

The Role of Parents in Youth Gambling

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The NSW Responsible Gambling Fund

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2.Executive Summary

The New South Wales (NSW) Office of Responsible Gambling (ORG) funded this survey of parents of young people, aged 12 to 17 years, to assist in furthering knowledge in its priority areas of 1) attitudes and behaviours towards gambling in vulnerable or target groups, and 2) what works in prevention and harm minimisation.

The research questions (RQs) were:

1. What attitudes do parents hold towards gambling and gambling harm generally and in relation to adolescents?
2. What are parent perceptions of the nature and extent of gambling, simulated gambling, and gambling problems among adolescents?
3. What are the parental risk and protective factors for adolescent gambling and gambling problems?
4. What target groups of parents are likely to benefit most from education and intervention about adolescent gambling?
5. What are parents' preferences for receiving information and support about protecting their adolescent children from gambling and gambling harm?

Key findings

- Of the 947 parents who had gambled in the past 12 months, most reported that their adolescent was present with them when they had gambled (68.4%).
- Parental facilitation of adolescent gambling was found to be the strongest predictor of adolescent gambling participation and gambling problems, while other independent predictors were adolescent simulated gambling, poor parental monitoring, and less positive parent-adolescent relationships.
- Parents tended to be less concerned about adolescent gambling and less likely to have had conversations with the adolescent about gambling and gambling-like games in comparison to other adolescent issues.
- Around a quarter of parents (27.1%) reported that their adolescent had participated in at least one form of gambling during the past 12 months. The most common activity adolescents took part in was buying instant scratch tickets (10.2%) and buying lottery or lotto tickets (10.0%).
- Compared to mothers, fathers reported higher levels of participation in gambling and simulated gambling among their adolescents, as well as higher levels of gambling problems.
- The findings suggest a need to target fathers (particularly fathers who gamble), and parents who engage in behaviours that actively facilitate adolescent gambling, in any prevention or education efforts to address adolescent gambling

Methodology

A single point in time online survey of parents was conducted from 27th May 2022 to 14th June 2022, with a total of 1,185 eligible respondents. Respondents were aged between 20 to 73 years¹, were the primary caregiver of an adolescent and permanent residents of NSW. Where respondents were caring for more than one child in the target age range, they were instructed to answer adolescent-related questions about their child with the next birthday. Data was collected using multiple online survey panels via the online survey company, Qualtrics.

The survey gathered information from parents and caregivers² regarding their views on adolescent gambling and gambling generally, their knowledge of their adolescent's involvement in monetary gambling and simulated gambling, and adolescent problem gambling. Parents reported on their own and their adolescent's participation in 14 forms of monetary gambling including both traditional (e.g., scratch tickets, pokies, sports betting) and emergent forms of gambling (e.g., esports betting, skin betting). Information was also collected on a range of risk and protective factors identified from the literature as influences on adolescent gambling. The design of the survey took a bioecological approach by obtaining information on parent sociodemographic factors (e.g., age, gender, education, Aboriginal and Torres Strait Islander status, household income, family structure) and adolescent factors (i.e., age, gender, impulsivity, emotional problems, simulated gambling participation). Importantly, the survey had a particular focus on parental influences. Parents were asked to respond to questions about their own behaviour that were directly gambling related (i.e., parent problem gambling, parental attitudes to adolescent gambling, parental facilitation of gambling) as well as questions that assessed general parenting practices (i.e., positive parenting, inconsistent discipline, poor supervision, online monitoring) and dimensions of the parent-adolescent relationship (connectedness, shared activities, hostility). Finally, information was gathered regarding parental preferences for receiving information on adolescent gambling.

RQ 1: What attitudes do parents hold towards gambling and gambling harm generally and in relation to adolescents?

Parent attitudes to adolescent gambling

Adolescent gambling was of lower concern to parents than other common adolescent issues. Adolescent gambling was ranked 11th and involvement in simulated gambling was ranked 16th out of 16 concerns presented to parents. Around half of parents had talked to their adolescent about responsible gambling

¹ While most respondents (98.3%) were the biological/adoptive parent or stepparent of the target adolescent, a small proportion were in other caregiver roles (e.g., grandparent, foster parent). This young parent age reflects a respondent who was the primary caregiver of their younger sibling.

² Because most respondents were the biological/adoptive parent or stepparent of the target adolescent, the term 'parents' was used for brevity as an over-arching term to describe the respondents to the survey. Similarly, 'fathers' was used to describe male parents, and 'mothers' was used to describe female parents.

(58.0%) and the risks and harms of gambling (49.3%). However, these conversations were less likely to have occurred in the past 12 months in comparison to other adolescent issues, with most parents (85 to 90%) reporting that they had talked to their adolescent about excessive time online, online safety, unhealthy eating, bullying and depression in the past 12 months.

Most parents indicated they did not approve of adolescent exposure to gambling and activities that promoted gambling. However, a notable proportion of respondents did indicate their approval. Over a third of parents (36.4%) were either ambivalent or felt it was acceptable for teenagers to watch professional poker tournaments or television shows featuring gambling, while 31.7 per cent were neutral or agreed that it is okay for teenagers to engage in online gambling games as long as it's not for money. Only 29.2 per cent believed that teenagers are more at risk of problem gambling than adults.

Parental attitudes to gambling in general

Parents held negative attitudes towards gambling in general. Most respondents disagreed that gambling is a good way to relieve boredom (68.0%), gambling is a good way for communities to raise funds (73.8%), and gambling can be a good way to make money if you know the game (73.0%). Around a quarter of respondents (25.2%) agreed that gambling less than once a week was appropriate, and only a small proportion of respondents (14.6%) agreed that gambling more than once a week was appropriate.

RQ 2: What are parent perceptions of the nature and extent of gambling, simulated gambling, and gambling problems among adolescents?

Adolescent participation in gambling and simulated gambling

Over a quarter of parents (27.1%) reported that their adolescent had participated in at least one form of gambling during the past 12 months. Participation was slightly higher in adolescent males (29.5%) compared to females (24.2%). Participation in monetary forms of gambling took place across all available forms, although participation was most common for instant scratch tickets and lottery tickets. Around the same proportion of parents (27.8%) reported that their adolescent had participated in at least one form of simulated gambling in the past 12 months. Higher rates of simulated gambling participation were reported among adolescent males (35.3%) compared to females (18.8%).

Adolescent exposure to parent gambling

Among parents who gambled ($n = 947$), 68.4 per cent ($n = 648$) indicated that their adolescent was present with them when they had gambled at least once in the past 12 months. That represents approximately 54.7% of the total sample of parents that reported their adolescent was present with them when they had gambled in the past

12 months. Both traditional and emergent forms of gambling were among the activities that parents reported the most adolescent exposure, including skin betting, fantasy sport betting, keno, online betting games and scratch tickets.

Adolescent gambling problems

A modified form of the DSM-IV-MR-J adapted for parent report was used to assess gambling problems in adolescents. An estimated 6.8 per cent of adolescents were reported by parents to be experiencing problems due to gambling and a further 3.4 per cent were at-risk of gambling problems. These rates were higher than typically reported in Australian surveys of adolescents, such as in the NSW Youth Gambling Study 2020 where 1.5 per cent of respondents were classified as experiencing gambling problems, and 2.2 per cent were classified as at-risk of gambling problems (Hing et al., 2021). The non-representative sampling approach used in this study and the fact that the DSM-IV-MR-J has not been validated for parent report means that any direct comparisons with adolescent-reported rates should be made with caution.

Differences in reports of adolescent gambling participation and gambling problems between mothers and fathers

Fathers reported higher rates of awareness of adolescent gambling (36.0% for fathers versus 23.2% for mothers) and simulated gambling (42.0% versus 21.6%), and higher rates of co-gambling with their adolescent (73.2% versus 66.1%). Fathers also reported a much higher rate (21.3%) of adolescent gambling problems than mothers (5.3%) and were concerned about their child's gambling (24.3%) more so than mothers (4.9%). These discrepancies in father and mother reports of gambling problems warrant further investigation but point to the need to target fathers in any prevention or education efforts to address adolescent gambling.

RQ 3: What are the parental risk and protective factors for adolescent gambling and gambling problems?

Parental influences on adolescent gambling participation and gambling problems

The extent to which parents facilitate gambling in their adolescent emerged as the strongest independent predictor of gambling participation and of gambling problems for both mothers and fathers. Other gambling-related parental factors also predicted independent variation in adolescent gambling outcomes. Specifically, mothers' but not fathers' positive attitudes to adolescent gambling were independently related to adolescent gambling participation. Neither mothers' or fathers' attitudes to adolescent gambling were related to adolescent problem gambling. Further, maternal and paternal problem gambling was independently related to adolescent gambling problems, but was not associated with adolescent gambling participation. However, the Independent effect of parental gambling facilitation on adolescent gambling outcomes was stronger than these other gambling-related parental influences, which

are identified in the literature as key risk factors for adolescent gambling (Calado et al., 2017; McComb & Sabiston, 2010).

Several factors within the broader parenting and parent-adolescent relationship context emerged as independent predictors. Poor monitoring was associated with gambling participation and gambling problems in analyses with mothers. In addition, positive parent-adolescent relationships were negatively associated with adolescent gambling problems for mothers and fathers, while hostility in the father-adolescent relationship was positively associated with adolescent gambling participation. Thus, appropriate parental monitoring and positive parent-adolescent relationships are likely to act as protective factors for adolescent gambling outcomes.

Adolescent factors associated with adolescent gambling participation and gambling problems

Adolescent simulated gambling participation was an independent and strong predictor of mother-reported adolescent gambling participation and gambling problems, and of father-reported adolescent gambling problems. Adolescent emotional problems explained a small but significant proportion of variation in adolescent gambling problems in the sample of mothers. No other adolescent factor, including gender and impulsivity, were significant predictors once the parental influences were considered (see below).

Sociodemographic factors associated with adolescent gambling participation and gambling problems

All analyses aiming to identify factors influencing adolescent gambling outcomes were conducted separately for mothers and fathers. The results of analyses with the sample of mothers suggested that mothers from an Aboriginal and/or Torres Strait Islander background reported higher adolescent gambling participation than mothers who did not identify as Aboriginal and/or Torres Strait Islander. Further, mothers with higher educational attainment reported more adolescent gambling problems. Both maternal Indigenous status and maternal educational attainment explained relatively little variability in adolescent gambling outcomes, suggesting that more proximal parenting and adolescent factors (see above), are better intervention targets for addressing adolescent gambling. No other maternal sociodemographic factors were related to adolescent gambling outcomes, nor were there any associations between fathers' sociodemographic factors and adolescent gambling outcomes.

RQ 4: What target groups of parents are likely to benefit most from education and intervention about adolescent gambling?

