to problem gamblers, little attention has been paid to how family members experience GD, and their inclusion in the broader paradigm of gambling-related harm. In order to address this gap, the present study had a twofold aim: (i) firstly, to compare coping strategies, difficulties in emotion regulation, and anxiety and depression symptoms between a sample of GDFMs, and a general population sample (non-GDFMs); and (ii) secondly, to analyze coping and emotion regulation as predictive factors in the development of anxiety and depression symptoms.

Methods

Participants

Participants were recruited and allocated into two cohorts depending upon the presence (clinical sample) or absence (general population sample) of a family member diagnosed with GD. This information to differentiate the sample was gathered within the socio-demographic data section, wherein participants were asked if they have at present or had in the past a family member with GD. Participants who answered positively to that question and who were receiving therapy at GD treatment centers were included in the clinical sample. The general population sample was recruited by convenience sampling comprising participants who answered negatively to that question.

A total of 89 participants were recruited for the clinical sample ($M_{\text{age}}=48.63$ years, $SD=13.36$), which represented 43.8% of the total sample, comprising 62 women (69.7%) and 27 men (30.3%). In terms of their kinship, 26.4% of the participants in this cohort were partners of the gambler, 17.6% siblings, 33.8% sons or daughters, and 16.2% parents. Their marital status of these participants comprised those who were single (20.3%), married (55.1%), in a non-marital partnership (11.6%), divorced/separated (10.1%), or widowed (2.9%). The highest educational level achieved by participants varied from primary school (17.4%), secondary school (26.1%), vocational training (20.3%), to university education (36.2%). Finally, in terms of occupation, 58% were working, 4.3% were on sick leave, 15.9% were unemployed, 1.4% were studying, and 20.3% were retired.

The general population sample (i.e., no gambling-related problems in their family; $n=114$, representing 56.2% of the sample, $M_{\text{age}}=35.89$ years, $SD=11.45$), comprised 73 women (64%) and 41 men (36%). Their marital status of these participants comprised those who were single (42.3%), married (38.5%), in a non-marital partnership (9%), divorced/separated (10.2%), or widowed (0%). The highest educational level achieved by participants varied from primary school (15.6%), secondary school (19.5%), vocational training (29.9%), to university education (35%). Finally, in terms of occupation, 81.8% were working, 2.6% were on sick leave, 6.5% were unemployed, 9.1% were studying, and 0% were retired. There were significant differences among both samples in occupation [$\chi^2 = 30.51(4)$, $p<.01$] and marital status [$\chi^2 = 12.97(4)$, $p<.05$], and age [$t = -7.65(221)$, $p<.01$] whereas there were no significant differences in gender or educational level.

Measures

Five assessment tools were utilized in collecting data in the present study. I only counted four (if anxiety and depression are counted separately, three if not)

Emotion regulation. The Difficulties in Emotion Regulation Scale (DERS; Gratz & Roemer, 2004; Spanish translation by Hervás & Jódar, 2008) was used to assess emotional regulation. The DERS comprises 28 items that assess a number of barriers regarding optimal emotion regulation. The scale has five latent factors: (i) lack of emotional awareness ('lack of awareness'), which assesses the inability to devote attentional resources; (ii) non-acceptance of emotional responses ('non-acceptance'), which assesses the negative evaluation of one's own emotional experience, reacting with shame or distress to such negative evaluations; (iii) lack of emotional clarity ('lack of clarity'), which assesses the inability to identify, and name clearly, the emotions being experienced; (iv) difficulties engaging in goal-directed behavior ('interference'), which assesses how difficult concentrating is without interference on everyday tasks is; and (v) lack of emotional control ('lack of control'), which assesses the emotional intensity, and persistence of negative emotional states. Each item asks how frequently the participants experience the events described by the questions on a 5-point Likert scale (0=almost never, 0-10% of the time; 4=almost always, 90-100% of the time) (Hervás & Jódar, 2008). The previously reported psychometric properties of the instrument are excellent (Cronbach's alpha of .93; range=.73-.91), as well as for the present study (.94).

