

Perceived burdensomeness partially mediates the longitudinal relationship between problem gambling and suicidal ideation

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Highlights

- Problem gambling is linked with increased risk for suicidality.
- Two painful feelings help explain this association: perceived burdensomeness and thwarted belongingness.
- We found that perceived burdensomeness helped explain the link between problem gambling and future suicide ideation.
- We suggest that clinicians routinely screen for suicidality and perceived burdensomeness within problem gambling treatment.
- Future research should explore interventions that target perceived burdensomeness in this context.

Abstract

Problem gambling is reliably linked with increased risk for suicidality. Research guided by the interpersonal theory of suicide suggests that two painful forms of social disconnection often associated with problem gambling – perceived burdensomeness and thwarted belongingness – help explain increased risk for suicide ideation. Specifically, perceived burdensomeness appears to mediate the relationship between problem gambling and suicidal ideation, especially at high levels of thwarted belongingness. Looking “upstream,” debt stress appears to link problem gambling to perceived burdensomeness. Contrary to our hypothesis, problem gambling severity at

Time 1 failed to predict debt stress at Time 2. Finally, we found evidence of a bidirectional relationship between problem gambling and suicide ideation, in that suicide ideation at Time 1 predicted problem gambling at Time 2. Clinical implications include the need to routinely screen for suicidality and perceived burdensomeness within problem gambling treatment. Future research should explore interventions that target perceived burdensomeness in this context.

Introduction

Problem gambling is associated with increased risk of suicide ideation (e.g., Gray and Edson, 2025, Edson et al., 2023, Wardle and McManus, 2021, Ronzitti et al., 2017), attempts (e.g., Wardle and McManus, 2021, Håkansson and Karlsson, 2020, Carr et al., 2018), and completion (e.g., Karlsson and Hakansson, 2018, Kristensen et al., 2024). It can also contribute to profound interpersonal harms, including distortion of relationship roles, dissolution of close relationships, and intimate partner violence (Langham et al., 2016). Given the importance of social connection to human health, these interpersonal harms likely help explain the established link between problem gambling and suicidality.

We (Gray and Edson, 2025) studied the interpersonal theory of suicide (Joiner, 2005) as an explanation for suicidal ideation among people with problem gambling. Briefly, the interpersonal theory states that perceived burdensomeness (i.e., the perception that one is a burden on others) and thwarted belongingness (i.e., the perception that one is lonely and lacks reciprocally supportive relationships) contribute to suicidal desire/ideation, especially when present in combination. In line with this theory, we found that among a nonclinical sample of gamblers, controlling for depression severity, perceived burdensomeness mediated the effect of problem gambling on suicide ideation (Gray and Edson, 2025). Also in accordance with the interpersonal theory, this mediating effect of perceived burdensomeness was especially apparent at high levels of thwarted belongingness. These findings support the interpersonal theory of suicide and suggest that perceived burdensomeness and thwarted belongingness may be important targets for reducing suicidality within problem gambling treatment.

Looking “upstream,” this study also revealed that the relation between problem gambling and perceived burdensomeness was partially explained by debt stress. This is likely because when a gambler experiences financial harms, including the accumulation of seemingly unmanageable debt, those harms radiate out to family members (e.g., Langham et al., 2016, Castrén et al., 2021). For instance, spouses might have to take on second jobs to pay gambling debts. The gambler might understandably feel like he/she is becoming a burden on loved ones.

A major limitation of our previous study (Gray & Edson, 2025) was its cross-sectional design, which precludes documentation of the temporal sequences assumed to operate under a mediational model. The current study tested the longitudinal mediation effect of perceived burdensomeness in the relationship between problem gambling and suicidality, and the potential mediating role of debt stress on the relationship between problem gambling and perceived burdensomeness, by adding a 6-month follow-up

assessment. As with other studies outside the context of problem gambling (Chu, 2017), the previous cross-sectional findings suggested a stronger role for perceived burdensomeness in the link between problem gambling and suicide ideation, compared with thwarted belongingness. Therefore, in our primary (pre-registered) analyses, we focused specifically on the mediating role of perceived burdensomeness.

We had three primary hypotheses:

- Participants with more severe problem gambling will be more likely to report current suicide ideation than those with less severe problem gambling.
- Perceived burdensomeness will mediate the relationship between Time 1 problem gambling and Time 2 suicide ideation.
- Debt stress will mediate the relationship between Time 1 problem gambling and Time 2 perceived burdensomeness.
- Additionally, we speculated that problem gambling might share a bi-directional association with suicide ideation, as it does with other experiences (Tabri, 2024, Suomi, 2019, Rash et al., 2016). Therefore, we tested the reverse pathway – that suicide ideation at Time 1 will predict problem gambling at Time 2.

In a set of unplanned exploratory analyses, we examined the role of thwarted belongingness as a moderator of the mediating relationship tested in Hypothesis 2, as predicted by the interpersonal theory of suicide. In another set of unplanned exploratory analyses, we examined whether Hypothesis 2 holds while controlling for depression, given that comorbid depression can confound the relationship between problem gambling and suicidality (e.g., Feigelman et al., 2006).

Section snippets

Materials and method

We re-surveyed Time 1 participants approximately 6 months later. Time 1 participants were subscribers to MTurk, Amazon's microtasking platform, in the U.S., aged 18+. We generated our Time 1 sample by posting a Human Intelligence Task (HIT) on MTurk, which directed participants to a survey hosted on the Qualtrics platform. We excluded MTurk workers from Alabama, Mississippi, and Nebraska due to age of majority requirements. To maximize data quality, we restricted the HIT to MTurk workers who

Results

Supplemental Tables 1 and 2 provide descriptive statistics and an intercorrelation matrix, respectively.

Discussion

We examined the longitudinal relationships among problem gambling, perceived burdensomeness, debt stress, and suicidal ideation among a non-clinical sample of gamblers. We re-established a cross-sectional link between problem gambling and suicide ideation (Hypothesis 1). Longitudinally, we observed that greater baseline problem gambling predicted subsequent suicidal ideation. This is consistent with existing evidence. Wardle et al. (Wardle et al., 2023) observed that, among young adults, higher

Credit authorship contribution statement

Heather M. Gray: Writing – review & editing, Writing – original draft, Resources, Project administration, Methodology, Investigation, Funding acquisition, Formal analysis, Data curation, Conceptualization. **Timothy C. Edson:** Writing – review & editing, Writing – original draft, Methodology, Investigation, Conceptualization.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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