

Do women gamble for the same reasons as men?

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Abstract

A study involving 83 female and 72 male gamblers tested the direct and interactional effects of avoidance coping and five dysphoric moods on problem gambling. Important differences were found between female and male gamblers. For female gamblers loneliness, boredom, anxiety, depression and avoidance coping all independently predicted problem gambling as was expected. Additionally, as expected, interactions between each mood and avoidance coping significantly predicted problem gambling, such that female gamblers with high dysphoria and high avoidance coping tended to show substantially more symptoms of problem gambling than those high in only one variable. In contrast, results for males revealed that only loneliness, boredom and stress significantly predicted problem gambling. Contrary to expectations neither avoidance coping nor the any of the interactional relationships between dysphoric mood and avoidance coping predicted problem gambling. These results supported research by Brown and Coventry (1997) and suggest that some females may be gambling to escape dysphoric moods. There was no indication that this motivation applies to male gamblers.

Introduction

Over the years many theories have been put forward to explain both gambling and problem gambling. Explanations involving the personality of the gambler and cognitive explanations such as representativeness bias and illusion of control have been particularly popular in the past. Other explanations have been more controversial, for instance the proposition that gambling can become an addiction similar to drug or alcohol addiction. Proponents argue that the strong attachment problem gamblers feel to their gambling enables it to be classified as a psychological if not physical addiction. However, detractors argue that an addiction must have a physiological basis to warrant diagnosis (Murray, 1993; Orford, Morison & Somers, 1996). Of the several explanations supporting gambling as a psychological addiction, Jacobs' general theory of

addictions (Jacobs, 1989) appears to be the most widely used and contains some interesting propositions.

Briefly, Jacobs' (1989) theory revolves around a combination of two factors, (a) a background of negative childhood experiences, and (b) a physiological condition of either hyper (over) or hypo (under)-arousal (this condition is expected to differ depending on the addiction). Jacobs argues that a combination of these two factors can explain all psychological addictions. In terms of problem gambling, Jacobs argues that an individual who is suffering from a chronic hypo-aroused state will be constantly searching for stimulating experiences to alleviate feelings of boredom. However, Jacobs does not believe that this by itself is enough to explain problem gambling.

He argues that a problem gambler must have had a very negative childhood experience, which has left them feeling inadequate and low in self-esteem. He theorises therefore that the gambling, as well as providing excitement, works to relieve tension and provide a psychological escape from long-term feelings of inadequacy and psychological distress (Gupta & Derevensky, 1998; Jacobs, 1989). This explanation shows some similarity to that of the tension-reduction model, which argues that gambling is undertaken as means of satisfying otherwise unmet needs, possibly being used as a means of escape from feelings of depression or loneliness (McCorrison, 1999; Walker, 1995). Jacobs' theory is attractive in that it provides a greater depth of explanation than either the theory of hypo-arousal or tension-reduction does by themselves. However, the evidence supporting the hypo-arousal hypothesis is very mixed with only some of the research showing the expected relationships for gamblers (Blaszczynski, Wilson & McConaghy, 1986; Langewisch & Frisch, 1998; Murray, 1993). Additionally, although there is evidence of depression and other negative mood states in problem gamblers (Becoña, Lorenzo and Fuentes, 1996; Gupta & Derevensky) it has yet to be shown that these are chronic conditions caused by childhood experiences rather than other more proximal factors (Gupta & Derevensky; Walker, 1995).

In total there do appear to be some problems with Jacobs' theory. However one very interesting aspect contained in both Jacobs' theory and the tension-reduction model is the suggestion that problem gamblers may be looking for a means of escape rather than searching for a 'high'. Both theories suggest that problem gamblers may be gambling to distract themselves from dysphoric states such as depression, loneliness or boredom, implying that the gambling may be a type of avoidance or escapist coping. In fact, recent qualitative research investigating female problem gamblers has found that many do claim to be gambling to escape negative feelings such as depression, anxiety, loneliness, isolation and stress (Brown & Coventry, 1997; Johnson & McLure, 1997). As well, past quantitative research has found some evidence that both male and female problem gamblers experience elevated levels of dysphoric moods as well as an over reliance on avoidance or escapist coping (e.g. Becoña et al., 1996; Getty, Watson and Frisch, 2000; Ohtsuka, Bruton, DeLuca and Borg, 1997; Scannell, Quirk, Smith, Maddern and Dickerson, 2000).