The results suggested that there are two main groups of parents that should be considered in the design and delivery of any education and support about adolescent gambling: fathers (particularly fathers who gamble), and parents who engage in behaviours that actively facilitate adolescent gambling.

RQ 5: What are parents' preferences for receiving information and support about protecting their adolescent children from gambling and gambling harm?

Parents indicated a preference for low intensity, easily accessible and self-directed delivery options when accessing information about adolescents and gambling. Parents' most preferred delivery formats were online written materials (47.0%), printed written materials (45.0%) and brief videos on social media (43.6%), with online group sessions (32.4%), in-person group sessions (25.1%) and in-person parent seminars (23.5%), their least preferred options. Mothers and fathers expressed similar delivery preferences, although more fathers than mothers preferred in-person seminars and more mothers than fathers preferred social media videos. More Aboriginal and Torres Strait Islander parents reported a preference for accessing information via media advertisements and articles compared to other parents, but expressed similar preferences to other parents for all other modalities.

Limitations

Several study limitations are noted. The sample is not representative of the larger NSW population because of the online panel sampling method. This means that any rates of gambling participation or gambling problems should be interpreted cautiously. Another limitation is the cross-sectional design, which precludes conclusions about causality. Furthermore, the study relied solely on parent-report data and used a measure of adolescent gambling problems (i.e., DSM-IV-MR-J) that has not been validated for parent-report. Future research should involve a longitudinal research design involving data collection from parents and adolescents.

Implications

The current study provides the empirical rationale for the development of an intervention that addresses adolescent gambling by focusing on parental behaviour. The recommended next step in this program of research is to take the knowledge from the current study and the NSW Youth Gambling Study 2020 (Hing et al., 2021) to inform the development of initiatives or programs to address adolescent gambling. Importantly, the findings from this study suggest that such an intervention should target parental co-gambling, parental facilitation of gambling, and parental awareness of the immediate and long-term risks of adolescent gambling and simulated gambling. A comprehensive, stepped care model is likely to be needed that combines universal messaging and education for all parents (especially fathers) with targeted support for adolescents at risk of gambling problems. This study also provided insight into parents' preference for easily accessible and self-directed forms of information about adolescent gambling. This process of program development, refinement and evaluation should follow best practice prevention science principles (Bertram et al., 2015; Sanders & Kirby, 2015) to maximise program effectiveness and dissemination to parents.

Table of Contents

1. Acknowledgements	2
2. Executive Summary	3
3. List of Tables	13
4. List of Figures	14
5. Introduction	15
5.1. Research objectives	16
5.2. Research questions	16
5.3. Literature review	16
5.3.1. Adolescent gambling and gambling problems	16
5.3.2. Measuring participation in gambling and problem gambling using parent reports	19
5.3.3. Adolescent engagement in simulated gambling	21
5.3.4. Continuity of adolescent gambling into adulthood	22
5.3.5. Factors that influence adolescent gambling	23
5.4. The role of parents and the family environment	27
5.4.1. The association between parental gambling and adolescent gambling	27
5.4.2. The association between the parent-adolescent relationship and adolescent gambling	29
5.4.3. The association between parenting practices and adolescent gambling	31
5.4.4. Parental monitoring and limit-setting related to adolescent online behaviour	32
5.5. Summary	33
6. Methodology	34
6.1. Participants and recruitment	34
6.2. Survey procedure	35
6.2.1. Introduction and informed consent	35
6.2.2. Screening questions	35
6.3. Survey measures	35
6.3.1. Demographics	35
6.3.2. Parental attitudes to gambling and adolescent gambling	36
6.3.3. Adolescent gambling behaviour	36
6.3.4. Parental gambling behaviour	37
6.3.5. Parenting practices related to adolescent gambling	38
6.3.6. General parenting	39
6.3.7. Adolescent adjustment	39
6.3.8. Accessing support for adolescent gambling	40
6.4. Data analysis	40
7. Descriptive findings	41
7.1. Demographics	41
7.2. Parental attitudes to gambling and adolescent gambling	45
7.2.1. Concern about gambling relative to other adolescent issues	45
7.2.2. Attitudes to adolescent gambling	48
7.2.3. Attitudes to gambling in general	48

7.2.4.	Attitudes towards risk of harm from gambling.....	49
7.3.	Parental perceptions of the nature and extent of adolescent gambling.....	50
7.3.1.	Adolescent gambling.....	50
7.3.2.	Adolescent participation in each gambling form.....	51
7.3.3.	Adolescent participation in simulated gambling.....	54
7.3.4.	Parent concern and help-seeking about adolescent gambling.....	54
7.3.5.	Parent-reported symptoms of problem gambling in their adolescents.....	55
7.4.	Parent gambling behaviour.....	56
7.4.1.	Parent gambling and simulated gambling participation.....	56
7.4.2.	Adolescent exposure to parent gambling.....	56
7.4.3.	Adolescent exposure to parent gambling for each gambling form.....	57
7.4.4.	Parent problem gambling.....	58
7.5.	Parenting practices related to adolescent gambling.....	59
7.5.1.	Parent facilitation of adolescent gambling.....	59
7.5.2.	Parent online monitoring.....	61
7.5.3.	Parent confidence in managing gambling and online behaviour.....	63
7.5.4.	Parent-adolescent communication about adolescent issues.....	64
7.6.	Parental preferences for receiving information and support about adolescent gambling.....	65
8.	Factors influencing adolescent gambling participation and gambling problems.....	67
8.1.	Data analysis approach.....	67
8.1.1.	Creation of scale and sub-scale scores.....	68
8.1.2.	Assumptions checking.....	70
8.2.	Factors influencing adolescent gambling participation.....	70
8.2.1.	Bivariate analyses.....	70
8.2.2.	Multivariate analyses.....	71
8.3.	Factors influencing adolescent gambling problems.....	72
8.3.1.	Bivariate analyses.....	72
8.3.2.	Multivariate analyses.....	73
9.	Discussion and conclusions.....	74
9.1.	RQ 1: What attitudes do parents hold towards gambling and gambling harm generally and in relation to adolescents?.....	74
9.1.1.	Parental attitudes to adolescent gambling.....	74
9.1.2.	Parental attitudes to gambling in general.....	75
9.2.	RQ 2: What are parent perceptions of the nature and extent of gambling, simulated gambling, and gambling problems among adolescents?.....	75
9.2.1.	Adolescent participation in gambling and simulated gambling.....	75
9.2.2.	Adolescent exposure to parent gambling.....	76
9.2.3.	Adolescent gambling problems.....	76
9.2.4.	Differences in reports of adolescent gambling participation and gambling problems between mothers and fathers.....	77
9.3.	RQ 3: What are the parental risk and protective factors for adolescent gambling and gambling problems?.....	78

9.3.1.	Sociodemographic factors associated with adolescent gambling participation and gambling problems	78
9.3.2.	Adolescent factors associated with adolescent gambling participation and gambling problems	79
9.3.3.	Parental influences on adolescent gambling participation and gambling problems	80
9.4.	RQ 4: What target groups of parents are likely to benefit most from education and intervention about adolescent gambling?	82
9.5.	RQ 5: What are parents' preferences for receiving information and support about protecting their adolescent children from gambling and gambling harm?	83
9.6.	Study limitations	83
9.7.	Conclusions.....	84
10.	Implications	86
10.1.	Implications for the design and evaluation of prevention and intervention efforts to address adolescent gambling	86
10.2.	Implications for future research into adolescent gambling.....	87
11.	References	88
12.	Appendices	99
12.1.	Appendix A. Survey instrument.....	99
12.2.	Appendix B. Results of bivariate analyses	118
12.3.	Appendix C. Results of multivariate analyses.....	122

3. List of Tables

Table 1 – Parent demographics (<i>N</i> = 1,185)	42
Table 2 – Target adolescent demographics (<i>N</i> = 1,185)	44
Table 3 – Frequency of adolescent exposure to parent gambling for each gambling form	57
Table 4 – Frequency of engagement by parents in behaviours that may facilitate adolescent gambling	59
Table 5 – Parent confidence ratings in preventing and managing adolescent gambling and online behaviour.....	63
Table B.1 – Bivariate relationships (95% confidence intervals) between parent sociodemographic factors and criterion measures for mothers and fathers	118
Table B.2 – Bivariate relationships (95% confidence intervals) between adolescent factors and criterion measures for mothers and fathers	119
Table B.3 – Bivariate relationships (95% confidence intervals) between general parental influences and gambling-related parenting influences and the criterion measures for mothers and fathers.....	120
Table C.1 – Results of linear regression analyses with mothers (<i>N</i> = 816) examining predictors of adolescent gambling participation (past 12 months)	122
Table C.2 – Results of linear regression analyses with fathers (<i>N</i> = 367) examining predictors of adolescent gambling participation (past 12 months)	124
Table C.3 – Results of linear regression analyses with mothers (<i>N</i> = 816) examining predictors of adolescent gambling problems (past 12 months)	126
Table C.4 – Results of linear regression analyses with fathers (<i>N</i> = 367) examining predictors of adolescent gambling problems (past 12 months)	128

4. List of Figures

Figure 1 – Mean rank of parental concern about adolescent issues (lower mean reflects higher-ranking concern)	46
Figure 2 – Proportion of parents who ranked adolescent issue as a top three concern	47
Figure 3 – Parental attitudes toward adolescent gambling.....	48
Figure 4 – Parental attitudes toward gambling in general.....	49
Figure 5 – Parental attitudes toward risk of harm from gambling	49
Figure 6 – Parent-reported adolescent participation in each gambling form in the past 12 months	51
Figure 7 – Frequency of parent-reported adolescent participation in each gambling form in the past 12 months.....	53
Figure 8 – Parent-reported adolescent participation in simulated gambling forms in the past 12 months.....	54
Figure 9 – Frequency of parent online monitoring	62
Figure 10 – Frequency of parent-adolescent communication in the last 12 months regarding common adolescent concerns	64
Figure 11 – Parents’ delivery preferences for accessing support about adolescent gambling.....	65

5. Introduction

The New South Wales (NSW) Office of Responsible Gambling (ORG) commissioned this survey of parents of adolescents (aged 12 to 17 years) to assist in furthering knowledge in its priority areas of 1) attitudes and behaviours towards gambling in vulnerable or target groups, and 2) what works in prevention and harm minimisation. This research was prompted by the findings from the NSW Youth Gambling Study 2020 (Hing et al., 2021), which surveyed 2,200 adolescents aged 12 to 17 years. This study found that gambling participation among this age group was common, that rates of problem gambling are concerning, and that parents have the strongest influence on adolescent gambling.

