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PSYCHOLOGICAL EXPERIENCES WITH GAMBLING

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A capstone project submitted for Graduation with University Honors

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ABSTRACT

According to the 2021 Worldwide Gambling Statistics, more than a quarter of the population gambles, which means literally billions of people gamble at least once a year (Casino.org, 2021). People can gamble almost anywhere, including casinos, gas stations, and state lottery games, yet there is a lack of research on how emotions and how people regulate their emotions affect their perceptions and experiences of gambling. Thus, the aim of this study was to better understand the role of emotion regulation deficits in gambling. A survey-based study was conducted to assess the relationship between frequency and type of gambling behavior and emotion regulation difficulties. The participants were gathered from the University of California, Riverside (UCR) Psychology Subject Pool ($N = 195$; after removing participants who failed the attention checks, $N = 162$). These participants were directed to a survey that assessed personal experiences and beliefs about gambling and their emotion regulation strategies and difficulties. The results indicated that cognitive reappraisal, not expressive suppression predicted gambling in a more controlled way. Neither reappraisal nor suppression tendencies predicted any other gambling experiences. Additionally, people who had greater difficulty regulating their emotions in general reported gambling less frequently and gambling in a way that was more enjoyable and focused, but also stressful. The findings suggest that cognitive reappraisal may provide benefits for individuals to gamble in moderation and that those that struggle with regulating their emotions experience gambling in a different way on various dimensions compared to those who struggle less with emotion regulation.

Keywords: Gambling, difficulties in emotion regulation, frequency, recency, gambling behaviors

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INTRODUCTION OF CAPSTONE

According to the 2021Worldwide Gambling Statistics, more than a quarter of the population gambles, which means that literally billions of people gamble at least once a year (Casino.org, 2021). People can gamble almost anywhere, including casinos, gas stations, and state lottery games, yet there is a lack of research on how emotions and how people regulate their emotions affect their perceptions and experiences of gambling. Thus, the aim of this study was to better understand the role of emotion regulation deficits in gambling.

Although gambling is a common behavior, it also has numerous potentially negative consequences, including financial troubles, lack of self-care, and relationship problems. Unfortunately, these negatives consequences are often overlooked by individuals due to their overwhelming focus on winning, no matter the cost (Yang et al., 2015). These significant consequences demonstrate how detrimental gambling is if individuals fail to appropriately regulate their behavior.

One reason some people engage in problematic gambling behavior is that they may have deficits in emotion regulation abilities (Rogier & Velotti, 2018; Williams et al., 2011). For instance, gambling behavior is associated with poor self-control, and gamblers tend to rely on detrimental coping strategies such as escaping and avoiding reality (Williams et al., 2011). Gambling can even cause individuals to develop depression and anxiety (Barrault et al., 2019), and easy access to online gambling exacerbates these problems (Barrault et al., 2017). Interestingly, gambling-related problems are even reflected amongst adolescents, where it is associated with various negative consequences such as mental health deficits (Bergevin, 2006).

Two common emotion regulation strategies that might be associated with better or worse gambling experiences are cognitive reappraisal and expressive suppression. Cognitive

reappraisal entails thinking differently about a situation in an effort to minimize negative emotions or increase positive emotions (Miu & Crisan, 2011). Expressive suppression involves hiding facial expressions or other signal of one's emotional state from others (Miu & Crisan, 2011). Reappraisal tends to be associated with positive life outcomes, whereas suppression tends to be associated with negative life outcomes (e.g., John & Gross, 2004). In our study, we investigate how these emotion regulation tendencies might be associated with gambling. We also explore the role of difficulties in regulating emotions (e.g., a lack of clarity or awareness regarding one's emotions; Gratz & Roemer, 2004) in gambling behavior and experiences.

Emotion Regulation among Regular Online Poker Players

Barrault et al. (2017) examined the relationships between emotion regulation, depression, and anxiety among a sample of poker players and compared these outcomes between problem and non-problem gamblers. The researchers predicted that problem gamblers would have greater emotion regulation deficits than non-problem gamblers. Furthermore, they anticipated that problem gamblers would have higher levels of anxiety and depression and that they would find a positive correlation between emotion regulation and problem gambling.