However, although there is evidence of elevated dysphoric mood states in both male and female problem gamblers, it is much less certain that male problem gamblers are gambling specifically to escape these negative feelings. In fact, two studies which compared male and female problem gamblers on their self-professed motivations found female problem gamblers were significantly more likely to say they were gambling to escape anxiety or worry than male problem gamblers. In contrast male problem gamblers were more likely than females to say they were gambling to win or to improve self worth (Loughnan, Pierce & Sagris, 1996; Pierce Wentzel & Loughnan, 1997). These results suggest that female problem gamblers may be more likely to use gambling specifically as a distraction from dysphoric moods.

In sum therefore, there would appear to be quantitative evidence to suggest that both male and female problem gamblers may be experiencing high levels of dysphoric mood as well as showing an over reliance on avoidance coping. However, the qualitative research suggests that it is not negative mood which is leading to problem gambling directly, it is the use of gambling as a distraction or escape from the negative mood which appears to result in more problematic gambling (Brown & Coventry, 1997). Additionally, the evidence to suggest that gambling is being undertaken specifically to escape dysphoric mood would appear to be somewhat stronger for female gamblers than male gamblers.

Although some research has been undertaken to explore the simple relationships between dysphoric mood and problem gambling or between avoidance coping and problem gambling, to the author's knowledge no research has directly tested whether gambling is being undertaken specifically to escape dysphoric mood. This complex relationship requires an assessment of the combined effects of dysphoric mood and avoidance coping on problem gambling rather than just the simple effects of high scores on one of these variables.

The present study therefore assessed an interactional model, where the emotion-moderating effects of characteristic styles of coping were tested for both male and female gamblers. Three steps were undertaken to test this model. Firstly, it was hypothesised that for both male and female gamblers, individuals experiencing high levels of dysphoric mood (assessed via measures of anxiety, depression, stress, loneliness and boredom) would tend to experience more symptoms of problem gambling. Secondly it was hypothesised that for both male and female gamblers, individuals with a high tendency to rely on avoidance coping would tend to experience more symptoms of problem gambling.

Finally, the key hypothesis suggested that for both male and female gamblers there would be a significant interaction between avoidance coping and dysphoric mood such that those with high dysphoria (again measured via depression, anxiety, stress, loneliness and boredom) and high avoidance coping would experience more symptoms of problem gambling than those high in just one variable.

Method

Participants

Participants recruited for this study were all over the age of 18 and were defined as current gamblers (i.e. they had gambled at least once in the past 12 months). Participants were 83 females ($M=28.4$ years, $SD=13.5$ years) and 72 males ($M=30.1$ years, $SD=12.9$ years), one female did not report age. Of these, 95 participants were university students, 13 were recruited via a gambling counselling organisation in the outer east and 47 were accessed via broader community contact.

Materials

Participants completed a questionnaire that included information about gambling behaviour and demographics as well as measures of coping, problem gambling and several measures of dysphoric mood (loneliness, anxiety, depression, stress and boredom). All of these mood states were included because they had been implicated in prior gambling research but not all had been tested on both male and female gamblers or in conjunction with coping strategies.

Loneliness

The UCLA loneliness scale (Russell, Peplau & Cutrona, 1980) consists of 20 items relating to feelings of loneliness the participant may have had experienced in relation to other people. The items are rated on a four-point Likert-type scale, where 1 = never and 4 = often. The measure has 10 positively scored items (e.g. I feel isolated from others), and 10 negatively scored items (e.g. I do not feel alone), with overall loneliness scores calculated by summing all items. Higher scores therefore indicate higher levels of loneliness. The measure has shown excellent internal consistency ($\alpha = .94$) while positive correlations with several other loneliness scales and a lack of relationship with conceptually distinct emotions indicate the measure has construct validity (Russell, 1982).

Depression, anxiety and stress

The Depression, Anxiety, Stress Scale (DASS21) (Lovibond & Lovibond, 1995) is a shorted version of the full DASS consisting of 21 items querying the participant's feelings over the past week. All items are rated on a four-point Likert-type scale, where 1 = did not apply to me 4 = applied to me very much, or most of the time. The measure has three sub-scales (seven questions in each), with questions relating to depression (e.g. I felt down-hearted and blue), anxiety (e.g. I felt I was close to panic) and stress (e.g. I found it hard to wind down). Scores are summed and then reduced by seven to bring them into alignment with normative samples, which are scored 0-3 rather than 1-4. Finally scores are multiplied by two so that they can be directly compared to normative samples based on the full DASS. Questions are all worded such that higher scores indicate higher levels of depression, anxiety and stress. The measure has shown high internal consistency (depression $\alpha = .81$; anxiety $\alpha = .73$; stress $\alpha = .81$) and evidence of construct validity with strong positive correlations between the subscales and theoretically similar measures (Lovibond & Lovibond).