Coping. The Coping Strategies Inventory (CSI; Tobin, Holroyd, Reynolds, & Wigal, 1989; Spanish adaptation and validation by Cano, Rodríguez and García, 2007) was used to assess coping strategies. It comprises 41 items, 40 of which gauge coping strategies and one the perceived self-efficacy to cope. Participants' scores are assessed on a 5-point Likert scale (0=none; 4=very much). The instrument comprises eight

primary subscales that correspond to eight different coping strategies: (i) problem-solving: strategies addressed to reduce the stress produced by specific situations by the modification of such situations; (ii) cognitive restructuring: strategies that modify the cognitive interpretation of the stressful situation; (iii) social support: strategies that seek emotional support; (iv) emotional expression: strategies addressed to release the emotions generated through a stressful process; (v) problem avoidance: strategies that involve the denial and avoidance of thoughts and behaviors associated with the stressful situation; (vi) wishful thinking: cognitive strategies that reflect individual desires to live an alternative reality in which situations were not stressful; (vii) social withdrawal: strategies leading to the discontinuation of personal relationships with individuals associated with the stressful situations; and (viii) self-blame: strategies consisting of blaming oneself for the recurrence of the stressful situation and its inadequate management. Hierarchical factor analysis of these eight primary scales support four secondary subscales: (1) problem-focused engagement, which includes problem-solving and cognitive restructuring subscales; (2) emotion-focused engagement, which includes social support and emotional expression subscales; (3) problem-focused disengagement, including problem avoidance and wishful thinking; (4) emotion-focused disengagement, which contains social withdrawal and self-blame. Regarding the internal consistency of the Spanish validation of the instrument, Cronbach's alphas have been reported from .63 to .89 (Cano, Rodríguez, and García, 2007). Jauregui and colleagues (2016) found similar values – from .75 to .89 – in an independent confirmatory factor analysis. In the present study, the overall alpha was .87.

Anxiety and depression. The Symptom Checklist-90-Revised (SCL-90-R; Derogatis, 2002; adapted into Spanish by González de Rivera, de las Cuevas, Rodríguez-Abuín and Rodríguez-Pulido, 2002) was used to assess anxiety and

depression. The SCL-90-R comprises 90 items that assess the degree of psychological distress experienced by both psychiatric patients and general population. Each item is scored on the basis of a 5-point Likert scale (0=not at all, 4=extremely), which assesses how intense the psychological distress covered by that item has been over the past seven days. Items are grouped into nine primary symptom dimensions: somatization, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, and psychoticism. In the present study, only the anxiety and depression subscales were utilized. The Anxiety subscale comprises 10 items that examine its clinical manifestations, both generalized and acute, as well as other symptoms of emotional stress and psychosomatic manifestations. The Depression subscale comprises 13 items that include the most common clinical manifestations of depression such as dysphoric mood, lack of motivation, low energy, hopelessness, and suicidal ideation. In terms of reliability, Cronbach's alpha coefficients for SCL-90-R in the Spanish validation ranged from 0.77 and 0.90 (González de Rivera et al., 2002). In the present study, Cronbach's alpha was .89 for anxiety, and .91 for depression.

Procedure

Participants for the study were recruited using convenience sampling. Questionnaires were physically administered on-site (where exactly?) as well as via an online platform. For those participants in the clinical sample (i.e., GDFMs), the questionnaire was administered within the premises of the treatment center they attended for group therapy. The general population sample (i.e., non-GDFMs), on the other hand, completed the questionnaire online and individually. In both cases, researchers explained the potential participants the purpose of the study and offered them the opportunity to participate. Those who accepted signed a consent form in which

a more detailed account of the study was available, including their rights to withdraw from it at any time, the confidential and anonymous nature of the research, and the contact details of the main researcher. Once participants gave their consent, they were handed the questionnaire. Data from participants were analyzed using SPSS 22. The present study was carried out in accordance with the Declaration of Helsinki (World Medical Association, 2013).