The results of their online survey indicated that problem gambling was associated with greater depression and anxiety in both problem and non-problem gamblers but that problem gamblers displayed higher levels of anxiety and depression in comparison to their non-gambling counterparts. Although a strength of the study was the use of multiple measures of emotion perception towards gambling, a weakness of the study was the limited sample population. Nonetheless, this study provided an initial examination of links between gambling behavior and emotion regulation difficulties. The findings suggest that more research is needed to understand links between emotion regulation and gambling, which is the goal of the present investigation.

Gambling Type and its Links with Problem Gambling and Emotion Regulation

Barrault et al. (2019) conducted another study with relevance to the current investigation, this time examining the link between emotion regulation, psychiatric symptoms, and gambling motives among a sample of regular gamblers. The researchers proposed that problem gambling is linked with deficits in emotion regulation and psychiatric symptoms (e.g., depression). Also, they suggested that coping may be higher among problem gamblers than non-problem gamblers due to their need to escape negative feelings (e.g., stress) (Bonnaire et al., 2009, as cited in Barrault et al., 2019, p. 56). Finally, they proposed that gambling type (mixed vs. strategic) might moderate the association between problem gambling, emotion regulation, and psychiatric symptoms. The results of their survey confirmed that problem gamblers displayed more coping behaviors than their non-gambler counterparts to escape these negative feelings. Interestingly, problem gambling was associated with greater psychiatric symptoms, but strategic gamblers reported better emotion regulation (specifically, expressive suppression) than mixed gamblers. Finally, gambling type moderated the relationship between gambling problems, psychiatric symptoms, and motives, such that those that identified as strategic gamblers experienced more problem gambling in depression and coping motives in contrast to mixed gamblers to where strategic gamblers had higher levels of depression and coping motives. However, there were no significant effects of gambling type with any of the other variables (anxiety, cognitive reappraisal/enhancement, and financial and social motives).

The researchers' study indicated a positive relationship between gambling and psychiatric symptoms where both non-problem and problem gamblers can suffer from these psychiatric symptoms (specifically depression). These findings contributed key insights to understanding key differences among various types of gamblers. These findings point towards helping

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individuals understand their gambling motives prior to participating in gambling behaviors to ensure appropriate emotion regulation strategies are used.

Adolescent Gambling: Understanding the Role of Stress and Coping

The present investigation recruited a sample of late adolescents and young adults, given that gambling behaviors likely begin during the relative independence of college or the start of professional life. To this point, Bergevin et al. (2006) conducted a study that aimed to assess whether adolescents with gambling problems experienced more major or minor stressful negative life events, utilized less than effective coping mechanisms, and used particular coping styles when gambling. The researchers suggested that severe adolescent gamblers would experience higher numbers of negative and stressful life events and use fewer coping strategies and coping styles to control stressful life events and gambling severity. To test these questions, the researchers gathered participants between 11 and 20 years of age to complete a questionnaire regarding their gambling behaviors, life stressors, and coping styles. The results indicated that adolescent gamblers experienced more negative life events than non-gamblers, and participants with gambling problems reported more avoidance-focused coping styles than task-focused coping styles. Finally, out of the three coping styles (Task coping, avoidance coping, and emotion coping), only emotion-focused helped mediate negative life events and gambling severity. This finding suggests that negative life events and gambling severity are predicted by one's coping style, where those that are emotion coping tend experience less negative life events and gambling severity than those that use task coping and avoidance coping. The present research will extend these findings to examine a broad set of gambling experiences and perceptions among late adolescents and young adults, along with a well-validated set of emotion regulations tendencies and challenges.

Another study by Koross (2016) examined gambling in this age group, in their case focusing on betting in Kenyan University students. The researcher looked at the prevalence of betting, motivation for betting, and influence of gambling on students' behaviors. The results indicated that prevalence of betting was high in most students that stated that they gambled, that their motivation was winning money and enjoyment, and that betting does influence students' behaviors, such that students engage in more gambling behaviors to win more or attempt to win their losses back. These students were also more likely to borrow money from their friends and families to gamble more.

