



Review

Early risk and protective factors for problem gambling: A systematic review and meta-analysis of longitudinal studies



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HIGHLIGHTS

- First systematic review of risk and protective factors for problem gambling
- Strongest risk factors were gambling severity, male gender, poor school performance
- Protective factors included parental supervision and high socio-economic status
- Results were generally robust to the quality of methodological approaches
- Need for future research to explore relationship, community, and societal factors

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ABSTRACT

This systematic review aimed to identify early risk and protective factors (in childhood, adolescence or young adulthood) longitudinally associated with the subsequent development of gambling problems. A systematic search of peer-reviewed and grey literature from 1990 to 2015 identified 15 studies published in 23 articles. Meta-analyses quantified the effect size of 13 individual risk factors (alcohol use frequency, antisocial behaviours, depression, male gender, cannabis use, illicit drug use, impulsivity, number of gambling activities, problem gambling severity, sensation seeking, tobacco use, violence, undercontrolled temperament), one relationship risk factor (peer antisocial behaviours), one community risk factor (poor academic performance), one individual protective factor (socio-economic status) and two relationship protective factors (parent supervision, social problems). Effect sizes were on average small to medium and sensitivity analyses revealed that the results were generally robust to the quality of methodological approaches of the included articles. These findings highlight the need for global prevention efforts that reduce risk factors and screen young people with high-risk profiles. There is insufficient investigation of protective factors to adequately guide prevention initiatives. Future longitudinal research is required to identify additional risk and protective factors associated with problem gambling, particularly within the relationship, community, and societal levels of the socio-ecological model.

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1. Background

Renamed gambling disorder, pathological gambling has been reclassified as an addiction and related disorder alongside alcohol and substance use disorders in the Diagnostic and Statistical Manual of Mental Disorders (Fifth Edition) (DSM-5) (American Psychiatric Association (APA), 2013). Consistent with public health frameworks that conceptualise gambling problems across a risk continuum (Shaffer & Korn, 2002), the term problem gambling is also employed to describe gambling that results in adverse consequences for individuals, families, and communities (Neal, Delfabbro, & O'Neil, 2005). These consequences can include impaired mental health, physical health, relationship and family dysfunction, financial problems, employment difficulties, and legal issues (Shaffer & Hall, 2002). The standardised past year prevalence of problem gambling in adults ranges from 0.5% to 7.6% across countries, with an average of 2.3% (Williams, Volberg, & Stevens, 2012).

Although ostensibly an activity legally restricted to adults in most jurisdictions (typically older than 18 years of age), adolescent gambling is

not uncommon. Individuals under the age of 18 years typically report gambling on lottery, instant scratch tickets, and informal private games, such as wagering with friends (Dixon et al., 2016; Jackson, Dowling, Thomas, Bond, & Patton, 2008). Internationally, estimates of past year gambling problems in adolescents (in the years 2000–2009) were highly variable, with rates of 0.8% to 6.0% (Volberg, Gupta, Griffiths, Olason, & Delfabbro, 2010). Although these prevalence rates are substantially higher than those reported by adults, there has been some concern that problem gambling rates for youth are inflated due to multiple situational and measurement issues (see Derevensky, Gupta, & Winters, 2003; Shaffer & Korn, 2002). Regardless of the actual level of risk, there is consensus that problem gambling among adolescents remains a significant social and public health policy issue, and that problem gambling in adolescents and young adults has been associated with a range of negative consequences across interpersonal, familial, economic, psychological, and legal domains (Blinn-Pike, Worthy, & Jonkman, 2010; Delfabbro, Lahn, & Grabosky, 2006; Nower, Derevensky, & Gupta, 2004). Moreover, adult gambling problems can

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