The intergenerational transmission of problem gambling: The mediating role of offspring gambling expectancies and motives

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HIGHLIGHTS

- There was a significant relationship between parent-and-offspring problem gambling.
- This relationship persisted after accounting for sociodemographic characteristics.
- Self-enhancement and money expectancies mediated intergenerational transmission.
- Over-involvement and emotional impact expectancies mediated intergenerational transmission.
- Enhancement and coping motives mediated intergenerational transmission.

ARTICLE INFO

ABSTRACT

Introduction: The risk for developing a gambling problem is greater among offspring who have a problem gambling parent, yet little research has directly examined the mechanisms by which this transmission of problem gambling occurs. For this reason, the present study sought to examine the degree to which children's expectancies and motives relating to gambling explain, at least in part, the intergenerational transmission of problem gambling.

Methods: Participants (N = 524; 56.5% male) were recruited from educational institutions, and retrospectively reported on parental problem gambling. Problem gambling was measured using the Problem Gambling Severity Index and a range of positive and negative expectancies and gambling motives were explored as potential mediators of the relationship between parent-and-participant problem gambling.

Results: The relationship between parent-and-participant problem gambling was significant, and remained so after controlling for sociodemographic factors and administration method. Significant mediators of this relationship included self-enhancement expectancies (feeling in control), money expectancies (financial gain), over-involvement (preoccupation with gambling) and emotional impact expectancies (guilt, shame, and loss), as well as enhancement motives (gambling to increase positive feelings) and coping motives (gambling to reduce or avoid negative emotions). All mediators remained significant when entered into the same model.

Conclusions: The findings highlight that gambling expectancies and motives present unique pathways to the development of problem gambling in the offspring of problem gambling parents, and suggest that gambling cognitions may be potential candidates for targeted interventions for the offspring of problem gamblers.

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1. Introduction

There is robust evidence that the offspring of problem gamblers are at increased risk for the development of problem gambling in contrast to their peers (Dowling et al., 2016; Govoni, Rupcich, & Frisch, 1996; Gupta & Derevensky, 1998). Although limited, there is also some evidence that only the relationship between paternal-to-offspring problem gambling remains significant after controlling for socio-demographic factors and maternal gambling behaviours (Dowling et al., 2016; Vachon, Vitaro, Wanner, & Tremblay, 2004). Despite these assertions, few studies have directly examined potential pathways leading to the transmission of problem gambling from parents to their offspring (Dowling et al., 2016; Oei & Raylu, 2004; Vachon et al., 2004).

Although the findings from genetic studies identify a considerable heritability of problem gambling (Gyollai et al., 2014; Lobo & Kennedy, 2009), the parent-to-offspring transmission of problem gambling is often explained using the social learning model, which proposes that offspring gambling is learnt directly from family members who act as models for the gambling behaviour (Gupta & Derevensky, 1997; Hardoon & Derevensky, 2002). Recent cognitive theories, however, suggest that the observation of parental gambling behaviour also contributes to the development of offspring gambling attitudes (overall evaluation of gambling), expectancies (beliefs about the future outcome of engaging in gambling), motives (reasons why a person engages in gambling), and cognitive distortions (erroneous beliefs) (Campbell & Oei, 2010). The mechanism for the transmission of problem gambling from parent-to-offspring may therefore be further explained by the transference of these gambling cognitions (Campbell & Oei, 2010; Oei & Raylu, 2004).

In their model of the intergenerational transference of alcohol use behaviour, Campbell and Oei (2010) posit that there is a behavioural element, in which parental alcohol use behaviour indirectly influences their offspring's alcohol use through the child's alcohol beliefs and expectancies, rather than directly from parent-to-child behaviour. They also posit a cognitive element, in which parent's alcohol cognitions indirectly influence their offspring's alcohol use via the offspring's alcohol cognitions, so that parents and children share cognitions regarding the effects of alcohol. Testing these elements in relation to the intergenerational transference of gambling problems, Oei and Raylu (2004) found that although offspring gambling cognitions (cognitive distortions/positive expectancies) failed to mediate the parent-to-offspring problem gambling relationship, they did mediate the relationship between parental gambling cognitions and offspring problem gambling. Similarly, Lang and Randall (2013) demonstrated that grandchildren gambling attitudes were significant mediators of the relationship between grandparent gambling attitudes and grandchild gambling frequency.