Boredom

The Boredom Proneness Scale (Farmer & Sundberg, 1986), is a 28 item true-false scale designed to capture the participant's tendency to become bored. The measure particularly relates to feelings of emptiness and loneliness associated with boredom, as well as measuring the ability of individuals to access adaptive resources and their level of connectedness to environments or situations. The measure has 18 positively scored items (e.g. Time always seems to be passing slowly) and 10 negatively scored items (e.g. I am good at waiting patiently). Items are summed for a complete score with higher scores indicating higher boredom proneness. The measure has been found to have reasonably good reliability ($\alpha = .73$ and $.79$; test-retest reliability at one week $r = .83$) and has shown validity via moderate to strong positive relationships with other boredom scales and self-reports of boredom.

Avoidance Coping

Coping resources are theorised to help individuals maintain psychological health by mediating the impact of life stressors (Billings & Moos, 1984). Billings and Moos' coping scale asks respondents to think of a stressful event which occurred in the last three months and then indicate the frequency of use of 28 different coping strategies to resolve the event. The use of each strategy is rated on a four-point Likert-type scale, where 1 = never used and 4 = often used. The measure has three subscales, two of which contain two individual factors. However, as the focus of the present study was on avoidance/escapist coping, only the avoidance factor (labelled emotional discharge) has been described fully. Scores are obtained by calculating the mean

response of all items contained in the factor. Emotional discharge (avoidance coping) has six items and relates to attempts made by the individual to reduce tension by refocussing on other behaviours such as smoking or eating and to the verbal and behavioural expression of unpleasant emotions (e.g. Tried to reduce tension by drinking more) (reliability $\alpha = .41$). The moderate to low alpha for this factor was argued by Billings and Moos to be due to the likelihood that only one or two strategies would be utilised within the factor, thereby reducing the use of alternative responses and setting an upper limit on the reliability coefficients. For the purposes of the current study this level of internal consistency was considered sufficient.

Problem gambling

The South Oaks Gambling Screen (SOGS) is a 23-item instrument (20 scored items) designed to give an indication of the severity of gambling problems in a gambling individual (Lesieur & Blume, 1987). The screen is based on the Diagnostic and Statistical Manual of Mental Disorders' (DSM-III) (American Psychiatric Association, 1980) problem gambling criteria and is consistent with later versions of the DSM. Questions cover problem gambling indicators such as chasing losses, gambling more than intended, feeling guilty about gambling, reactions of others to the individual's gambling and borrowing money to gamble. Scores range from 0 to 20 with a score of 5 or more indicating problem gambling and a score of 10 or more indicating severe problem gambling. The SOGS is a widely used measure of problem gambling and has shown high internal consistency and test-retest reliability as well as correlating highly with the DSM-III-R criteria for problem gambling (Lesieur & Blume).

Procedure

All questionnaires were completed anonymously in participants' own time, however several methods of recruitment were undertaken for the current study. Ninety-five first year psychology students were recruited at a Melbourne University with their participation contributing to a subject requirement. Forty-seven general community members were recruited as a convenience sample of friends and family known to the researcher. Finally, 13 problem gamblers were recruited via a Melbourne problem gambling counselling centre.

Results

All participants were current gamblers and all completed a measure of problem gambling (the SOGS). Problem gambling symptomatology ranged from zero to 18 with an average score of three (the SOGS has a possible range of 0-20). Thirty-two participants were designated as problem gamblers with a SOGS score of five or more (as recommended by Lesieur and Blume, 1987). Of these 21 were male gamblers and 11 were female gamblers.

A series of hierarchical multiple regressions were used to test the hypothesised model that the relationship between dysphoric mood and problem gambling would be moderated by avoidance coping, such that participants who scored high on a measure of dysphoric mood and high on the use of avoidance coping would exhibit substantially more problems than those who were high on only one of the predictors. These regressions also assessed predicted relationships between problem gambling and (a) dysphoric mood, and (b) avoidance coping. Separate regressions were performed for each mood state because of the high degree of multicollinearity between the various dysphoric states which would substantially alter results if they were entered into the same regression. For each regression, the mood state and avoidance coping were entered at stage one with the interaction between mood state and avoidance coping entered at stage two. All analyses were performed separately for males and females in order to examine the relationships between mood, coping and problem gambling for each gender.