The critical role of parents in healthy adolescent development and wellbeing is well-established across a range of other adolescent outcomes. However, comparatively little research has investigated the role that parents play in adolescent gambling and problem gambling. Similarly, there is a lack of research examining this issue from the perspective of parents. Up-to-date research is also needed that considers the changing landscape of gambling, including new forms of gambling (e.g., fantasy sports betting, esports betting), simulated gambling (e.g., social casino games) and gambling-like content in video games. Indeed, this generation of adolescents is the first to be exposed to a proliferation of easy-to-access online gambling and simulated gambling activities (King et al., 2014) and widespread gambling advertising (e.g., sports betting) in their formative years (Hing et al., 2014).

Thus, this study was designed to gain parent reports of gambling and simulated gambling among adolescents, and to identify modifiable parental risk and protective factors for adolescent gambling. These include factors related specifically to gambling, including parents' own gambling behaviours and attitudes, parental approval of adolescent gambling, and participation in gambling with their adolescent. In addition, the survey assessed the role of general parenting practices and parent-adolescent relationship behaviours in adolescent gambling. The survey also assessed parental experiences with and preferences for receiving and accessing information and support on adolescent gambling.

Findings from this research can inform the future development and evaluation of evidence-based resources by the ORG to help parents protect their adolescent children from gambling harm. The findings may also inform policy development and regulation in relation to children and young people and gambling.

5.1. Research objectives

The overall objective of the study is to investigate parental influences on gambling and simulated gambling among adolescents, aged 12 to 17 years, and identify modifiable parental risk and protective factors that can be targeted in a parenting program to help parents protect their adolescent children from gambling harm.

5.2. Research questions

1. What attitudes do parents hold towards gambling and gambling harm generally and in relation to adolescents?
2. What are parent perceptions of the nature and extent of gambling, simulated gambling, and gambling problems among adolescents?
3. What are the parental risk and protective factors for adolescent gambling and gambling problems?
4. What target groups of parents are likely to benefit most from education and intervention about adolescent gambling?
5. What are parents' preferences for receiving information and support about protecting their adolescent children from gambling and gambling harm?

5.3. Literature review

This literature review summarises relevant Australian and international literature, including peer-reviewed articles and government-funded research and technical reports (i.e., grey literature) with the aim of directly informing the development of the survey of NSW parents regarding adolescent gambling.

This review begins by summarising current knowledge about adolescents' participation in gambling activities, including emerging technological forms of gambling and simulated gambling, and the prevalence of problem gambling among adolescents. It then presents a summary of the evidence regarding key individual and family risk factors for adolescent gambling, before moving onto a specific focus on the role of parents. This section includes an overview of the evidence base on the influence of parenting and parent-adolescent relationships on adolescent development, and then examines the available literature on the association between parenting and adolescent gambling.

5.3.1. Adolescent gambling and gambling problems

Gambling on commercial products under the age of 18 years is prohibited in Australia. A person must be 18 years of age to gamble in hotel or club venues, casinos, TABs, to buy lottery products or to access legally available online gambling services. Yet, several large-scale studies conducted with Australian adolescents over the past two decades indicate that gambling among young people is common (King et al., 2020). Across 12 studies with sample sizes >500, rates of participation in any gambling activity in the past 12 months ranged from 15 per cent ($N = 1,287$; King et

al., 2014) to 70 per cent ($N = 926$; Delfabbro et al., 2005). An additional study of Victorian secondary school students, which assessed past-month gambling participation rather than past-year participation, found that six per cent of adolescents reported gambling in the past 30 days ($N = 3,746$; Freund et al., 2019). The most frequently nominated activity across these studies were scratch tickets, sports betting, lottery/lotto and private betting (e.g., card games, coin toss). Furthermore, this body of literature suggests that between 0.7 per cent ($N = 612$; Dowling et al., 2010) and 5.4 per cent ($N = 926$; Delfabbro et al., 2005) of adolescents meet criteria for problem gambling based on their responses to standardised measures.

This variability in rates of gambling participation is likely due to methodological differences in these studies, particularly in assessing gambling participation. In Australia and internationally there is very little standardisation in the measures used to assess adolescent gambling (King et al., 2020). Surveys typically present a list of activities and ask respondents to rate how often they have taken part in them over a particular time frame (e.g., past month, past 12 months). One challenge with this checklist approach is that participation is not clearly defined, such that the frequency rating often only captures the young person's active involvement in the activity when they gambled using their own money. This is an important consideration in assessing adolescent versus adult gambling, as a young person may be present while their parent is gambling (e.g., when placing a bet via an esports app on their phone) or may be involved in some aspect of the gambling activity (e.g., helping to choose lotto or keno numbers), but do not actively gamble their own money. There may be a gradient of risk to consider when investigating adolescent gambling from observation of others' gambling to active involvement in part or all the activity, to spending their own money on gambling. A further concern is that there are differences across surveys in the coverage of gambling activities, and in the way that gambling activities are either delineated or combined into convenient categories for description or analysis.

Similarly, studies differ in which standardised measure of problem gambling they have employed. The main measures used in youth gambling research have been derived from measures of adult gambling and include the South Oaks Gambling Screen-Revised for Adolescents (SOGS-RA; Winters et al., 1993), the Diagnostic Statistical Manual of Mental Disorders-IV-Multiple Response Format for Juveniles (DSM-IV-MR-J; Fisher, 2000), and the Problem Gambling Severity Index (PGSI; Ferris & Wynne, 2001). These instruments are all based on DSM-IV-TR (Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision) conceptualisations of gambling disorder and define problem gambling as being characterised by difficulties limiting money and/or time spent gambling and adverse consequences for the individual and their family (Purdie et al., 2011). Internationally,

the SOGS-RA is the most frequently used tool, but in Australia, the DSM-IV-MR-J is considered the standard measure of adolescent gambling (King et al., 2020).

There are also sampling issues to note in Australian research on youth gambling. Most studies recruited adolescents from secondary schools, which excludes young people who are not participating in formal schooling, are engaged in alternative education or training, or who do not regularly attend school. Consistent with this sampling issue, the reported figures cannot be considered prevalence rates as the studies tend to be focused on a particular state or school system, and therefore have not involved nationally representative samples of adolescents in the target age range (i.e., 12 to 17 years).

Recent studies that have used alternatives to school-based recruitment methods and/or taken a national approach to sampling likely provide more comprehensive assessment of the extent of adolescent gambling. One study that has addressed both issues was by Warren and Yu (2018), who assessed adolescent gambling activity using data from Wave 7 of the Longitudinal Study of Australian Children, which is a longitudinal study involving two cohorts of a nationally representative sample of Australian children. In Wave 7, the K ('Kindergarten') cohort ($N = 2,936$), were aged 16-17 years, and both they and their parents were asked whether they had spent money on a list of gambling activities in the past 12 months. In this sample, around 19 per cent of male adolescents and 12 per cent of female adolescents had spent money on at least one gambling activity in the past 12 months. The most common gambling activity was private betting with friends and family, followed by sports betting and scratch tickets. Problem gambling in this study was assessed using the PGSI, with 3.6 per cent of the sample categorised as moderate risk gamblers, and 2.8 per cent as problem gamblers.

Another noteworthy study was the national survey of gambling among youth aged 10 to 24 years, conducted by Purdie et al. (2011). The study combined a large national school-based sample, as well as a community sample recruited via random digit dialling and supplemented by online surveys. In the sample, 76 per cent of those aged 10-14 years ($N = 1,253$), and 64 per cent of those aged 15-17 years ($N = 1,551$) had actively participated in a gambling activity in the past 12 months. The most common forms of gambling were scratch tickets, lotto/lottery, and playing card games in private with friends or family. Similar proportions of the 10- to 14-year-old (8.2%) and 15- to 17-year-old (8.4%) participants were classified as at-risk gamblers, with 3.6 per cent of the younger age group and 2.7 per cent of the middle age group classified in the problem gambling category on the DSM-IV-MR-J.

Finally, the NSW Youth Gambling Study (Hing et al., 2021), commissioned by the NSW ORG, employed a community-based approach to recruitment. Their study involved three samples of adolescents aged 12 to 17 years; a sample recruited via a

letterbox drop of flyers to households in NSW and weighted on key demographic characteristics ($N = 551$); and two convenience samples, one obtained through a Qualtrics survey panel ($N = 826$) and one via online and email advertising ($N = 843$). Estimates from the weighted letterbox sample indicated that 30 per cent of adolescents had participated in monetary gambling in the past 12 months, with private betting, scratch tickets and bingo being the most popular activities. Problem gambling rates were estimated using the DSM-IV-MR-J, with 1.5 per cent of respondents classified as problem gamblers and a further 2.2 per cent classified as at-risk gamblers.

5.3.2. Measuring participation in gambling and problem gambling using parent reports

Gambling behaviour and gambling problems among adolescents have very rarely been assessed using parent report. Within Australia, studies of adolescent gambling have all relied on adolescent self-report, and the same trend is seen internationally (Calado et al., 2017; King et al., 2020). Further, the main problem gambling measures have not been validated for parent report, likely because most have been developed as downward extensions of measures designed to assess problem gambling among adults (Edgren et al., 2016).

Interestingly, adolescent gambling behaviour is unique in this respect. In the wider literature on adolescent problem behaviour and mental health, the use of parent report is a common and valid method for assessing these concerns among adolescents and is considered to be central to an evidence-based assessment approach in both clinical (McMahon & Frick, 2005; Silverman & Ollendick, 2005) and research settings (Hartung et al., 2005; Kuhn et al., 2017). Indeed, most measures of adolescent mental health are developed to include both parent- and youth-report versions (De Los Reyes et al., 2015; Etkin et al., 2021). This includes issues considered to be ‘internalising’ concerns, such as anxiety (e.g., fear, worry, obsessive thoughts) and depression (e.g., sadness, hopelessness, low self-esteem), as well as those described as ‘externalising’ behaviours, including oppositional and defiant behaviour, impulsivity, aggression, and antisocial and risky behaviour. Researchers have posited that adolescents may be more likely to under-report symptoms and behaviours within certain domains of functioning (e.g., anxiety, conduct problems) to present a more positive view of themselves, consistent with a social desirability bias (De Los Reyes et al., 2015; McMahon & Frick, 2005).

Research indicates low consistency between parent and adolescent ratings of adolescent mental health problems. A key meta-analysis involving 341 studies reported that the concordance between adolescent and parent ratings of adolescent mental health problems is low to moderate (De Los Reyes et al., 2015). Consistent with this finding, research indicates that the most effective approach in identifying psychological disorders is to obtain both parent and adolescent reports (Kuhn et al.,

2017; van Dulmen & Egeland, 2011). However, there is reliable evidence that there is value in obtaining parental perspectives on adolescent mental health concerns, particularly when adolescent reports are unavailable. One recent study examining the predictive validity of mental health screening measures found that, while combined parent and youth reports were most successful, parent report was more successful than adolescent report in predicting psychological diagnoses among adolescents (Kuhn et al., 2017). Further, parent report may be more valid depending on the domain and context of the behaviour, with the meta-analytic work by De Los Reyes et al. (2015) finding that stronger parent-youth correspondence was observed for overt externalising behaviours, and for concerns observable in the home context.