Finally, Pascual-Leone et al. (2010) explored the effects of cognitive and affective components in gambling behaviors among university students, including one of the emotion regulation difficulties addressed in the present investigation (emotional awareness). The researchers hypothesized (1) emotional awareness will have a negative relationship with gambling severity, (2) depressive symptoms and vulnerability to depression will have a positive relationship with gambling severity, and (3) cognitive flexibility will have a negative relationship with gambling severity. The resulted indicated that gambling behaviors significantly correlated with the Depressive Experience Questionnaire (DEQ; Blatt et al., 1976), but not on the Beck Depression Inventory-II (BDI-II; Beck et al., 1996). Gambling behaviors was not related with The Levels of Emotional Awareness Scale-B (LEAS-B; Lane et al., 1990) and The Stroop Color-Word Test (SCWT; Golden, 1978), indicating no support for the hypothesis that individuals with higher levels of gambling severity would report lower levels of emotional awareness. However, there was a positive correlation with the Box Test (subtest of the Torrance Tests of Creative Thinking (TTCT; Torrance, 1974)), suggesting that creative originality and self-criticism were indicators of gambling behavior.

Clarifying the Role of Personality in Risk for Gambling

Although the present investigation focuses on individual differences in emotion regulation, other studies have addressed a range of personality traits and dispositions. Cyders & Smith (2008) conducted a longitudinal study that focused on dispositions and their role in gambling behaviors. The researchers predicted that positive urgency (unusual positive moods) could lead to less advantageous situations (e.g., losing but betting more) and that sensation seeking (excitement traits) would be associated with more gambling behavior. This study was also relevant to our investigation in its focus on the transition to college as a risky period for gambling. To test these hypotheses, participants between 18 and 32 years of age completed measures of five personality traits (positive urgency, lack of planning, sensation seeking, lack of perseverance, and negative urgency) in three waves. The results indicated that lack of planning and sensation seeking correlated with risky and gambling behaviors. Also, positive and negative urgency correlated with the hypothesized behaviors. Finally, the transition to college was associated with an increase in gambling behaviors, seemingly due to an increase in positive urgency.

Other researchers have similarly pursued questions about personality and gambling. For example, Gibson and Sanbonmatsu (2004) conducted three studies that examined the relationship between dispositional optimism and gambling. These researchers proposed that optimists would expect to win more and gamble longer than pessimists. The results supported the hypotheses, such that optimists were more likely to have positive gambling outcomes and report that winning money was the reason for gambling despite losing. Pessimists, on the other hand, gambled less and reflected more upon near loss performance.

Xia et al. (2018) further examined the role of optimism in gambling, hypothesizing that

optimists are more affected by the near-win effect (close to winning, but still lose) than pessimists and that optimists would engage in riskier behaviors than pessimists, as found by Gibson and Sanbonmatsu (2004). Consistent with that previous study, the results indicated that optimists engaged in riskier behaviors, but near-win effects did not differentiate amongst optimists and pessimists. These findings point to the potential for otherwise beneficial traits like dispositional optimism to have unexpected associations with gambling behavior.

Emotion Regulation and Decision Making Under Risk and Uncertainty

Although relatively few studies have examined emotion regulation in the context of gambling specifically, some research has examined other decision-making contexts. For example, Heilman et al. (2010) conducted two studies that looked at individuals' emotion regulation (cognitive reappraisal and expressive suppression) and its associations with their decision making during uncertain events. The researchers anticipated that individuals' use of cognitive reappraisal (reforming the situation mentally) would be associated with riskier decisions than would expressive suppression (inhibiting behaviors). Results showed that reappraisal increased risky behaviors, as anticipated, and that negative emotions reduced risk-taking while positive emotions increased risk taking. We will examine similar associations in the present investigation.

Further investigating the role of reappraisal in decision making, Miu & Crisan (2011) conducted a study that assessed whether cognitive reappraisal could benefit well-being by reducing susceptibility to the framing effect in economic decision making. Here, the findings suggested that use of reappraisal reduced susceptibility to the framing effect (e.g., changes in behavior depending on whether outcomes are framed as losses or wins).

Overview and Hypotheses

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Overall, past research reveals the need for a greater understanding of the role of emotion regulation strategies, among other dispositions, in relation with gambling behaviors among late adolescents and young adults. To that end, the present investigation will focus primarily on two research question and test two focal hypotheses, with other analyses conducted for exploratory purposes.

Research Question #1: Are tendencies to use reappraisal and suppression in regulating one's emotions associated with more gambling or different perceptions of gambling?

Hypothesis #1: Individuals higher in cognitive reappraisal tendencies will report more gambling behavior and riskier perceptions of gambling.

Research Question #2: Can awareness of one's emotions and clarity about those emotions help individuals better regulate their gambling behavior or alter their perceptions of gambling?

Hypothesis #2: Individuals lower in emotional clarity and emotional awareness will report gambling more frequently and will report riskier perceptions of gambling.