To facilitate interpretation of the interactions, the loneliness by avoidance coping interaction has been presented graphically using the regression equation to generate a predicted score on problem gambling for each group, representing all possible combinations of low and high (Cohen & Cohen, 1983). Low and high scores were operationalised using one standard deviation below the mean and one standard deviation above the mean respectively, giving two regression lines.

Hierarchical Regression Analyses for Females

A summary of the regression results for female gamblers is shown in Table 1.

Table 1.

Summary of Hierarchical Regression Analyses Showing Main and Interactive Effects of Dysphoric Mood and Avoidance Coping on Problem Gambling for Females

Predictor Variables	Loneliness		Anxiety		Depression		Boredom		Stress	
	R ² Δ	β	R ² Δ	β	R ² Δ	β	R ² Δ	β	R ² Δ	β
Stage 1	.27***		.24***		.24***		.19**		.16**	
Mood		.39***		.34**		.36**		.29*		.19 ⁺
AC		.25*		.27*		.22*		.21 ⁺		.30**
Stage 2	.28***		.10**		.05*		.07*		.06*	
Mood		-2.05***		-1.01*		-.67		-.93 ⁺		-.78 ⁺
AC		-1.56***		-.12		-.06		-.31		-.14
Mood x AC		3.46***		1.53**		1.19*		1.57*		1.20*
Total R ²	.55***		.34***		.29***		.26***		.22***	

Note. N=83, R²Δ=R² change, β=Beta, AC=Avoidance Coping, p<.10⁺, p<.05*, p<.01**, p<.001***

In the first regression loneliness and avoidance coping at stage one accounted for 27% of the variation in problem gambling ($F(2,75)=13.99$, $p<.001$) and as expected both factors significantly predicted problem gambling, lonely women and women who had a tendency to use avoidance coping tended to experience more gambling problems. At stage two, the interaction between loneliness and avoidance coping was entered and accounted for a significant amount of the variance in problem gambling (28%) (F change (1,74)=46.69, $p<.001$). All three predictors were significant at stage two with the interaction being the most important predictor. The interaction is shown in figure 1. As can be seen female gamblers who were high on both avoidance coping and loneliness showed substantially more symptoms of problem gambling than female gamblers high on only loneliness or avoidance coping.

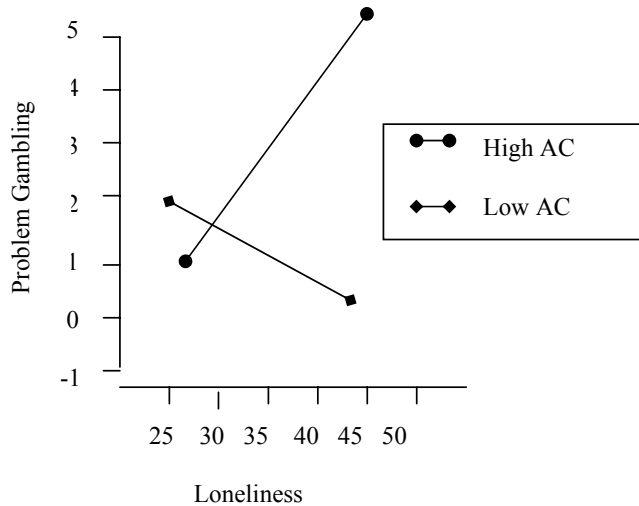


Figure 1. Interaction between avoidance coping (AC) and loneliness for female gamblers

An examination of the second regression showed that anxiety and avoidance coping together accounted for 24% of the variation in problem gambling ($F(2,77)=11.81$, $p<.001$) with both significantly related to problem gambling. As expected women who were more anxious and who used more avoidance coping tended to experience more gambling problems. At stage two, the interaction between anxiety and avoidance coping was entered and accounted for an additional 10% of the variance in problem gambling (F change $(1,76)=11.67$, $p<.01$). Avoidance coping no longer significantly predicted problem gambling at this stage, however the interaction and anxiety both independently predicted problem gambling, with the interaction the most important predictor. Again, female gamblers who were high in both avoidance coping and anxiety tended to show substantially more symptoms of problem gambling than those high in only one variable.