There is a strong argument for assessing adolescent gambling participation and problem gambling from a parent perspective. Canadian survey research conducted with parents has assessed both parental participation in gambling with children, and children's gambling behaviour without parental involvement ($N = 2,710$; Campbell et al., 2011; Ladouceur et al., 1998). When asked about their adolescent's gambling, between 12.5 per cent (Campbell et al., 2011) and 28 per cent of parents (Ladouceur et al., 1998) reported knowing that their adolescent had gambled. These rates are reasonably consistent with gambling prevalence rates reported by adolescents. While this research did not assess parental knowledge of adolescent gambling across different gambling activities or of adolescent problem gambling, it does demonstrate the capacity for parents to report on their children's gambling.

Further, several Australian studies of adolescent gambling suggest that the gambling behaviour of adolescents is observable to parents and occurs within the home and family context. This research has found that parents or guardians are the greatest facilitators of gambling (Delfabbro et al., 2005; Dowling et al., 2010; Freund et al., 2019). For instance, in the NSW Youth Gambling Study 2020, 54 per cent of adolescents who had gambled during the last 12 months had gambled with their parent or guardian, compared to 27 per cent who had gambled with a friend or peer, and 20 per cent who had gambled with a sibling (Hing et al., 2021). Similarly, in a survey of 3,746 Victorian secondary school students, the most common gambling modality was gambling at home or the home of a friend (52%) followed by a parent purchasing or playing on their behalf (51%) (Freund et al., 2019).

Thus, the present study fills an important research gap by gaining important collateral information regarding adolescent gambling in the form of parent report. Importantly, the methodological issues highlighted above related to adolescent reports of their own gambling has applicability to assessing parental perspectives and were considered in the design of the survey instrument for parents.

5.3.3. Adolescent engagement in simulated gambling

Data has started to emerge on young people's involvement in simulated gambling activities. These products are software or applications that involve realistic simulations of gambling activities and environments, but do not involve monetary payoffs. Adolescents can legally and easily use their personal smart devices to access simulated gambling games in the form of loot boxes, social casino games, demo games, and video games with gambling components (Delfabbro & King, 2021). Monetary reward structures are becoming increasingly prevalent in video games, in which the purchase of additional content or items using real money is required or strongly encouraged to progress further in the game, extend playing time, or purchase loot boxes (Hing et al., 2022a).

Loot boxes are digital containers that can be purchased or won through in-game play and yield a mystery prize when opened (Rockloff et al., 2021; Zendle et al., 2019). These items can have functional value, such as weapons and abilities that enhance in-game performance; aesthetic and prestige value, such as skins to decorate in-game characters or weapons; or material value where virtual currency is won and can be spent on in-game items or progression (Drummond & Sauer, 2018; Greer et al., 2019). Like many forms of gambling, the loot box prize is not known in advance and is usually determined by chance. Social casino games directly replicate gambling activities, such as online slots and other casino games. They can be downloaded as apps or played on social media sites. Although players can win only in-game currency, many social casino games allow players to purchase virtual credits with real money to expedite continued play (Hing et al., 2022a). Simulated casino games can also be played as demo games on real-money gambling websites and are promoted as a way to practise gambling without spending money. Other games with gambling components have embedded gambling games, such as wheel spinning or bingo, that are secondary to the main theme of the game (King, 2018). They provide opportunities to advance in the game or obtain in-game items or currency.

The NSW Youth Gambling Study 2020 (Hing et al., 2021) estimated that the past-year prevalence of simulated gambling among adolescents was 36.5 per cent for purchasing loot boxes, 31.7 per cent for games with gambling components, 14.2 per cent for demo games, 14.2 per cent for social casino games on apps, and 11.8 per cent for social casino games on social media. Other studies, although not necessarily with representative data, suggested that 30-40 per cent of adolescents report purchasing loot boxes or playing games with gambling components in the past year (González-Cabrera et al., 2022; Hayer et al., 2018; Rockloff et al., 2021), and 12-25 per cent report playing social casino games (Gainsbury et al., 2015; The Gambling Commission, 2019; Veselka et al., 2018).

Young people who engage in simulated gambling are more likely to gamble on monetary forms and to experience gambling problems (Hing et al., 2022b; Wardle & Zendle, 2021), but few longitudinal studies have been conducted to confirm any 'gateway' effect (Dussault et al., 2017; Hayer et al., 2018; Kristiansen et al., 2018). Nonetheless, simulated gambling is thought to foster gambling participation and gambling problems because it provides a training ground for gambling, normalises gambling, creates erroneous gambling beliefs, and increases exposure to gambling-themed advertising (Armstrong et al., 2018; Hing et al., 2022a; Kristiansen et al., 2018).

Some simulated gambling activities, including loot boxes and games with gambling components, are an unavoidable and integral part of many games that young people play. The nature of these activities may mean that parents are not aware of what these activities are, nor the extent to which their own adolescent is exposed to them. Consistent with this, a survey of 824 South Australian secondary school students found that adolescents reported low parental supervision over their simulated gambling activities (King & Delfabbro, 2016). However, it is important to note that low parental supervision of an adolescent's activity does not necessarily equate to low parental knowledge, as parental monitoring can be accomplished through other means, including direct questioning from parents and spontaneous disclosure of information by adolescents (Kerr & Stattin, 2000). Clearly, research is needed with parents to establish whether they have knowledge of their adolescent's involvement in simulated gambling.

5.3.4. Continuity of adolescent gambling into adulthood

The main question assessed by research into the consequences of adolescent gambling is whether adolescent gambling leads to gambling and gambling problems in adulthood. This is based on the assumption that patterns of risky behaviour established during adolescence may continue across the transition into adulthood (Delfabbro et al., 2014). Indeed, there is some evidence that early patterns of adolescent gambling are associated with gambling in adulthood. Retrospective research with adult gamblers suggests that age of onset is a significant risk factor for problem gambling in adulthood, with involvement in gambling as an adolescent associated with problem gambling in adulthood (Browne et al., 2019a; Johansson et al., 2009), and potentially with greater severity of problem gambling (Jiménez-Murcia et al., 2010). Even within a cross-sectional study of 1,624 U.S. adolescents, earlier age of onset (i.e., during pre-adolescence) was associated with problem gambling severity (Rahman et al., 2012).

Longitudinal prospective designs in which adolescents are tracked into adulthood provide the strongest assessment of the stability of adolescent gambling into adulthood. Several longitudinal studies from Australia (Delfabbro et al., 2014, 2009) and internationally (Carbonneau et al., 2015; Edgerton et al., 2015; Pisarska &

Ostaszewski, 2020; Slutske et al., 2003; Winters et al., 2005) have highlighted that there is little continuity in gambling across adolescence into early adulthood, with gambling behaviour in general tending to decline or cease across time. Importantly, this research indicates substantial individual variability in gambling behaviour over time. This finding is consistent with the trajectories of other adolescent conduct problems or antisocial behaviours (López-Romero et al., 2017; Vassallo & Sanson, 2013).

While gambling research has noted significant individual variability in gambling trajectories, a small but significant proportion of adolescent gamblers go on to engage in problematic gambling in adulthood (Carbonneau et al., 2015; Pisarska & Ostaszewski, 2020; Winters et al., 2005). This points to the need to better understand the factors that might place individuals at risk of persistent gambling problems and subsequent gambling harm to design effective prevention or early intervention approaches that can be deployed during adolescence. However, only a handful of studies have examined factors that predict persistent gambling problems from adolescence to young adulthood. In these studies, potentially important risk factors for gambling continuity include impulsivity and sensation-seeking (Botella-Guijarro et al., 2020; Edgerton et al., 2015; Pisarska & Ostaszewski, 2020), and higher gambling frequency and being male (Carbonneau et al., 2015), while positive relationships with parents have been implicated as protecting against ongoing gambling participation (Pisarska & Ostaszewski, 2020). Unsurprisingly, the factors found to predict continuity in adolescent gambling into adulthood are similar to those associated with the development of adolescent gambling (see Section 5.3.5 below).

5.3.5. Factors that influence adolescent gambling

Like any problematic behaviour or mental health concern, the development of adolescent problem gambling is best conceptualised from a bioecological perspective, in which the interplay of individual, environmental and broader community and societal factors is considered (Johansson et al., 2009). The following section provides a brief overview of the key risk and protective factors within each of these domains, followed by a more detailed discussion about risk and protective factors within the family environment, particularly the influence of parents.

5.3.5.1. Individual characteristics

Most research examining factors associated with adolescent problem gambling have focused on individual factors, with particular sociodemographic factors, psychological characteristics or personality traits argued to make young people more prone to engage in gambling and develop gambling problems (Dowling et al., 2017a). A systematic review of 44 cross-sectional studies in Europe identified several sociodemographic factors associated with adolescent gambling, including being male, of a minority cultural or ethnic background, growing up in a single-parent household and being of lower socioeconomic status (Calado et al., 2017). Similar

findings were obtained in a comprehensive meta-analysis of 15 longitudinal studies of youth gambling that examined the effect of 14 individual risk and protective factors (Dowling et al., 2017a). The researchers found that the only reliable sociodemographic risk factors were male gender and low socioeconomic status. Two more recent longitudinal studies of adolescents in Poland (Pisarska & Ostaszewski, 2020) and in Canada (Allami et al., 2017) have supported male gender as a key risk factor, as has a recent cross-sectional, multinational study of European adolescents (Andrie et al., 2019).

In terms of psychological characteristics, research has highlighted the influence of difficulties with underlying self-control and regulation of behaviour on the development of gambling in adolescents. In the longitudinal studies by Allami et al. (2017) and Pisarska and Ostaszewski (2020), impulsivity, sensation seeking, and under-controlled temperament were reliably associated with problem gambling. Other important individual risk factors identified by Dowling et al. (2017a) were related to the young person's mental health and psychological adjustment, with these factors also implicated in the development of problem gambling in more recent research (Allami et al., 2017; Andrie et al., 2019; Pisarska & Ostaszewski, 2020). In the review by Dowling et al. (2017a), alcohol and substance use emerged as a thematic risk factor, with tobacco use, alcohol use frequency, cannabis use, and illicit drug use each found to be significant individual risk factors. A constellation of risk factors related to antisocial behaviour were identified including delinquency, association with deviant peers, violence, and low academic achievement. In comparison, internalising symptoms, including anxiety, psychological distress, and suicidal ideation, were not significant longitudinal predictors of problem gambling. There was a small but significant association between early depressive symptoms and later gambling.