Statistical analysis

A cross-sectional correlational analysis was conducted. All analyses were conducted in SPSS 22. First, *t*-tests were conducted to assess the differences between the sample of GDFMs, and the general population sample (non-GDFMs) in anxiety, depression, coping, and difficulties of emotion regulation. Effect sizes of identified differences were assessed by using Cohen's *d*. According to Cohen's interpretation criteria (1992), values under .20 indicate small effect sizes; values between around .50 mean medium effects; while values over .80 are indicative of large effects. Second, partial correlation coefficients were calculated among all the variables in the group of GDFMs while controlling for sociodemographic data (age, gender, marital status, educational level, and job status). Third, regression analyses were conducted in this group utilizing stepwise regression models. Four models were conducted to evaluate the predictive role of difficulties in emotion regulation and coping relative to anxiety and depression while controlling for age, gender, marital status, educational level, and job status. Two models were conducted for each symptom (anxiety and depression). One of them included coping as a predictor and the other one included difficulties in emotion regulation as a predictor.

Results

Firstly, an analysis of mean differences between GDFMs and non-GDFMs groups concerning emotion regulation, coping, and anxiety and depression was carried out (see Table 1). Results showed that GDFMs scored significantly higher on non-acceptance, lack of clarity, lack of control, total emotion regulation, problem-solving, emotional expression, wishful thinking, social withdrawal, depression, and anxiety. The effect size for the *t*-tests that were found to be statistically significant ranged from .29 to .58 (i.e., a medium size effect).

[INSERT TABLE 1 ABOUT HERE]

Secondly, partial correlation coefficients were examined between depression, anxiety, emotion regulation, and coping within the GDFMs group while controlling for sociodemographic data (age, gender, marital status, educational level, and job status; see Table 2). Participants with anxiety and depression symptoms also showed a significant correlation with emotion regulation and coping. More specifically, depression was correlated with non-acceptance, interference, lack of control, total emotion regulation, self-blame, wishful thinking, and social withdrawal. Similarly, anxiety was significantly correlated with non-acceptance, interference, lack of control, total emotion regulation, self-blame, and social withdrawal. Anxiety and depression were mutually correlated. Finally, problem-solving, self-blame, wishful thinking, cognitive restructuring, and social withdrawal showed a correlation with difficulties in emotion regulation.

[INSERT TABLE 2 ABOUT HERE]

Finally, the role of coping and emotion regulation in predicting anxiety, and depression symptoms was analyzed while controlling for sociodemographic data (age, gender, marital status, educational level, and job status; see Tables 3 and 4). Stepwise regression analyses were therefore carried out. This analysis found that lack of control

predicted 14% of the variance in anxiety and 20% for depression. Similarly, social withdrawal and emotional expression both predicted 23% of the variability in anxiety symptoms, whereas social withdrawal and self-blame did so with 37% of the variance in depression. Sociodemographic variables were not statistically significant in any of the analyses.

[INSERT TABLES 3 AND 4 ABOUT HERE]

Discussion

The present paper investigated the negative effects of GD on those around individuals suffering from it. First, the study analyzed the differences in the difficulties in emotion regulation, coping, and anxiety and depression symptoms between family members of problem gamblers (GDFMs), and individuals with no family member with GD (non-GDFMs). Regarding anxiety, and depression, GDFMs scored significantly higher than non-GDFMs, which aligns well with previous literature (Arquillo, 2016; Biscarra & Fernández-Acevedo, 2010; Certuche & Andrés, 2015). More specifically, GDFMs' scores were higher in non-acceptance, lack of clarity, and lack of control. These findings support previous studies that found GDFMs have a higher prevalence of emotional confusion (Blanco, 2013; Fernández-Montalvo & Castillo, 2004). In that regard, GDFMs have already been theorized as experiencing greater difficulties in managing cognitive, emotional, and behavioral processes because of their lack of resources to deal with such processes (Calvo, 2007; Compas et al. 2001), and sometimes inferior skills to tailor their emotional responses (Estévez et al., 2014; Gratz & Roemer, 2004; Gross & Thompson, 2007). In this sense, it is important to take into consideration that different family factors may also influence how emotional distress is managed, such as social and economic status, social support networks, and family

dynamics regarding the flexibility towards internal and external boundaries (Suissa, 2005).