Method

Participants

The sample consisted of 195 participants (after removing participants who failed attention checks, $N = 162$) that were recruited from the Psychology Subject Pool (SONA) at the University of California, Riverside. All materials are available on the Open Science Framework (*https://osf.io/4d3rh/*). This study was reviewed and approved by the authors' Institutional Review Board.

Measures

Gambling Frequency

Frequency of gambling was measured with a single item ("How often do you gamble?"; 1 = *Never*, 5 = *Very Often*; *M* = 1.44, *SD* = 0.82, Cronbach's α = 0.68).

Gambling Recency

Recency of gambling was measured with a single item ("When was the last time you gambled (# of weeks ago)?"; 1 = *Less than a week ago*, 6 = *Never*; *M* = 3.50, *SD* = 1.57, α = 0.56).

Gambling Frequency Within the Last Year

Frequency of gambling within the last year was measured with a single item ("How often have you gambled in the past 12 months?"; 1 = *Every day or nearly every day*, 7 = *Never*; *M* = 6.32, *SD* = 1.14, α = 0.67).

Gambling Items

Personal experiences and perceptions of gambling were measured with a 20-item questionnaire designed for the purpose of this study (e.g., "I feel energized when I watch other people gamble," "I feel that I am aware of my emotions while deciding whether to gamble"; 1 = *Strongly Agree*, 7 = *Strongly Disagree*; *M* = 4.35, *SD* = 0.78, α = 0.65).

Emotion Regulation Questionnaire

Emotion regulation tendencies were measured with the Emotion Regulation Questionnaire (ERQ; Gross & John, 2003), a 10-item scale designed to measure emotion regulation tendencies in two ways: (1) Cognitive Reappraisal and (2) Expressive Suppression (e.g., "When I want to feel more positive emotion (such as joy or amusement), I change what I'm thinking about," "When I want to feel less negative emotion (such as sadness or anger), I change what I'm thinking about"; 1 = *Strongly Agree,* 7 = *Strongly Disagree*; *M* = 4.62, *SD* = 0.86, α = 0.80).

Difficulties in Emotion Regulation

Difficulties in emotion regulation were measured with the Difficulties in Emotion Regulation Scale (DERS-18; Victor & Klonsky, 2016), an 18-item questionnaire that measures various difficulties in regulating emotions (e.g., "I pay attention to how I feel," "I have difficulty making sense out of my feelings"; 1 = *Almost Always (91 - 100%)*, 5 = *Almost Never (0 – 10%)*; $M = 2.49$, $SD = 0.76$, $\alpha = 0.91$).

Dispositional Optimism

Dispositional optimism was measured with the Life Orientation Task-Revised (LOT-R; Scheier et al., 1994), a 10-item questionnaire that measures optimistic and pessimistic mindsets (e.g., "In uncertain times, I usually expect the best," "If something can go wrong for me, it will"; 1 = *I Agree a Lot*, 5 = *I Disagree a Lot*; $M = 3.35$, $SD = 0.64$, $\alpha = 0.76$).

Intolerance of Uncertainty

Intolerance of uncertainty was measured with the Intolerance of Uncertainty-Short scale (Carleton et al. 2007), a 12-item questionnaire that assesses general discomfort with uncertainty (e.g., "Unforeseen events upset me greatly," "I always want to know what the future has in store for me"; 1 = *not at all characteristic of me*, 5=*extremely characteristic of me*; $M = 2.94$, $SD = 0.79$, $\alpha = 0.89$)

Satisfaction with Life

Satisfaction with life was assessed with the Satisfaction with life Scale (SWLS; Diener et al., 1985), a 5-item questionnaire that measures one's perception of their life (e.g., "The conditions of my life are excellent," "The conditions of my life are excellent"; 1 = *Strongly Agree*, 7 = *Strongly Disagree*; $M = 4.32$, $SD = 1.24$, $\alpha = 0.83$)

Trait Worry

General tendencies to worry were assessed with the Penn State Worry Questionnaire (PSWQ; Meyer et al., 1990), a 16-item questionnaire (e.g., "If I don't have enough time to do everything, I don't worry about it," "My worries overwhelm me"; 1 = *Very Typical of Me*, 5 = *Not at all Typical*; *M* = 3.52, *SD* = 0.84, *α* = 0.91)