Further research is needed to determine the temporal associations among adolescent gambling and substance use, antisocial behaviour, and depression, in terms of whether gambling is a cause or consequence of these issues, or whether these are co-occurring concerns that share an underlying psychological cause. The associations among these constructs are likely to be complex and reciprocal in nature. Consistent with this complexity, the longitudinal research by Allami et al. (2017) suggests that there are likely to be separate developmental pathways to problem gambling, with each pathway characterised by a particular profile of psychological risks and outcomes.

5.3.5.2. Environmental influences: Peer relationships

As children transition into adolescence, peers become increasingly influential in their behaviour, decision-making and overall wellbeing. Research into gambling among adolescents has therefore investigated the role of peers as a potentially important environmental influence in the initiation and continuation of gambling. In Australian

surveys of gambling among youth, associating with peers who gamble was related to greater adolescent gambling involvement and adolescent problem gambling (Freund et al., 2019; Hing et al., 2021). Hing et al. (2021) also found that gambling participation was linked to a higher sense of belonging to an online community, suggesting a role of peers in the context of online gambling activities. Furthermore, in research drawing on the Longitudinal Study of Australian Children data, Warren and Yu (2018) found that having peers involved in other risky behaviours (e.g., trying drugs, smoking cigarettes, getting into fights) was associated with adolescent gambling participation at age 16 to 17 years. In line with this, research with 632 Pacific Islander 17-year-olds in New Zealand found that gang involvement was associated with greater gambling participation compared with not having gang associations (Bellringer et al., 2019).

Only two studies have examined the longitudinal associations between peer factors and adolescent gambling. Yücel et al. (2015), in their study of 156 Australian adolescents, found that early adolescent social problems were negatively associated with problem gambling in late adolescence at a bivariate level, suggesting that male adolescents who were socially competent and well-liked by their peers were more likely to develop problematic gambling. This is consistent with the view that one pathway to gambling among males may initially be via recreation and socialising with peers. However, this relationship was not replicated in multivariate analyses in which other individual risk factors were included. Similarly, a recent longitudinal study with 511 Polish adolescents found that peer risk behaviours and quality of peer relationships during tenth grade were not independent predictors of at-risk gambling in twelfth grade once other key demographic, individual and parenting factors were controlled (Pisarska & Ostaszewski, 2020). Thus, overall, the evidence for the influence of peers on adolescent gambling is limited, and more longitudinal research is needed to more comprehensively examine how peers might play a role in the development of gambling problems among young people.

5.3.5.3. Community and societal influences

The most relevant societal influences on adolescent gambling relate to advertising of gambling and simulated gambling, and particularly sports betting advertising. This generation is the first to be exposed to widespread gambling advertising in their formative years, most notably sports betting advertising in broadcast media. In the NSW Youth Gambling Study 2020 involving 2,200 adolescents, nearly one-half (46.1%) reported noticing gambling advertising on televised sports and racing events at-least weekly (Hing et al., 2021). Exposure to this advertising can have normalising effects, fostering positive attitudes, increased knowledge, and greater interest in betting. For example, around one-third of adolescents in the NSW Youth Gambling Study 2020 reported that betting on sport is normal, and that gambling advertisements have increased their knowledge of gambling options (Hing et al., 2021). Also in Australia, experimental research using an Implicit Association Test

found an unconscious association between gambling and sport when young people were shown sport-relevant (vs. sport-irrelevant) gambling logos, and gambling-relevant (vs. gambling-irrelevant) sport names (Li et al., 2018). This association was positively related to the amount of sports viewing and positive attitudes to gambling, suggesting that sports-related gambling sponsorship can influence the nonconscious minds of young people. Australian studies have also shown strong brand association between gambling sponsors and sport, where many young people can correctly pair gambling brands with the teams and sports they sponsor (Bestman et al., 2015; Pitt et al., 2017; Sproston et al., 2015).

Gambling advertising is also common in the digital spaces that young people frequent, with one-third (34.8%) of adolescents in the NSW Youth Gambling Study 2020 reporting at least weekly exposure to gambling advertising in online and social media (Hing et al., 2021). Digital gambling advertising includes paid advertisements, messaging through social media platforms (e.g., Twitter), sponsored content by online influencers, and unregulated advertising for online casinos and other unlicensed gambling sites. An emerging trend is the use of young social influencers who are shown being rewarded with large wins that have been falsely manipulated by their gambling sponsors (Greer et al., 2019; Hing et al., 2021). Young people also describe seeing gambling advertisements in social media, especially on YouTube, before watching gaming or sports videos (Thomas et al., 2018). Gambling advertising appears on streaming platforms and gaming apps when playing video games and watching esports competitions (Hing et al., 2021). Adolescents may not recognise this content as paid advertising or that the advertising might be deceptive, given that these promotional messages are embedded in their everyday digital activities and are often communicated by influential peers.

Research has identified an 'exposure-response' effect, with gambling participation, intentions and problems increasing with greater exposure to gambling advertising (Hing et al., 2014, 2021; Noble et al., 2022; Sproston et al., 2015). Survey research with 6,377 Australian secondary students examined associations between gambling behaviour and exposure to 11 different types of gambling advertising (e.g., on TV, on social media, on billboards, in sporting stadia). Exposure to one additional type of gambling advertising was associated with a 6 per cent increase in the odds of past-month gambling and a 10 per cent increase in the odds of gambling problems (Noble et al., 2022). When advertising types were compared, only exposure to online gambling ads (websites, pop-ups on websites, social media) was significantly associated with gambling and gambling problems (Noble et al., 2022). While causal relationships between advertising exposure and gambling behaviour are unclear, there is little doubt that adolescents have become increasingly exposed to gambling over the last decade. Further, parents report high levels of concern about their children's exposure to this advertising, and that they find it difficult to compete with

this plethora of positive gambling messages in attempting to protect their children from the risks and harms of gambling (Pitt et al., 2016; Thomas et al., 2016).

5.4. The role of parents and the family environment

Parents play a central role in the healthy physical, social, and psychological development of adolescents. The literature on parental influences on adolescent outcomes generally examines two major domains of parenting: 1) parenting practices and 2) the parent-adolescent relationship. Effective parenting practices involve consistent and appropriate limit setting, monitoring and supervision, clear communication, and appropriate conflict management. Strong parent-adolescent relationships are those characterised by high levels of connectedness, support and acceptance and low levels of rejection, hostility, and negativity.

A large evidence base attests to the capacity of effective parenting and strong parent-adolescent relationships to protect against a range of negative adolescent outcomes. These include conduct problems and antisocial behaviour (e.g., aggression, rule-breaking, truancy; Hoeve et al., 2009; Wang et al., 2011), mental health problems (Wang & Sheikh-Khalil, 2014; Yap et al., 2014), risky sexual behaviour (Widman et al., 2016), early alcohol use (Kelly et al., 2011b) and tobacco use (Kelly et al., 2011a). Furthermore, parenting programs that focus on targeting *modifiable* parenting factors, namely parenting practices and parent-adolescent relationship behaviours, have been shown in controlled trials to reduce problematic and disruptive adolescent behaviour (Sanders et al., 2014) and improve adolescent mental health (Yap et al., 2017).

Less is known about the influence of parenting factors on gambling participation and gambling problems among youth. Much of the evidence base has focused on the association between parental gambling and adolescent gambling, although recent research has increasingly focused on the parenting practices and dimensions of the parent-adolescent relationship that may be associated with adolescent gambling (e.g., Dowling et al., 2017a; Molinaro et al., 2014; Pisarska & Ostaszewski, 2020). Thus, the following section reviews the research on parenting and adolescent gambling.

5.4.1. The association between parental gambling and adolescent gambling

Within the gambling literature, the role of parental gambling has been evaluated in two major ways: 1) by examining retrospective risk factors for problem gambling among adult gamblers, and 2) surveying adolescents on their gambling experiences.

In research with adult gamblers, early exposure to gambling and family involvement in gambling have been identified as risk factors for later problem gambling and gambling harm (Browne et al., 2019a; Dowling et al., 2016, 2021). For instance, in a

survey of 3,953 Australian adults, respondents who reported parental problem gambling during their childhood were over 10 times more likely than those who had not reported parental gambling to be classified as a current problem gambler (Dowling et al., 2016). Consistent with this, a multivariate evaluation of 25 risk factors for gambling harms found that early gambling experiences, particularly childhood exposure to family gambling problems, was a key predictor of gambling harm in adults (Browne et al., 2019a).

In research with adolescents, one of the most robust findings is the association between parental and child gambling (Calado et al., 2017; McComb & Sabiston, 2010), such that adolescent problem gambling is more likely to occur among adolescents with parents who gamble. Paternal problem gambling has been highlighted in one Australian study as presenting stronger risk than maternal problem gambling (Dowling et al., 2017b). This body of research highlights social learning influences and parental modelling of gambling behaviour as important to the transmission of gambling behaviour across generations. Further, adolescents may be vicariously reinforced for gambling and therefore be more likely to engage in gambling themselves when they have parents who talk about gambling positively and visibly celebrate and discuss gambling wins with their adolescent.

The potentially important role of social learning influences on adolescent gambling has been highlighted in several Australian surveys that have found an association between parental gambling and adolescent gambling (Delfabbro et al., 2005; Dowling et al., 2010; Freund et al., 2019; Hing et al., 2021). For example, in the NSW Youth Gambling Study of 2,220 youth conducted by Hing et al. (2021), growing up with a problem gambling adult uniquely predicted problem/at-risk gambling among adolescents. Importantly, unlike other adolescent risk behaviours (e.g., alcohol use, smoking), parents often approve of, are involved in, and facilitate their children's gambling behaviour (McComb & Sabiston, 2010). For example, in a study of 824 South Australian secondary school students, adolescents reported that their parents were actively involved in their financial gambling activities, particularly in the form of scratch tickets (20% of the sample) and sports betting (11% of the sample; King & Delfabbro, 2016). Similarly, in the NSW Youth Gambling Study, gambling with parents during childhood and parental approval of gambling were independent predictors of gambling participation (Hing et al., 2021), while parental approval of gambling was associated with frequent gambling in a U.S. study of 2,805 adolescents (Leeman et al., 2014).