An examination of the third regression showed that depression and avoidance coping together accounted for 24% of the variation in problem gambling ($F(2,77)=12.16$, $p<.001$) with both variables independently predicting problem gambling. As expected, women who were more depressed and tended to rely on avoidance coping had a greater tendency to show more problems with gambling. At stage two, the interaction between depression and avoidance coping again accounted for a significant amount of the variance in problem gambling (5%) (F change $(1,76)=5.85$, $p<.05$). However, only the interaction between depression and avoidance coping remained significant at this stage. Again female gamblers high on both avoidance coping and depression tended to show more problem gambling symptoms than those high in only depression or avoidance coping.

For the fourth regression, boredom and avoidance coping accounted for 19% of the variance in problem gambling at stage one ($F(2,77)=9.07$, $p<.001$) but only boredom significantly predicted problem gambling, women who were bored tended to reveal more gambling problems. The interaction between boredom and avoidance coping was entered at stage two and again accounted for a significant increase in the prediction of problem gambling (7%) (F change $(1,76)=6.65$, $p<.05$). At this stage the interaction remained the only significant predictor of problem gambling, although the relationship between boredom and problem gambling approached significance. In

common with the above regressions, the female gamblers high in avoidance coping and boredom had a tendency to show substantially more symptoms of problem gambling than those high in just one variable.

Finally, in the fifth regression stress and avoidance coping accounted for 16% of the variation in problem gambling at stage one ($F(2,77)=7.40, p<.01$) with avoidance coping significantly predicting problem gambling and the correlation between stress and problem gambling approaching significance. Women who had a tendency to use avoidance coping tended to experience more gambling problems. At stage two, the interaction between stress and avoidance coping resulted in a significant increase in prediction of problem gambling (6%) (F change (1,76)=5.95, $p<.05$). At this stage only the interaction between stress and avoidance coping was significant in predicting problem gambling, although stress again approached significance in prediction. The interaction was similar to those in the previously reported regressions with female gamblers who were high in both avoidance coping and stress showing substantially more problems with their gambling than those high on only avoidance coping or stress.

Hierarchical Regression Analyses for Males

A summary of regression results for male gamblers is shown in Table 2.

Table 2.

Summary of Hierarchical Regression Analyses Showing Main and Interactive Effects of Dysphoric Mood and Avoidance Coping on Problem Gambling for Males

Predictor Variables	Loneliness		Anxiety		Depression		Boredom		Stress	
	R ² Δ	β	R ² Δ	β	R ² Δ	β	R ² Δ	β	R ² Δ	β
Stage 1	.10*		.04		.06		.07 ⁺		.07	
Mood		.31*		.18		.24 ⁺		.26*		.26*
AC		.01		.03		.02		.02		.02
Stage 2	.03		.02		.01		.04 ⁺		.01	
Mood		1.0*		.85		.56		1.03*		.55
AC		.60		.16		.11		.45		.12
Mood x AC		-1.10		-.76		-.37		-1.04 ⁺		-.35
Total R ²	.13*		.06		.07		.12*		.08	

Note. N=72, R²Δ=R² change, β=Beta, AC=Avoidance Coping, p<.10⁺, p<.05*

As can be seen, the picture is quite different for males compared to females. Contrary to expectations, none of the predicted mood by avoidance coping interactions occurred, although the interaction between boredom and avoidance coping to predict problem gambling approached significance. Also contrary to expectations, avoidance coping failed to predict problem gambling in any of the regressions.

However, some of the relationships between dysphoric mood and problem gambling were significant. At stage one of the regression, loneliness was significantly correlated with problem gambling. Men who were lonely also tended to have more problems with their gambling ($t=2.54, p<.05$). This relationship remained significant at stage two of the regression and the three predictors (loneliness, avoidance coping and the interaction between loneliness and

avoidance coping) together accounted for 13% of the variance in problem gambling ($F(3,67)=3.43, p<.05$).

Similarly, boredom was significantly correlated with problem gambling at stage one of this regression. Men who were bored tended to show more gambling problems than those who were not very bored ($t=2.05, p<.05$). This relationship also remained significant at stage two of the regression and the three predictors together accounted for 12% of the variance in problem gambling ($F(3,67)=2.90, p<.05$).