Big Five Personality Traits

Personality was assessed with the Big Five Inventory-2XS (BFI-2XS, Soto & John, 2017), a 15-item questionnaire that measured five personality traits (Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism; e.g., "Is compassionate, has a soft heart," "Is dominant, acts like a leader"; 1 = *Agree Strongly*, 5 = *Disagree Strongly*; *M* = 3.41, *SD* = 0.41, *α* = 0.36)

Procedure

Participants were recruited through the Psychology Subject Pool at UCR via SONA (Psychology Research Participation System) within a two-month period. The participants completed the study online via a Qualtrics survey. The link to the Qualtrics survey was provided in the SONA system. Following the consent form, participants completed the online survey. After completing the survey, the participants were asked to email the lead researcher a code (GAMBLE2020), which was used to confirm participation and compensate the participants for their time (one SONA credit).

<div align="center">

Results

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Factor Analysis of Gambling Experience Items

We first sought to create subscales within our novel gambling experience items via exploratory factor analysis (EFA) with varimax rotation. Initial inspection of the scree plot suggested that a 4-factor solution was appropriate. After inspecting the items that loaded most

strongly onto each factor, we labeled the factors as follows: gambling enjoyment (7 items; e.g., "When I am winning, I engage more in gambling behaviors," "I gamble to have a good time with friends and/or family), gambling focus (4 items, e.g., "I tend to lose track of time when gambling," "Gambling is an activity best done alone"), controlled gambling (5 items, e.g., "When I am losing while gambling, I can change my negative experience into a positive experience," "I keep calm and collected when gambling"), and stressful gambling (4 items, e.g., "I feel that I am aware of my emotions while deciding whether to gamble," "I prefer to watch other people gamble rather than engaging in gambling myself").

Associations between Emotion Regulation and Gambling

To test our hypotheses, we conducted Pearson's bivariate correlation analyses between emotion regulation (reappraisal, suppression, and difficulties in emotion regulation) and gambling behaviors and experiences. Table 1 presents the results of these analyses, which are summarized below.

Reappraisal Tendencies

Reappraisal tendencies were not significantly correlated with the frequency or recency of gambling behavior. However, reappraisal tendencies predicted controlled gambling, such that participants who were higher in reappraisal tendencies reported experiencing gambling in a more controlled way. Reappraisal was not significantly correlated with any other gambling experience subscale.

Suppression Tendencies

Suppression tendencies were not significantly correlated with the frequency or recency of gambling behaviors. Suppression was not significantly correlated with any other gambling experience subscale.

Difficulties in Emotion Regulation

Difficulties in emotion regulation negatively correlated with the frequency of gambling behaviors, such that participants with greater difficulty regulating their emotions reported gambling less frequently within the past 12 months. In addition, difficulties in emotion regulation predicted enjoyed and stressed gambling behaviors, such that participants who were higher in difficulties in emotion regulation reported experiencing gambling in a more enjoyed and stressed way. Difficulties in emotion regulation were not significantly correlated with any other gambling experience subscale.

Associations between Other Individual Difference Measures and Gambling

To test exploratory research questions, we conducted Pearson's bivariate correlation analyses between dispositional optimism, intolerance of uncertainty, satisfaction with life, trait worry, and Big Five personality traits with gambling behaviors and experience, gambling frequency, gambling frequency within the past year, and recency of gambling experiences. The results from these analyses are introduced in Table 2, which are outlined below.

Dispositional Optimism

Dispositional optimism was not significantly correlated with any of the gambling subscales or measures of gambling behavior.

Intolerance of Uncertainty

Intolerance of uncertainty was significantly correlated with focused and stressed gambling behaviors, such that participants who were higher in intolerance of uncertainty reported gambling in a more focused and stressed way. Intolerance of uncertainty was not significantly correlated with any other gambling subscale or measure of gambling behavior.

Satisfaction with Life

Satisfaction with life predicted gambling experiences that were focused and controlled, such that participants who were more satisfied with their lives reported gambling in a less focused, yet more controlled way. Satisfaction with life did not significantly correlated with any other gambling experience subscale or measure of gambling behavior.

Trait Worry

Trait worry significantly correlated with only stressed gambling experiences, such that participants who were higher in trait worry reported higher levels of stressed gambling experiences. Trait worry did not significantly correlate with any other gambling experience subscale or measure of gambling behavior.