A national survey of over 2,710 Canadian parents of adolescents further supported the suggestion that parents often endorse and/or are actively involved in the gambling activities of their children. In one of the only surveys of parents regarding youth gambling, results indicated that around 60 per cent of respondents had gambled with money with their adolescent (Campbell et al., 2011). The most

common activities reported by parents was purchasing joint scratch tickets (40%), joint raffle tickets (36%) and joint lottery tickets (12%). Follow-up analyses comparing responses from mothers and fathers revealed several trends in both parental attitudes and parental involvement in adolescent gambling (Shead et al., 2011). Fathers tended to report more lenient attitudes towards adolescent gambling in comparison to mothers. While similar proportions of mothers and fathers reported having gambled with their adolescent child, mothers were more likely to gamble on scratch tickets and raffle tickets with their adolescents, whereas fathers were more likely to participate with their adolescent when gambling with money on poker, sports betting and private or informal betting (e.g., betting on sports they are playing together). While fathers more often than mothers reported that they took part in these activities with their daughters, fathers also reported higher rates of gambling involvement with their sons compared to daughters. This points to a need to consider parent and adolescent gender when examining the association between parent gambling and adolescent gambling.

Thus, among adolescents whose parents gamble, adolescents are not only directly observing their parent's gambling but are also supported or encouraged to gamble themselves in their parent's presence. Overall, parental approval and facilitation of adolescent gambling conveys the message to adolescents that gambling is an acceptable and harmless activity, and the available research suggests that this may be associated with gambling participation in young people. However, further work is needed to confirm whether this co-gambling behaviour is associated with adolescent gambling and adolescent problem gambling.

It is also important to consider whether there are certain protective parental behaviours, whether gambling-specific, or related to parent-adolescent interactions more generally, that might buffer the effect of parental gambling on adolescent gambling. Parental guidance and communication about gambling might be one means by which parents can educate adolescents about safer gambling practices. Yet, the research with Canadian parents (Campbell et al., 2012) indicated that gambling was an issue considered to be of low concern in comparison to other adolescent issues (e.g., alcohol use, drug use, excessive video game playing, obesity) and was infrequently discussed with adolescents. Mothers were more likely than fathers to have talked to their adolescents about gambling, and both parents were more likely to have talked to their sons compared to their daughters (Shead et al., 2011).

5.4.2. The association between the parent-adolescent relationship and adolescent gambling

Unlike research on other adolescent problem behaviours, only a handful of studies have investigated the influence of parent-adolescent relationship behaviours on adolescent gambling (McComb & Sabiston, 2010). One early cross-sectional study

with 116 U.S. adolescents indicated that parent-adolescent connectedness and involvement was associated with lower levels of adolescent gambling, while adolescents who reported negative parent-adolescent relationships were more likely to be classified as problem gamblers (Magoon & Ingersoll, 2006). These findings have been replicated in larger multivariate studies of Canadian secondary school students (Casey et al., 2011; Haroon et al., 2004). In one of these studies, ($N = 2,336$), students who reported high family conflict and hostility and low parental support were more likely to be categorised as at-risk/problem gamblers (Haroon et al., 2004).

The importance of positive relationships with parents for reducing the risk of problem gambling has been supported in several international studies. This includes a multinational study of 31,326 16-year-olds from nine European countries (Molinaro et al., 2014) and longitudinal research with 511 Polish adolescents (Pisarska & Ostaszewski, 2020). In this latter study, which assessed several key individual, family and social factors, parental connectedness, and involvement uniquely predicted gambling involvement, but peer relationships did not, highlighting the continuing importance of parents in adolescent behaviour.

One cross-sectional study involving a sample of 2,017 Greek secondary school students is notable for assessing both maternal and paternal influences on adolescent gambling (Floros et al., 2013). This study found that adolescents who reported higher levels of mothers' and fathers' connectedness also reported lower levels of self-reported gambling problems. In comparison, higher perceived control and intrusiveness in the mother-adolescent and father-adolescent relationship was associated with higher adolescent problem gambling. Interestingly, this study also found that paternal connectedness and maternal control were each independently associated with internet gambling participation, after controlling for adolescent gender and involvement in other online activities.

Finally, two studies have indicated that positive parent-adolescent relationships might moderate the effect of other risk factors for gambling on adolescent gambling behaviour. Australian survey research with 612 Victorian secondary school students found that high parental involvement attenuated the influence of maternal problem gambling on adolescent at-risk/problem gambling (Dowling et al., 2017b), suggesting that parental involvement acted as a protective factor in the link between parent and adolescent gambling. Research with 1,174 Spanish adolescents indicated that high parental support also buffers the effect of exposure to gambling advertising on adolescents, as adolescents with high family support were less likely to hold favourable attitudes towards gambling (Parrado-González & León-Jariego, 2020).

5.4.3. The association between parenting practices and adolescent gambling

Research examining the role of parenting practices in adolescent gambling has largely focused on parental monitoring and discipline practices, given their strong association with other externalising and antisocial behaviour problems in adolescents (e.g., Hoeve et al., 2009; Kelly, Toumbourou, et al., 2011; Wang et al., 2011). Most of this research has examined the protective role of parental monitoring, which refers to parents' knowledge of the who, what and where of their adolescent's activities (Racz & McMahon, 2011). Fewer studies have examined the role of ineffective discipline practices, with this research generally investigating the effect of harsh, coercive, and/or inconsistent discipline on adolescent gambling.

Several cross-sectional studies support an association between parenting practices and adolescent gambling (McComb & Sabiston, 2010). For instance, one Canadian study of 938 adolescents found that adolescent-reported high parental monitoring and lower levels of ineffective discipline were associated with lower levels of adolescent gambling involvement and gambling problems, after controlling for parent gambling, adolescent impulsivity and sociodemographic background (Vachon et al., 2004). Similar findings were reported in a nationally representative survey of 10,063 Italian secondary school students, with higher parental monitoring associated with lower risk of being classified as an at-risk/problem gambler (Canale et al., 2017). A second study involving this same sample found that parental monitoring decreases the risk of adolescent gambling by increasing adolescents' disapproval of gambling and their awareness of gambling harms (Canale et al., 2016), suggesting an important mechanism underlying the relationship between parenting and adolescent gambling. Finally, the protective role of parental monitoring was supported by the findings of a multi-national study of 31,326 16-year-olds from nine European countries (Molinaro et al., 2014).

Longitudinal research with adolescents has reported mixed findings for the role of parental monitoring in the development of gambling problems in young people (Dowling et al., 2017a). Research with 717 adolescent boys in Canada indicated that parental supervision at age 13 to 14 years was not associated with gambling frequency or problem gambling at age 17 years, after controlling for adolescent impulsivity, delinquency and substance use, and peer deviancy (Vitaro et al., 2001). Consistent with this, research involving this same sample and a second Canadian sample of adolescent boys found that parental supervision at age 16 years did not uniquely predict gambling participation or gambling problems at age 23 years (Wanner et al., 2009). However, this research was conducted with adolescent boys growing up in the 1990s. Thus, it is difficult to know whether these findings would apply to a contemporary sample of adolescents, given the vast technological and social changes since that time generally and in relation to gambling (King et al., 2020), and the likelihood that the nature of parental monitoring and supervision has altered in response to these changes (Rudi & Dworkin, 2018).

In a more recent longitudinal study, involving 514 U.S. adolescents, Lee et al. (2014) examined longitudinal trajectories of parental monitoring across early adolescence (i.e., 11 to 14 years), rather than assessing monitoring at a single point in time. In well-controlled models, Lee et al. found that adolescents who experienced low and declining levels of parental monitoring between ages 11 to 14 years were significantly more likely to be problem gamblers by age 22 in comparison to young people who experienced high and stable levels of parental monitoring. While this research is consistent with the suggestion that parental monitoring may protect adolescents from developing gambling problems, clearly more research is needed within the current context of high accessibility to technological devices that enable gambling and simulated gambling activities (King et al., 2020).

5.4.4. Parental monitoring and limit-setting related to adolescent online behaviour

Increased accessibility to technology and to the internet has meant that parental monitoring and limit-setting now needs to consider young people's online activities and usage of smartphones, tablets, and other internet-connected devices (Padilla-Walker et al., 2018; Vaala & Bleakley, 2015). This expansion of parents' monitoring is likely to be particularly pertinent when it comes to gambling, with a vast array of gambling activities readily accessible on the internet, including sports betting, online casinos, and virtual poker (King et al., 2020). Adolescents can also access simulated gambling activities through online digital media, such as via smartphone apps and social media sites, and through online video games (Hing, Dittman, et al., 2022; King et al., 2014).

Research has begun to emerge on the relationship between parental media monitoring and adolescent technology and internet use. Parental media monitoring refers to parental efforts to supervise, discuss and/or set limits around their child's use of technology and the internet (Padilla-Walker et al., 2018). Available research suggests that active and appropriate monitoring that is not overly restrictive reduces adolescent media use (Padilla-Walker et al., 2018), risky online behaviour (Chng et al., 2015) and may protect against externalising behaviour problems (Padilla-Walker et al., 2016). Other research has indicated that general parental monitoring, rather than monitoring aimed specifically at adolescent technology and internet use, is more important in protecting adolescents from internet misuse (Vaala & Bleakley, 2015).

Two studies have examined parental media monitoring in the context of adolescent online gambling and problem gambling. The study by Flores et al. (2013) with 2,017 Greek adolescents investigated the relationship between parent-reported use of internet security measures (e.g., ensuring computers are placed in public areas, developing a contract for internet use, using online parent control and content

filtering software) and gambling. They found that parental media monitoring was not associated with adolescent online gambling, nor with problem gambling. Similar findings were reported by King and Delfabbro (2016) in their study of 824 South Australian secondary school students. Adolescent-reported parental media monitoring, comprising items assessing restrictions on online content, limit-setting for time spent online, and rules regarding use of technological devices in bedrooms, was not related to adolescent simulated gambling, and did not independently predict adolescent problem gambling.

5.5. Summary

The available research provides support for the role of parental gambling behaviours and attitudes in the development of adolescent gambling, although more work is needed to identify the specific gambling-related behaviours that might either facilitate or limit adolescent gambling. Further, the available literature suggests that positive parent-adolescent relationships and appropriate levels of parental monitoring in general are likely to protect adolescents from gambling participation and gambling problems. However, most work has been conducted with adolescents themselves, with very little research investigating the issue of adolescent gambling from the perspective of parents. Furthermore, while there are several recent large Australian and International surveys of adolescent-reported gambling behaviour, the limited research on the influence of parenting and the parent-adolescent relationship is becoming outdated (King & Delfabbro, 2016; Magoon & Ingersoll, 2006; McComb & Sabiston, 2010). This is because these studies were conducted prior to increased availability of online gambling, extensive promotion of gambling in television and social media, and a proliferation of simulated gambling activities.

Thus, there is a significant gap regarding the role that parents play in the development of gambling behaviour among adolescents. Research is needed to better understand the modifiable risk and protective factors for adolescent gambling and problem gambling, which is an important public health issue among adolescents in NSW. Such research will benefit adolescents, parents and the wider community through its application to the design of effective population health strategies to protect adolescents from problem gambling and gambling harm (Messerlian et al., 2005).