In addition, evidence increasingly indicates the role of positive gambling expectancies (Emond & Marmurek, 2010; Michalczuk, Bowden-Jones, Verdejo-Garcia, & Clark, 2011; Taylor, Parker, Keefer, Kloosterman, & Summerfeldt, 2014; Teeters, Ginley, Whelan, Meyers, & Pearlson, 2015) and negative gambling expectancies (St-Pierre, Temcheff, Gupta, Derevensky, & Paskus, 2013; Wickwire, Whelan, & Meyers, 2010; Wohl, Anisman, Matherson, & Young, 2006) as unique contributors to the development of problem gambling in young people. There is also evidence that gambling motives, such as enhancement motives (to increase positive emotions), coping motives (to decrease negative emotions), and social motives (to increase social affiliation) are involved in the development of youth gambling problems (Francis, Dowling, Jackson, Christensen, & Wardle, 2015; Lambe, Mackinnon, & Stewart, 2015). Moreover, these gambling motives have the potential to mediate the associations between psychological characteristics, such as mood states and impulsivity, and gambling problems in young people (Canale et al., 2015; Goldstein et al., 2014). While it is unsurprising that positive expectancies and gambling motives predict problem gambling, the positive relationship between negative gambling expectancies and problem gambling may be recursive in nature,

whereby the negative consequences of gambling increases as gambling behaviour intensifies, which in turn strengthens negative gambling expectancies (Gillespie, Derevensky, & Gupta, 2007a; St-Pierre et al., 2013; Wickwire et al., 2010; Wohl et al., 2006). The simultaneous anticipation of both positive and negative outcomes from gambling may, in part, be explained by the immediacy assumption theory (Gillespie, Derevensky, & Gupta, 2007b; Wickwire et al., 2010), which posits that the immediate benefits of gambling outweigh the long-term negative consequences.

The aim of the current study is to investigate whether the relationship between parent-and-offspring problem gambling may, at least in part, be explained by offspring gambling expectancies or motives. Understanding the role these gambling cognitions play in the intergenerational transmission of gambling problems may inform intervention or prevention programs aimed at the offspring of problem gamblers. It is hypothesised that (a) parental problem gambling will be positively related to offspring problem gambling, and that this relationship will remain significant when accounting for demographic variables, and (b) offspring gambling expectancies and motives will mediate the parent-to-offspring problem gambling relationship.

2. Methods

2.1. Participants and procedure

Participants were recruited from multiple tertiary education institutions in Melbourne, Australia. In total, 823 students completed a hard copy (26.4%) or online (73.6%) survey, which were identical in content, depending on the preferred administration of the survey by the participating institution. Two-thirds (63.7%, $n = 524$) reported that they had gambled in the previous 12-months; 53.8% were classified as non-problem gamblers, 23.3% as low risk gamblers, 17.6% as moderate risk gamblers, and 5.3% as problem gamblers. The analyses presented in this study were based on the sample of 524 past year gamblers. This sample comprised 56.5% males aged 18–25 years ($M = 21.2$, $SD = 2.2$). More than half (67.0%) were born in Australia, few (1.5%) were of Aboriginal or Torres Strait Islander (ATSI) descent, and the majority were single (58.0%) and in paid employment (71.6%). Overall, 7.1% reported that at least one parent (6.1% fathers, 1.1% mothers) had a gambling problem. This project received ethical approval from the University of Melbourne Human Research Ethics Committee (No. 0931741), Chisholm Institute of TAFE (October 28, 2009), and Holmesglen TAFE (October 14, 2009). All survey respondents received a movie ticket to compensate them for their time.

2.2. Measures

Participants were asked for demographic information (gender, age, country-of-birth, ATSI status, relationship status, and employment status) and past-year gambling participation. The 9-item Problem Gambling Severity Index (PGSI) (Ferris & Wynne, 2001) was administered to evaluate problem gambling severity. The PGSI has demonstrated good psychometric properties (Ferris & Wynne, 2001; Holtgraves, 2009; Neal, Delfabbro, & O'Neil, 2005) and the internal consistency of the PGSI in this study was very good ($\alpha = 0.88$).

A family history method, involving data collection from a single family member regarding the presence of a gambling problem in their parents (Cuijpers & Smit, 2001; Hodgins, & Shimp, 1995; Vail, Protinsky, & Prouty, 2000), was employed to examine the relationship between parent and child gambling problems. The perceived presence of paternal (father/male guardian) and maternal (mother/female guardian) problem gambling was assessed using a single screening item: *"To your knowledge, do any of these people have a gambling problem?"* This item was included in a set of gambling behaviour items that were only administered to participants reporting past year gambling problems. There is substantial evidence that the reliability and validity of single-