Big Five Personality Traits

Neither openness to experience, extraversion, nor agreeableness significantly correlated with any gambling subscale or measure of gambling behavior. Conscientiousness was significantly correlated only with controlled gambling, such that participants who were higher in conscientiousness reported gambling in a more controlled way. Finally, neuroticism significantly correlated with only stressed gambling, such that participants who were higher in neuroticism reported gambling in a more stressed way.

<div align="center">**Discussion**</div>

The purpose of this study was to gain a better understanding of emotion regulation deficiencies in individuals' gambling behaviors. Taken together, the findings predominately supported our hypotheses and indicated some key points. Our study highlights the importance of efficiently regulating one's emotions when dealing with the uncertainty of gambling. We first hypothesized that individuals higher in cognitive reappraisal tendencies would report more gambling behavior and riskier perceptions of gambling. Our findings seemed to contradict this

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hypothesis, such that individuals who reported greater tendencies to use cognitive reappraisal in general reported more controlled gambling experiences, not riskier experiences (and not more gambling behavior). Interestingly, suppression tendencies did not correlate with any of the gambling measures. One explanation for this outcome is that cognitive reappraisal attempts to reevaluate emotion-inducing situations in a favorable way to regulate one's emotions, whereas expressive suppression changes the way a person behaviorally responds in an emotion-enticing situation. This explanation is supported with Heilman (2010), such that acute cognitive reappraisal increases risk taking by effectively reducing the experience of negative emotions; in contrast, expressive suppression does not decrease risk aversion because it is ineffective in regulating unpleasant feelings. Furthermore, findings from past research studies suggested that cognitive reappraisal (not expressive suppression) altered the way people experienced their emotions while gambling, where it provided positive affect, rather than negative affect (Barrault et al., 2017; Miu & Crisan, 2011).

In addition, we hypothesized that individuals lower in emotional clarity and emotional awareness would report gambling more frequently and report risker perceptions of gambling. We also found mixed support for this hypothesis. Contrary to our prediction, difficulties in emotion regulation negatively correlated with frequency of gambling within the last 12 months. However, as anticipated, overall difficulties in emotion regulation were associated with both more enjoyment and more stressed gambling behaviors (i.e., more intense emotional experiences while gambling, both positive and negative) These findings were consistent with Bergevin et al.'s (2006) findings, in which severe gamblers who reported higher levels of negative life events experienced higher levels of stress-related outcomes and used gambling as an attempt to reduce their difficulties in regulating their emotions. However, when assessing only awareness and

clarity, emotional awareness predicted only more controlled gambling experiences, whereas emotional clarity only predicted more enjoyment gambling experiences. This pattern of results was consistent with the previous literature from Koross (2016), who suggested that individuals partake in gambling as a way to enjoy themselves and win more money; perhaps being clear about one's emotional experience heightens this tendency.

Finally, we conducted exploratory analyses to assess other socio-cognitive factors that could contribute to gambling behavior and perceptions. Intriguingly, dispositional optimism did not correlate with any of the gambling experience variables. In contrast, prior research studies indicated that optimists engaged in riskier behaviors than pessimists, and optimists tended to engage in more gambling behaviors than pessimists, especially if optimists were close to winning their gambling bets (Gibson & Sanbonmatsu, 2004). These findings suggest that more research is needed on dispositional optimism and its effects on gambling behaviors.

Turning to intolerance of uncertainty, it significantly predicted focused and stressed gambling behaviors, as expected given that gambling is inherently uncertain and thus may produce discomfort among those who have difficulty coping with uncertainty of all kinds. Furthermore, satisfaction with life positively correlated with controlled gambling behaviors and negatively correlated with focused gambling behaviors. This finding suggests that individuals who experience more positive life events, or who at least perceive their life as more positive, can experience positive gambling behaviors (less focused and more controlled behaviors). Similarly, Bergevin et al. (2006) found that those who experienced positive life events were less stressed, more satisfied, and effectively coped with negative outcomes. In relation to our findings, perhaps people who are satisfied with their lives avoided coping with negative experiences in risky and dysfunctional ways in the context of gambling.

As expected, trait worry significantly correlated with only stressed gambling behaviors. Considering that gambling has the potential to produce worrying outcomes, it can detrimentally impact a person's level of stress, increasing the likelihood for a person to feel worried about whether the gambling outcomes fall in their favor or not.