6. Methodology

6.1. Participants and recruitment

This project received ethical approval from the CQUniversity Human Research Ethics Committee (Clearance number: 23502).

To take part in the study, participants were required to provide consent, be the parent or guardian of an adolescent aged 12 to 17 years and reside in the state of NSW. In addition, to ensure enough fathers were in the sample for sub-group analyses, a quota of 25.0 per cent was set for male respondents. Using these criteria, recruitment was conducted through multiple market research panels with the assistance of Qualtrics. A soft launch of the survey was conducted from 27th May 2022 to 30th May 2022. The survey was confirmed to be working as intended, but three participants were noted to be too young to be a biological parent of an adolescent (i.e., less than 15 years difference in age between parent and adolescent) and their specified relationship to the target child was inconsistent with a guardianship role. Therefore, these responses were deemed invalid, and this criterion was included as an additional validation criterion in the review process for the full launch.

The full launch commenced on the 1st of June 2022, and the first round of recruitment was completed on the 14th of June 2022. A total of 1,103 potential respondents started the survey. Data quality checks resulted in a total of 203 exclusions. Some respondents were excluded for more than one reason, so the following numbers sum to more than 203. Thirty-eight were removed due to less than 15 years difference between the parent and adolescent, 188 were found to be duplicates (i.e., individuals recruited from two separate panels who completed the survey twice), 32 were poor quality responses (e.g., irrelevant text responses, sped through the survey), 11 straightlined through some or all of the survey (i.e., indicated the same answer through scales when it was inappropriate to do so), six respondents did not complete the survey, and 16 had IP addresses that indicated that they were outside of Australia.

The survey went back into the field for a further data collection period from the 20th of June 2022 to the 21st of June 2022. There were an additional 312 responses, resulting in a total of 1,212 potential responses. Among them, 27 respondents were excluded. Again, some respondents were excluded for more than one reason; therefore, the following numbers total more than 27. Ten were removed as there was less than 15 years difference between the parent and adolescent and they specified that they were the biological parent of the target adolescent, two lived outside of NSW, 15 duplicates were identified, six were poor quality responses, four surveys were incomplete, and one IP address was outside of Australia. A total of 1,185 responses were retained for analysis.

6.2. Survey procedure

The content of the survey was informed by the literature review, previous youth gambling and adult gambling surveys, and refined in consultation with the ORG. The survey was constructed and hosted on the Qualtrics platform.

6.2.1. Introduction and informed consent

Prior to completing the survey, respondents were provided with a brief description of the study, detailing the purpose and voluntary nature of their participation (see Appendix A). They were also informed about protection of their confidentiality and how to contact help and support services if required. Respondents were then asked to confirm their consent to participate in the survey. If respondents declined, they were thanked for their time and screened out.

6.2.2. Screening questions

Four screening questions were used to determine eligibility for participation in the survey. First, it was determined if a respondent was a permanent resident of NSW by asking them if they were and requesting their postcode. Those who indicated a location other than NSW were screened out. Respondents were also screened out if they replied that they were not a parent or primary caregiver of a child aged between 12 and 17 years. Additionally, respondents were asked how many children they had in their household, with a response of 'zero' screening them out of the survey.

6.3. Survey measures

At the start of the survey, parents were informed that they would be asked to respond to a series of questionnaires about one child in their care and living in their household, aged between 12 and 17 years. Parents were instructed to choose the child with the next birthday if they had more than one child in their household aged between 12 and 17 years. This child was referred to from here as the 'target adolescent'.

A copy of the survey instrument can be found in Appendix A.

6.3.1. Demographics

Respondents were asked their age, gender, Aboriginal and/or Torres Strait Islander status, main language spoken at home, highest level of education, current work situation, yearly household income, marital status, and household composition. They were also asked about year of birth, gender, relationship to and main daily activity of the target adolescent. Participants were also asked to indicate if there were shared custody arrangements for their adolescent (i.e., their adolescent lived some of their

time with another parent or caregiver) and, if so, how many days out of the month the adolescent resided with the respondent.

6.3.2. Parental attitudes to gambling and adolescent gambling

Concern about gambling relative to other adolescent issues was assessed by asking respondents to rank 16 common adolescent issues (e.g., drug use, gambling, bullying) in order of concern, with the most concerning issue at the top. The list of issues was adapted from the Canadian parent survey on youth gambling (Campbell et al., 2011).

Parental attitudes toward gambling were assessed via 14 statements that were developed based on the Canadian parent survey of youth gambling (Campbell et al., 2011) and the NSW Youth Gambling Study (Hing et al., 2021). Ten statements related to general gambling attitudes (e.g., If you really know the game, gambling can be an easy way to make money) and four reflected attitudes toward adolescent gambling (e.g., There is nothing wrong with teens' gambling occasionally). Respondents were asked to indicate to what extent they agreed or disagreed with each statement on a five-point scale from 1 (*strongly disagree*) to 5 (*strongly agree*).

6.3.3. Adolescent gambling behaviour

Adolescent participation in traditional forms of gambling was assessed by asking respondents to report on their knowledge of the target adolescent's participation in 14 forms of gambling including traditional forms (e.g., scratch tickets, pokies, keno, casino games) and emergent forms (e.g., skin betting, Esport betting). Except for informal private betting with family or friends, all forms of gambling that were listed in the survey are illegal for young people aged under 18 years in Australia. Parents were first asked to indicate 'yes', 'no' or 'don't know' as to whether their adolescent had taken part in each gambling form for money in the past 12 months. Those who indicated 'yes' were then asked how often their adolescent participated in that gambling form in the past 12 months from 0 (*never in the last 12 months*) to 6 (*4 or more times a week*).

Adolescent engagement in simulated forms of gambling was captured by asking respondents, based on their knowledge, how frequently their adolescent participated in four simulated forms of gambling (e.g., loot boxes) in the last 12 months from 0 (*never in the last 12 months*) to 6 (*4 or more times a week*). Respondents were also given the option to answer 'I don't know' to each item.

Parental concern about adolescent gambling was attained by asking respondents if they were concerned about the gambling behaviour of their adolescent (from 0 [*not at all concerned*] to 4 [*extremely concerned*]), if they thought their adolescent had a gambling problem (yes or no), and if they have ever sought assistance for concerns about their adolescent's gambling (yes or no). If respondents selected 'yes' to the

final question, they were asked what type of help they had sought for their adolescent (e.g., informal help from friends, gambling helpline).

Adolescent at-risk and problematic gambling in the past 12 months was assessed using the DSM-IV-MR-J (Fisher, 2000). Given the items were designed to be self-report, adjustments were made to the wording of each item to be suitable for parent report (see Appendix A). In addition, the response 'don't know' was added to nine of the 10 items to capture the possibility that parents had no knowledge of a particular problematic gambling behaviour. Scoring was conducted as per the adolescent-report version, with a total score calculated by summing the scores of all items. Respondents who endorsed 4 or more diagnostic criteria were classified as experiencing gambling problems, 2 to 3 criteria were classified as at-risk of gambling problems³, and 0 to 1 criterion as not experiencing problems. Internal consistency of the total score was .927 (Cronbach's α) and .939 (McDonald's ω).

6.3.4. Parental gambling behaviour

Parental participation in traditional and simulated forms of gambling was measured using items based on prior Australian surveys of gambling in adults (e.g., Browne et al., 2019b). Respondents were asked how frequently they had engaged in 14 commercial forms of gambling (e.g., bingo, esports) and four simulated forms of gambling (e.g., loot boxes) for money in the last 12 months from 0 (*never in the last 12 months*) to 6 (*4 or more times a week*).

To assess *adolescent exposure to parental gambling*, the survey was constructed to ask participants how often their adolescent was present for each of the traditional forms of gambling they had endorsed in the previous question about their own gambling behaviour. For instance, if respondents had indicated that they had bought lottery or lotto tickets in the past 12 months, then they were asked how often they had gambled with their adolescent on that gambling form in the last 12 months from 0 (*never in the last 12 months*) to 6 (*4 or more times a week*). In comparison, if parents indicated they had not bought lottery or lotto tickets in the past 12 months, then this gambling form did not appear in this section of the survey.

Parental problem gambling was measured using the Problem Gambling Severity Index (PGSI; Ferris & Wynne, 2001). Respondents reported on nine gambling behaviours on a four-point Likert scale from 0 (*never*) to 3 (*almost always*) as to how often they had demonstrated each behaviour in the past 12 months. Higher scores indicated higher problem gambling severity. Respondents were categorised based

³ The 'at-risk' cut-off on the DSM-IV-MR-J was not validated in the original research conducted by Fisher (2000). However, this at-risk cut-off has been routinely used in other survey studies in Australia (e.g., Dowling et al., 2010; Freund et al., 2019; Purdie et al., 2011) and was used in the NSW Youth Gambling Study 2020 (Hing et al., 2021). Thus, the present study also used the at-risk cut-off for consistency with other Australian research with adolescents.

on standard cut-offs: non-problem (0), low-risk (1-2), moderate risk (3-7) and problem (8-27). Internal consistency was .957 (Cronbach's α) and .957 (McDonald's ω).

Family gambling issues were assessed via two questions, which asked respondents to indicate if they had any concerns about the gambling behaviours of anyone in the adolescent's family and if anyone in the adolescent's family had ever sought professional help for problem gambling.

6.3.5. Parenting practices related to adolescent gambling

Parental facilitation of adolescent gambling was assessed by asking respondents how often in the past 12 months they had engaged in four behaviours that potentially limit adolescent gambling (e.g., discussed responsible gambling) and 13 behaviours that potentially facilitate adolescent gambling (e.g., given them money to gamble themselves). These items were developed based on prior surveys that assessed adolescent perceptions of parental behaviour (Hing et al., 2021; King & Delfabbro, 2016) and the Canadian parent survey (Campbell et al., 2012). Respondents rated each behaviour from 0 (*never in the last 12 months*) to 6 (*4 or more times a week*).

Parental online monitoring was assessed by asking respondents to rate six items related to strategies used by parents to monitor and regulate adolescent online usage (e.g., you set limits about the amount of time your teenager spends online). Items were developed based on prior literature on parental media monitoring (e.g., Khurana et al., 2015; Padilla-Walker et al., 2018) and consultation with the ORG. Respondents rated each item based on how often it typically happens in their home on a five-point Likert scale from 1 (*never or almost never*) to 5 (*almost always or always*).

Parental confidence in managing adolescent gambling and online behaviour was measured using a sliding scale. Respondents reported on 17 parenting practices related to adolescent gambling (e.g., talking to your teenager about the risks of gambling), and online behaviour (e.g., talking with your teenager about how they spend their time online) and online safety (e.g., helping your teenager if they have a bad experience online). They rated how confident they felt about enacting each of the behaviours on a scale from 0 (*certain I can't do it*) to 100 (*certain I can do it*).

