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Short Communication

The intergenerational transmission of problem gambling: The mediating role of parental psychopathology

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HIGHLIGHTS

- The relationship between parent-and-offspring problem gambling was significant.
- Paternal-offspring relationship was significant after controlling for other factors.
- Paternal problem drinking, maternal drug use mediated paternal-offspring gambling.
- Paternal problem drinking, maternal drug use mediated maternal-offspring gambling.
- The magnitude of transmission risk appears to warrant clinical and policy responses.

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ABSTRACT

The present study investigated the intergenerational transmission of problem gambling and the potential mediating role of parental psychopathology (problem drinking, drug use problems, and mental health issues). The study comprised 3953 participants (1938 males, 2015 females) recruited from a large-scale Australian community telephone survey of adults retrospectively reporting on parental problem gambling and psychopathology during their childhood. Overall, 4.0% [95%CI 3.0, 5.0] ($n = 157$) of participants reported paternal problem gambling and 1.7% [95%CI 1.0, 2.0] ($n = 68$) reported maternal problem gambling. Compared to their peers, participants reporting paternal problem gambling were 5.1 times more likely to be moderate risk gamblers and 10.7 times more likely to be problem gamblers. Participants reporting maternal problem gambling were 1.7 times more likely to be moderate risk gamblers and 10.6 times more likely to be problem gamblers. The results revealed that the relationships between paternal-and-participant and maternal-and-participant problem gambling were significant, but that only the relationship between paternal-and-participant problem gambling remained statistically significant after controlling for maternal problem gambling and sociodemographic factors. Paternal problem drinking and maternal drug use problems partially mediated the relationship between paternal-and-participant problem gambling, and fully mediated the relationship between maternal-and-participant problem gambling. In contrast, parental mental health issues failed to significantly mediate the transmission of gambling problems by either parent. When parental problem gambling was the mediator, there was full mediation of the effect between parental psychopathology and offspring problem gambling for fathers but not mothers. Overall, the study highlights the vulnerability of children from problem gambling households and suggests that it would be of value to target prevention and intervention efforts towards this cohort.

1. Introduction

It has been estimated that for each problem gambler, at least seven other people may be negatively impacted (Productivity Commission, 1999). Surprisingly few studies, however, have examined the impact of problem gambling on families (Dowling, Smith, & Thomas, 2009; Kourgiantakis, Saint-Jacques, & Tremblay, 2013), particularly on the nature of the intergenerational transmission of gambling problems. It is therefore the focus of this study to investigate some of the potential explanatory mechanisms underpinning the relationship between parental-and-offspring gambling problems.

There is an accumulation of evidence suggesting that children and adolescents are vulnerable to the influence of parental problem

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gambling. The children of problem gamblers report greater gambling frequency (Delfabbro, Lahn, & Grabosky, 2005; Delfabbro & Thrupp, 2003; Jacobs et al., 1989; Vachon, Vitaro, Wanner, & Tremblay, 2004), earlier onset of gambling behaviour (Jacobs, 2000; Jacobs et al., 1989), and elevated incidence of problem gambling (Govoni, Rupcich, & Frisch, 1996; Gupta & Derevensky, 1998) than the children of non-problem gambling parents. Studies consistently report that children who have at least one parent who gambles, irrespective of the level of severity, are 2-to-4 times more likely to develop a gambling problem than their peers with non-gambling parents (Black, Monahan, Temkit, & Shaw, 2006; Jacobs et al., 1989; Langhinrichsen-Rohling, Rohde, Seeley, & Rohling, 2004; Magoon & Ingersoll, 2006). Although limited, there is some evidence that this relationship remains significant after controlling for socio-demographic factors (Vachon et al., 2004). The association between parent-and-offspring gambling may, in part, be explained by the social learning model which views that offspring gambling is promoted by family and friends who act as significant models for gambling behaviour (Gupta & Derevensky, 1997; Hardoon & Derevensky, 2001). Indeed, children and adolescents are often introduced to gambling by their parents and family members, becoming involved in gambling activities as part of normal and accepted family social entertainment (Griffiths & Wood, 2000; Jacobs, 2000).

Research suggests that compared to their peers, children of problem gamblers are also more likely to experience the effects of co-occurring parental psychopathology (Jacobs et al., 1989; Lesieur & Rothschild, 1989). Moreover, the children of problem gambling parents with multiple co-occurring conditions (i.e., alcohol use problems, substance use problems, or overeating behaviours) report more adjustment difficulties, such as smoking, alcohol use, overeating, and psychological distress, than children of problem gambling parents without any co-morbid conditions (Lesieur & Rothschild, 1989). These findings are consistent with research indicating that problem gamblers (Dowling et al., 2014a; Dowling, Rodda, Lubman, & Jackson, 2014b; Dowling et al., 2015; Lorains, Cowlishaw, & Thomas, 2011) and their parents (Lesieur, Blume, & Zoppa, 1986) demonstrate high levels of co-morbid psychopathology, including alcohol use problems, mood disorders, anxiety disorders, substance use problems, and personality disorders.