Finally, out of the Big Five personality traits, conscientiousness significantly predicted controlled gambling behaviors, consistent with the general definition of conscientiousness. Prior research studies have shown that gamblers who are more pessimistic tend to be more conscientious, meaning those who experience negative outcomes when gambling step back from gambling and decrease their chances of repeating their bets (Xia et al., 2018). As expected, neuroticism significantly correlated with only stressed gambling behaviors. Further research is recommended to study the various patterns of personality traits and how they can affect risky behaviors.

Limitations and Future Research

Although the present investigation had several strengths, we recognize several limitations of this study. First, our investigation had a limited sample population, consisting of students from the University of California, Riverside Psychology Subject Pool. Due to this limited sample population, our findings were limited in their generalizability to young people with at least some college education, although our sample was quite diverse in terms of race, ethnicity, and socioeconomic status. Future research should gather a larger sample population to increase generalizability. Furthermore, our study relied on self-report measures of gambling experiences and behavior, and it was cross-sectional and correlational. These self-reported measures are subjective by nature since these measures reflect the participants' personal perspectives, and the correlational nature of our data prevent causal inferences regarding the associations we observed.

Future research should assess the gambling behaviors in an experimental design and with objective measures of behavior to better study these psychological experiences.

Another limitation was that participants could have misunderstood the definition of gambling. We included items that asked participants gambling types (e.g., horse betting, slot machines); however, we also had participants freely answer other gambling types by selecting an open response option ("other"). Future research should specify various gambling activities to better assess these activities. Finally, one last limitation was that the study did not assess those who identified as problem or non-problem gamblers. Barrault et al. (2019) assessed problem and non-problem gamblers, where those who identified as problem gamblers displayed different gambling motives (e.g., gambling to win) and increased psychiatric symptoms (e.g., anxiety). Future research should study more about the relationship between problem and non-problem gamblers alongside difficulties in regulating emotions when engaging in gambling behaviors.

Conclusion

Nonetheless, our study provides insight into the role of emotion regulation tendencies and deficiencies when engaging in gambling. The present study uncovered the roles of cognitive reappraisal and expression suppression, while assessing the relationship between difficulties in emotion regulation alongside gambling behavior. Most notably, our findings suggest that people with emotion regulation difficulties may be at a lower risk for problem gambling, and people who readily engage in cognitive reappraisal to regulate their emotions may be less at risk for problem gambling due to their tendency to gambling in a controlled way. These findings could contribute to the development of interventions to teach cognitive reappraisal strategies, thus potentially lowering their risk for problematic gambling behavior. Certainly, the findings open opportunities for research and understanding emotion regulation difficulties in gambling

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behaviors.

Further research is required to better understand the role of emotion regulation difficulties and other gambling assessment tools (e.g., South Oaks Gambling Screen) should be considered when following up with this study. Ultimately, our study offered novel insights into the role of emotion regulation when participating in risky activities such as gambling.

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Table 1

Bivariate Correlations between Emotion Regulation and Gambling

	Reappraisal tendencies	Suppression tendencies	Difficulties in emotion regulation
Gambling frequency	.02	<.01	-.14[*]
Gambling recency	-.02	-.16	-.02
Frequency in the past year	-.02	<.01	-.15[*]
Gambling enjoyment	.15	.16	.30[**]
Gambling focus	.19	.15	.21[+]
Controlled gambling	.33[*]	.16	-.08
Stressful gambling	.03	.12	.16[*]

Note: [**]$p < .01$, [*]$p < .05$, [+]$p < .10$.

Table 2

Bivariate Correlations between Other Individual Difference Measures and Gambling

	Dispositional optimism	Intolerance of uncertainty	Satisfaction with life	Trait worry	Openness	Conscien-tiousness	Extra-version	Agree-ableness	Neuro-ticism
Gambling frequency	.02	<.01	-.03	-.08	-.10	.08	-.04	-.05	-.08
Gambling recency	-.06	-.06	.13	.06	-.03	.09	.09	.24[+]	.02
Frequency in the past year	-.02	.00	-.03	-.06	-.07	.07	-.02	-.06	-.06
Gambling enjoyment	-.06	.06	-.10	.14	.01	-.08	-.04	.04	.16
Gambling focus	-.07	.29**	-.25*	.09	.20[+]	-.15	-.01	-.05	.06
Controlled gambling	.15	-.03	.30**	-.01	.22[+]	.24*	.15	.15	-.10
Stressful gambling	-.04	.23**	-.06	.26**	.10	-.07	-.09	.08	.15*

Note: **p < .01, *p < .05, [+]p < .10.