In the case of coping strategies, GDFMs scored higher on problem-solving, emotional expression, wishful thinking, and social withdrawal. Given that wishful thinking is associated with the desire to alter stressful circumstances, high scores in this variable could be attributable to GDFMs' own suffering, which is personally affected by interpersonal conflicts with the gambler, and/or debts incurred by him or her (Blanco, 2013). With regard to social withdrawal, a previous study found that a large proportion of family members of individuals suffering mental issues have tense relationships with other distant family members, or friends, as a consequence of the stigma and self-blame generated by having a relative with a mental health condition (Östman & Kjellin, 2002). More specifically, GDFMs often feel shame because of their gambling problem, and tend to feel socially isolated (Suissa, 2005).

Problem-solving, and emotional expression, in turn, are generally considered adaptive coping strategies (Jauregui et al., 2016). Similar studies with GD patients have also found high scores on emotional expression (Jauregui et al., 2017). In this sense, gamblers with higher problem-solving skills, and a broader and deeper network of social support, would be more likely to seek treatment for their gambling problems (Matheson, Wohl, & Anisman, 2009). Higher scores for both problem-solving, and emotional expression may be explained by the characteristics of the sample collected for the present study. This could potentially be a limitation, because family members who participated in the study were already receiving treatment, and therefore, had already taken initial steps in developing an adaptive strategy to cope with the problems they were facing. Despite this limitation, the results in this study provide novel findings about the characteristics of GDFMs.

The results demonstrated how depression and anxiety correlated with emotion regulation and coping in GDFMs. These results are in agreement with findings from Copello, Orford, Velleman, Templeton and Krishnan (2000), who argued that the way individuals cope with the difficulties associated with having a family member suffering from an addiction are essential in reducing their levels of stress. This could be the reason why some studies have proposed that maladaptive coping strategies, and inadequate emotion regulation could be what leads family members to suffer other psychological issues such as depression and anxiety (Asselmann et al., 2015; Collins, Woolfson, & Durkin, 2013). Moreover, coping and emotion regulation, which were found to be correlated in the present study, might interact with each other. The greater the difficulties that individuals have in regulating their emotions, the higher the likelihood of using problem and emotion avoidance strategies (Monteiro, Balogun, & Oratile, 2014). Consequently, emotion regulation and coping might be interdependent factors associated with higher anxiety and depression symptoms among GDFMs.

Also, the findings of the present study suggest that both anxiety and depression are predicted by the lack of control. Anxiety on its own is predicted by social withdrawal and emotional expression, and depression is predicted by social withdrawal, self-blame, and cognitive restructuring. Age, gender, job status, marital status, and educational level were not significant in this relationship. As previously discussed, lack of control is an overwhelming feeling of intense emotion, characterized by the persistence of negative emotional states. Such overwhelming emotions are closely associated with what GDFMs experience, which typically includes the sudden discovery of the full extent of a gambling problem they had ignored up until that moment, a serious financial situation they were not anticipating, having repeatedly been lied for long periods of time, and/or a loss of trust in the gambler (Blanco, 2013; Fernández-

Montalvo & Castillo, 2004). Such situations involve high emotional intensity, resulting in emotional overcharge, and angst, for which emotional management is typically complicated, and entails stress and preoccupation (Biscarra & Fernández-Acevedo, 2010; Blanco, 2016; Blanco et al., 2016; García et al., 2012).