Children living in problem gambling families may also be exposed to significant psychopathology in their non-gambling parent. The intimate partners of problem gamblers are more likely to report mental health problems, emotional disturbances, and alcohol use problems than their counterparts (Hodgins, Shead, & Makarchuk, 2007; Svensson, Romild, & Shepherdson, 2013). Studies of treatment-seeking family members have also revealed that emotional distress is the most common problem reported by the intimate partners of problem gamblers (Crisp, Thomas, Jackson, & Thomason, 2001; Dowling, Rodda, Lubman, & Jackson, 2014b; Dowling, Suomi, Jackson, & Lavis, 2015).

Taken together, the existing research suggests a positive relationship between parent-and-offspring problem gambling and between parental problem gambling and psychopathology. It remains unclear, however, whether increased parental psychopathology has an explanatory role in the intergenerational transmission of gambling problems. The aim of the present study is therefore to investigate the degree to which parental psychopathology mediates the parent-and-offspring relationship. It is hypothesised that (a) there will be a significant positive relationship between parent-and-offspring problem gambling and that this relationship will remain significant after controlling for socio-demographic characteristics; and (b) the relationship between parent-and-offspring problem gambling will be mediated by parental psychopathology (problem drinking, drug use problems, and mental health issues). An alternative model in which parental problem gambling mediates the relationship between parental psychopathology and offspring problem gambling will also be explored.

2. Methods

2.1. Participants and procedures

Data for this study were collected from a computer-assisted telephone interview of a sample of 3953 adults (1938 [49.0%] males) living in Australia, retrospectively reporting on the problem gambling and psychopathology of biological, step, or foster parents during their childhood. This project was approved by the Monash University Human Research Ethics Committee (CF07/3951). The data were collected by independent market research providers using a targeted random digit dialling telephone survey methodology to interview adult participants living in Australia. The in scope population for the survey were Australian residents aged 18 years and over who were contactable by a landline telephone. Chi-square goodness of fit tests for age and gender revealed no significant differences between the study sample and the Australian population. Incremental sampling with quota allocation was used to ensure adequate numbers of the target groups. A maximum of 10 contacts were attempted in the event of a live number. Although interviews were completed with 5206 participants, the final sample comprised 3953 participants who fully completed the PGSI and parental problem gambling items.

Participants were most often aged 40 to 49 years (21.2%) or 30 to 39 years (20.6%), with smaller proportions aged 60 to 69 years (16.3%), 50 to 59 years (14.9%), 18 to 29 years (13.8%), and 70 years or older (13.3%). Participants were primarily born in Australia (83.5%) or Europe (10.4%), with fewer participants born in Asia (2.4%), New Zealand (2.4%), Africa (0.9%), or North America (0.4%). The largest proportion of participants was married (58.8%), with smaller proportions never married (18.9%), in a cohabiting relationship (5.8%), separated or divorced (9.4%), and widowed (7.1%). Most participants were working in a full-time (30.9%), part-time (22.5%), or self-employed (6.2%) capacity, or were retired (25.1%). Fewer participants were engaged in full-time home duties (7.6%), unemployed (3.6%), students (3.1%), or on a sick or disability pension (1.0%). Approximately one-third of participants had completed a university or college degree (32.3%), and a further 27.2% had completed primary school as their highest educational qualification. Smaller proportions of participants had completed a trade, technical certificate or diploma (22.0%), completed secondary school as their highest educational qualification (18.2%), or failed to complete primary school (0.1%).

2.2. Measures

Participants were asked to provide their demographic characteristics (gender, age category, country of birth, relationship status, employment status, and highest level of educational qualification). Participants were required to report gambling participation over the past 12 months on a range of gambling activities (raffles, bingo or housie, lotteries, scratch tickets, informal cards for money [not at casino], horse racing, trotting or harness racing, greyhound racing, electronic gaming machines [EGMs] at hotels, EGMs at clubs, EGMs at a casino, casino gambling, off-course sports betting, fixed odds sports betting, soccer pools, keno at club or hotel, Internet gambling, and informal indoor games for money).

The nine-item PGSI of the Canadian Problem Gambling Index (Ferris & Wynne, 2001) was employed to evaluate problem gambling severity using the original scoring (Jackson, Wynne, Dowling, Tomnay, & Thomas, 2010). Scores on the PGSI can be used to classify individuals as non-problem gamblers (score of 0), low risk gamblers (scores of 1 or 2), moderate risk gamblers (scores between 3 and 7), or problem gamblers (scores of 8 or higher). The PGSI has been adopted as the preferred measurement tool for population-level research in Australia and has demonstrated very good psychometric properties (Ferris & Wynne, 2001; Holtgraves, 2009; Neal, Delfabbro, & O'Neil, 2005).

The perceived presence of paternal and maternal problem gambling when growing up was assessed using a single screening item: "*When*