Finally, stress significantly predicted problem gambling at stage one of this regression. Men who were very stressed tended to show more problems with their gambling than those who were not very stressed ($t=2.05, p<.05$). However, this relationship was no longer significant once the interaction between stress and avoidance coping was taken into account. The three predictors combined were only able to explain 8% of the variance in problem gambling at stage two, and together they were unable to significantly predict problem gambling ($F(3,67)=1.94, p>.05$). Neither depression nor anxiety were significantly correlated with problem gambling.

Discussion

These results suggest that for female gamblers both avoidance coping and dysphoric mood are important factors in explaining problem gambling. Depression, anxiety, loneliness, boredom and avoidance coping all independently predicted problem gambling. As expected, female gamblers who felt more dysphoria or who had a high reliance on avoidance coping tended to experience more symptoms of problem gambling. These results supported prior research which has found that female gamblers with problems showed elevated levels of dysphoric mood compared to those without problems (Becoña et al., 1996; Ohtsuka et al., 1997; Trevorrow & Moore, 1998). Similarly, the positive relationship between avoidance coping and problem gambling supported prior research by Di Dio and Ong (1997) which found that avoidance coping directly predicted problem gambling. The results also supported those of Getty et al. (2000) and Scannell et al. (2000) who found that females with problematic gambling showed greater reliance on avoidance coping than those with less problematic gambling.

Additionally, it would appear that a combination of high dysphoria and high avoidance coping may lead to an increased vulnerability to problem gambling for female gamblers. Female gamblers who were high on both dysphoria and avoidance coping tended to experience substantially more symptoms of problem gambling than those high in just one variable. These results supported prior qualitative research that found that female gamblers talk about gambling specifically to escape dysphoric feelings (Brown & Coventry, 1997; Johnson & McLure, 1997).

The results for male gamblers were very different. Males who were very lonely, bored or stressed tended to experience more symptoms of problem gambling, however, neither anxiety nor depression were able to significantly predict problem gambling for male gamblers. The significant results gave some support to research by Blaszczynski, McConaghy and Frankova (1990) which found a male dominated sample of pathological gamblers were significantly higher in boredom compared to a control group of patients without addiction problems. However, the current study's finding that no relationship existed between problem gambling and either anxiety or depression contradicted earlier findings. McCormick, Russo, Ramirez and Taber (1984) found 76% of male pathological gamblers in their sample were suffering from depression. Similarly, Blaszczynski and McConaghy (1988) found their male dominated sample of pathological gamblers to be higher in both depression and anxiety compared to a normative sample. Together, these inconsistent findings cast some doubt on the applicability of negative mood in explanations of problem gambling for males.

Secondly, contrary to predictions avoidance coping was not significantly related to problem gambling for males. These results appear to be contrary to prior research by McCormick (1994) who found male problem gamblers used significantly more avoidance coping compared to male non-problem gamblers. The results also appear to contradict those of Getty et al. (2000) who found problem gamblers as a whole used significantly more avoidance coping compared to non-problem gamblers, but that male problem gamblers did not differ from female problem gamblers in the use of this style of coping.

One explanation for these apparently contradictory findings may be the more sophisticated methods of analysis used in the current study. The regression analysis used in this study scrutinised the relationship between avoidance coping and problem gambling for male and female gamblers separately rather than simply comparing the average level of avoidance coping used by male and female gamblers. Possibly avoidance coping is high on average in male problem gamblers, but is not predictive of problem gambling symptomatology. The current study's results were also contrary to those of Di Dio and Ong (1997) who found that avoidance coping did significantly predict problem gambling. However they included both male and female gamblers in their regression that may account for the difference in results.

Finally, problem gambling could not be predicted via an interaction between dysphoric mood and avoidance coping for male gamblers. This suggests that the combination of high dysphoria and high avoidance coping does not substantially increase vulnerability to problem gambling for male gamblers.

These substantially different findings for male and female gamblers suggest female problem gamblers may be motivated to gamble for qualitatively different reasons than male problem gamblers. The results for female gamblers provide strong support for an interactional model and suggest that female gamblers who are high in dysphoria and have a tendency to use avoidance coping may be particularly vulnerable in terms of problem gambling. It is possible that, as suggested by prior research, there is a tendency for some female problem gamblers to gamble specifically to escape dysphoric emotions (e.g. Brown & Coventry, 1997; Pierce et al., 1997). In contrast there is little evidence to suggest that the combination of high dysphoria and high avoidance coping significantly increases the risk of problem gambling in male gamblers. Although males who were very lonely, bored or stressed tended to display more problem gambling, there was no evidence to suggest they were motivated to gamble specifically to escape these emotions.

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