Similarly, social withdrawal is very much associated with avoidance strategies in depression and anxiety. When withdrawing, individuals distance themselves from the source of stress, as well as from the emotions and thoughts associated with it (Skinner et al., 2003). In the case of GDFMs in particular, withdrawal strategies might appear to be counterproductive, since previous research has shown that quality social support in situations where a family member is suffering from an addiction is beneficial to reduce the emotional suffering and stress derived from it (Orford, Templeton, Velleman, & Copello, 2005). It is important to highlight that associations between social support and attachment could be very important in the development of gambling problems and the wellbeing of GDFMs. Higher scores on attachment among peers and parents have been found to be related to lower scores in GD, thus, they could be protective factors for preventing the appearance of GD (Estevez, Jauregui, Sanchez-Marcos, Lopez-Gonzalez, & Griffiths, 2017). Consequently, family and attachment-based interventions have been proposed for GD, which tackle family dynamics through the mutual and bidirectional impact of GD on family, and family on GD (McComb, Lee, & Sprenkle, 2009).

Self-blame is characterized by an internal attribution of blame for the occurrence of stressful situations. Previous studies have hypothesized that GDFMs, or other family members of individuals with substance or nonsubstance addictions, tend to more often blame the individual receiving treatment for the onset of their addictive behavior and relapses, as compared to relatives of individuals suffering with other mental health issues such as schizophrenia (Corrigan, Watson, & Miller, 2006). Rush and Nowels

(1994) first theorized that individuals with depression attributed their unpleasant feelings to physical, mental, and/or moral flaws, and that they blamed themselves for those flaws. Negative thinking refers to depressed individuals tendency to negatively interpret their own experiences, even when an optimistic alternative is available, and such an alternative best characterizes the situation (Beck, 1976). Negative thinking might materialize by anticipating serious difficulties in the future, or thinking that the current suffering will be indefinite (Estévez, 2008). Thus, difficulties in emotion regulation and coping may facilitate anxiety and depression symptoms in GDFMs, a relationship already posited in the context of other mental illnesses but not in the case of GD.

The present study is not without limitations. Firstly, the recruitment strategy of convenience sampling might entail a number of shortcomings. The fact that GDFMs for the study were recruited via a gambling treatment center in which they participated on a weekly basis in special sessions for family members, might have skewed the sample towards highly motivated profiles, or alternatively, towards those experiencing greater mental health issues. Therefore, the results of this study might not be representative of other GD familial contexts. In that respect, further research with different population groups using different sampling methods is needed. Secondly, the cross-sectional nature of the research makes it impossible to determine the causality of the relationship between the variables examined. Also, GDFMs had different degrees of kinship, which could have impacted on the results of the study. Further studies should try to investigate differences among different types of family member.

To conclude, the present study has provided empirical evidence of the existence among GDFMs of higher levels of anxiety and depression, as well as difficulties in regulating their emotions, and coping, which were related to the manifestation of

anxiety and depression symptoms. The study offers valuable empirical evidence that could be incorporated into guidelines to help shape clinical interventions for GDFMs, given the relevance of the familial support in GD treatment and recovery. Copello, Velleman and Templeton (2005) note that meeting the needs of family members of those with substance or nonsubstance addictive behaviors is essential in any intervention. However, those needs are often ignored, and there is little evidence concerning the most effective ways of structuring intervention programs for family members. The present paper hints at two potentially fundamental aspects of such interventions (i.e., coping strategies and emotion regulation) and argues that focusing on these may help reduce and prevent the presence of dysfunctional psychological symptoms among GDFMs.

Declarations of interest

The authors declare that they have no conflict of interest apart from MDG. MDG's university currently receives funding from *Norsk Tipping* (the gambling operator owned by the Norwegian Government). MDG has also received funding for a number of research projects in the area of gambling education for young people, social responsibility in gambling and gambling treatment from Gamble Aware (formerly the Responsibility in Gambling Trust), a charitable body which funds its research program based on donations from the gambling industry. MDG also undertakes consultancy for various gaming companies in the area of social responsibility in gambling.

Compliance with Ethical Standards

All procedures followed were in accordance with the ethical standards of the responsible committee on human experimentation (institutional and national) and with

the Helsinki Declaration of 1975, as revised in 2000 (5). Informed consent was obtained from all patients for being included in the study.

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