Parent-adolescent communication was measured by asking respondents how often they had engaged in a conversation with their adolescent in the last 12 months about common adolescent issues. Respondents were presented with 16 issues that may affect adolescents (e.g., drug use, negative body image) and responded to each item on a seven-point Likert scale from 1 (*never in the last 12 months*) to 7 (*4 or more times a week*).

6.3.6. General parenting

Parenting practices, both effective and ineffective, were measured using the short form of the Alabama Parenting Questionnaire (APQ; Elgar et al., 2007). Nine items were used to assess the three subscales of Positive Parenting, Inconsistent Discipline and Poor Supervision. Respondents indicated how often they typically used each parenting practice on a five-point Likert scale from 1 (*never or almost never*) to 5 (*almost always or always*). The scores were summed for each of the three subscales, with higher scores on each subscale reflecting greater usage of that parenting strategy. Reliability was assessed for all subscales: Positive Parenting (Cronbach's $\alpha = .847$; McDonald's $\omega = .852$), Inconsistent Discipline (Cronbach's $\alpha = .720$; McDonald's $\omega = .720$) and Poor Supervision (Cronbach's $\alpha = .834$; McDonald's $\omega = .835$).

Positive and negative dimensions of the *parent-adolescent relationship* were assessed across three subscales (i.e., Connectedness, Shared Activities, and Hostility) on the Parent-Adolescent Relationship Scale (PARS; Burke et al., 2021). Respondents rated 15 items on a six-point Likert scale from 0 (*not at all true*) to 5 (*nearly always or always true*) in terms of their relationship with the target adolescent. Items in each subscale were summed and divided by the number of items to create a mean total score. Reliability was assessed for all subscales: Connectedness (Cronbach's $\alpha = .906$; McDonald's $\omega = .905$), Shared Activities (Cronbach's $\alpha = .782$; McDonald's $\omega = .789$) and Hostility (Cronbach's $\alpha = .817$; McDonald's $\omega = .818$). Higher scores on each subscale reflect greater levels of that dimension of the parent-adolescent relationship.

6.3.7. Adolescent adjustment

Adolescent emotional adjustment was assessed using the Emotional Difficulties subscale from the Adolescent Functioning Scale (AFS; Dittman et al., 2016). Respondents rated 5 items on a six-point Likert scale from 0 (*not at all true*) to 5 (*true most of the time*) in relation to the target adolescent in the past 4 weeks. The items were averaged to yield a mean score for the subscale. Reliability was Cronbach's $\alpha = .876$; McDonald's $\omega = .877$. Higher scores on each subscale reflected greater levels of the problem behaviour.

Impulsiveness was assessed using the Barratt Impulsiveness Scale-Brief (BIS: Steinberg et al., 2013). Eight items were assessed on a four-point Likert scale from 1 (*rarely/never*) to 4 (*almost always/always*) as to how well it described the target adolescent. Items 1, 4, 5 and 6 were reverse coded, and then all items were summed for a total score. Higher scores represented more impulsive behaviours. Reliability was Cronbach's $\alpha = .848$ and McDonald's $\omega = .841$.

6.3.8. Accessing support for adolescent gambling

Parental preferences for accessing adolescent gambling support were attained by asking respondents to rate the suitability of nine different delivery formats (e.g., in-person parent seminar, online learning program) for accessing information about adolescent gambling. Respondents rated the formats from 1 (*not at all suitable*) to 5 (*extremely suitable*).

6.4. Data analysis

Participants were required to answer all items before being able to continue with the survey. As such, there was no missing data. Descriptive analyses were used to address Research Questions 1 and 2 regarding parental attitudes towards gambling and adolescent gambling and parent reports of the nature and extent of gambling and simulated gambling among target adolescents. Chi-square analyses were used to evaluate differences by parent and adolescent gender and adolescent age in parent report of adolescent gambling and simulated participation, parental concerns about adolescent gambling and parent-reported symptoms of adolescent gambling. Chi-square analyses were also used to assess parent gender differences in parental reports of their own gambling participation and problem gambling, and rates of co-gambling with adolescents.

Research Question 3 related to identifying the demographic, adolescent, or parental factors that are associated with greater risk of adolescent gambling. Descriptive analyses explored the frequency of use of parenting behaviours that might facilitate or limit adolescent gambling and the frequency of parent's use of online monitoring behaviours. Descriptive statistics were also used to describe parents' confidence in managing adolescent gambling and online behaviour, and the frequency by which they engaged in conversations about issues (including gambling) affecting adolescents. Finally, descriptive analyses examined parents' own participation in monetary and simulated gambling and the frequency of involvement of their target adolescent in each self-identified form of gambling.

Research Questions 3 and 4 were then assessed by bivariate analyses (correlations for continuous variables, chi-square analyses for categorical variables) to identify the correlates of adolescent gambling participation and problem gambling. Hierarchical multiple regression analyses were then used to identify the factors that uniquely predicted adolescent gambling participation and adolescent at-risk/problem gambling. These analyses enabled the identification of characteristics of parents or adolescents at greater risk of having an adolescent with gambling problems and likely to benefit most from support (Research Question 4).

Finally, Research Question 5, was examined using descriptive analyses to assess parental preferences for receiving support.

7. Descriptive findings

7.1. Demographics

Demographic characteristics of the 1,185 respondents are reported in Table 1. Parents were aged between 20⁴ to 73 years (mean = 42.55; *SD* = 6.84) and most identified as female (68.9%). The proportion of male respondents (31.0%) was over the initial quota set with Qualtrics to obtain a minimum of 25.0 per cent males in the sample. The majority of respondents were married or in a couple relationship (80.3%), and were working full- or part-time (84.2%). Most parents had a post-school qualification (82.7%), and just over half of parents (56.7%) reported that their annual household income was above \$90,000⁵. Most participants reported that they were not of an Indigenous cultural background, while 7.2 per cent identified as being an Aboriginal and/or Torres Strait Islander person. Finally, most participants spoke English as their main language, with 7.3 per cent of the sample indicating that they spoke a language other than English.

Because almost all parents (98.3%) were either a biological/adoptive or step-parent, for the remainder of the report, 'parents' will be used as an over-arching term to describe the respondents to the survey, whereas 'fathers' will be used to describe male parents, and 'mothers' will be used to describe female parents. Two parents indicated a gender other than male or female and these participants were included in the overall sample, but not in separate analyses for mothers and fathers⁶.

⁴ This 20-year-old participant indicated that they were the older sister of the target adolescent and confirmed in the screening process that they were caring for that young person.

⁵ The median annual household income in Australia in 2019-20 was \$92,872 (Australian Bureau of Statistics, 2022).

⁶ We understand that this may seem to be an insensitive decision and is only made based on statistical analysis considerations. The other solution would be to include the two respondents in one of the parent categories at random.

Table 1 – Parent demographics (N = 1,185)

Variables	<i>n</i>	%
Gender		
Male	367	31.0
Female	816	68.9
Other	2	0.2
Marital Status		
Married or living with a partner	951	80.3
Separated or divorced (not living with a partner)	156	13.2
Widowed (not living with a partner)	11	0.9
Single/never married/never de facto	62	5.2
Other	5	0.4
Employment Status		
Working full-time	701	59.2
Working part-time	296	25.0
Home duties	136	11.5
Full-time student	4	0.3
Retired/pensioner	18	1.5
Sick or disability pension	3	0.3
Unemployed and looking for work	22	1.9
Other	5	0.4
Highest Educational Attainment		
Less than a secondary school education	93	7.9
Completed secondary school	113	9.5
A trade, technical certificate, or diploma	400	33.8
Undergraduate university degree	361	30.5
Postgraduate university degree	218	18.4

Variables	<i>n</i>	%
Annual Household Income		
Less than \$30,000	70	5.9
\$30,001 to \$50,000	90	7.6
\$50,001 to \$70,000	152	12.8
\$70,001 to \$90,001	140	11.8
\$90,001 to \$120,000	234	19.8
\$120,001 to \$160,000	229	19.3
\$160,001 to \$200,000	122	10.3
\$200,001 and above	90	7.6
Did not wish to disclose	58	4.9
Indigenous Status		
Aboriginal	74	6.2
Torres Strait Islander	7	0.6
Both Aboriginal and Torres Strait Islander	5	0.4
Not Indigenous	1099	92.7
Main Language Spoken at Home		
English	1099	92.7
Language other than English	86	7.3

Parents also reported on key demographics of their nominated adolescent. The target adolescents ranged in age from 12 to 17 years ($M = 14.65$; $SD = 1.69$). There were slightly fewer females than males (45.7% vs. 53.8%), and six identified as a gender other than female or male. Two thirds of adolescents lived in a two-parent family (66.3%), with representation of single-parent (19.7%) and step- or blended families (13.6%). The vast majority of parents (94.9%) reported that they were the biological or adoptive parent of the target adolescent.

Table 2 – Target adolescent demographics (N = 1,185)

Variables	<i>n</i>	%
Adolescent Age		
12	154	13.0
13	198	16.7
14	215	18.1
15	192	16.2
16	188	15.9
17	238	20.1
Adolescent Gender		
Male	637	53.8
Female	542	45.7
Other	6	0.5
Family Composition		
Two-parent original family	786	66.3
Stepfamily (two parents, one being a stepparent)	105	8.9
Blended family	56	4.7
Sole parent family	234	19.7
Other	4	0.3
Parent Relationship to Adolescent		
Biological or adoptive parent	1125	94.9
Stepparent	40	3.4
Grandparent	10	0.8
Other	10	0.8
Adolescent lives some of their time with another parent/caregiver		
Yes	226	19.1
No	959	80.9

7.2. Parental attitudes to gambling and adolescent gambling

7.2.1. Concern about gambling relative to other adolescent issues

Parents were asked to rank 16 adolescent issues in order from the most concerning (rank = 1) to the least concerning (rank = 16). Figure 1 displays the average ranking of each issue ordered from most concerning to least concerning, with lower means reflecting a higher-ranking concern. Parents ranked bullying as the most serious adolescent issue, followed by drugs, depression and anxiety, too much time online and unsafe sex. Gambling ranked on average as the eleventh most concerning issue to parents, while playing games with gambling like features ranked as the lowest issue of concern.

Similar findings were obtained when examining level of relative concern by looking at the proportion of parents who ranked a particular concern within their top three concerns (see Figure 2). Drug use was the issue of most concern using this approach, with around half of parents (51.1%) ranking it among their top three concerns. The next most common issues of concern reported by parents as being among their top three were bullying (37%), depression and anxiety (28.2%), too much time online (26.2%) and drink driving (23.3%). Nineteen per cent (18.5%) of parents reported that gambling was among their top three, while few respondents reported games with gambling like features as a concern (1.9%).

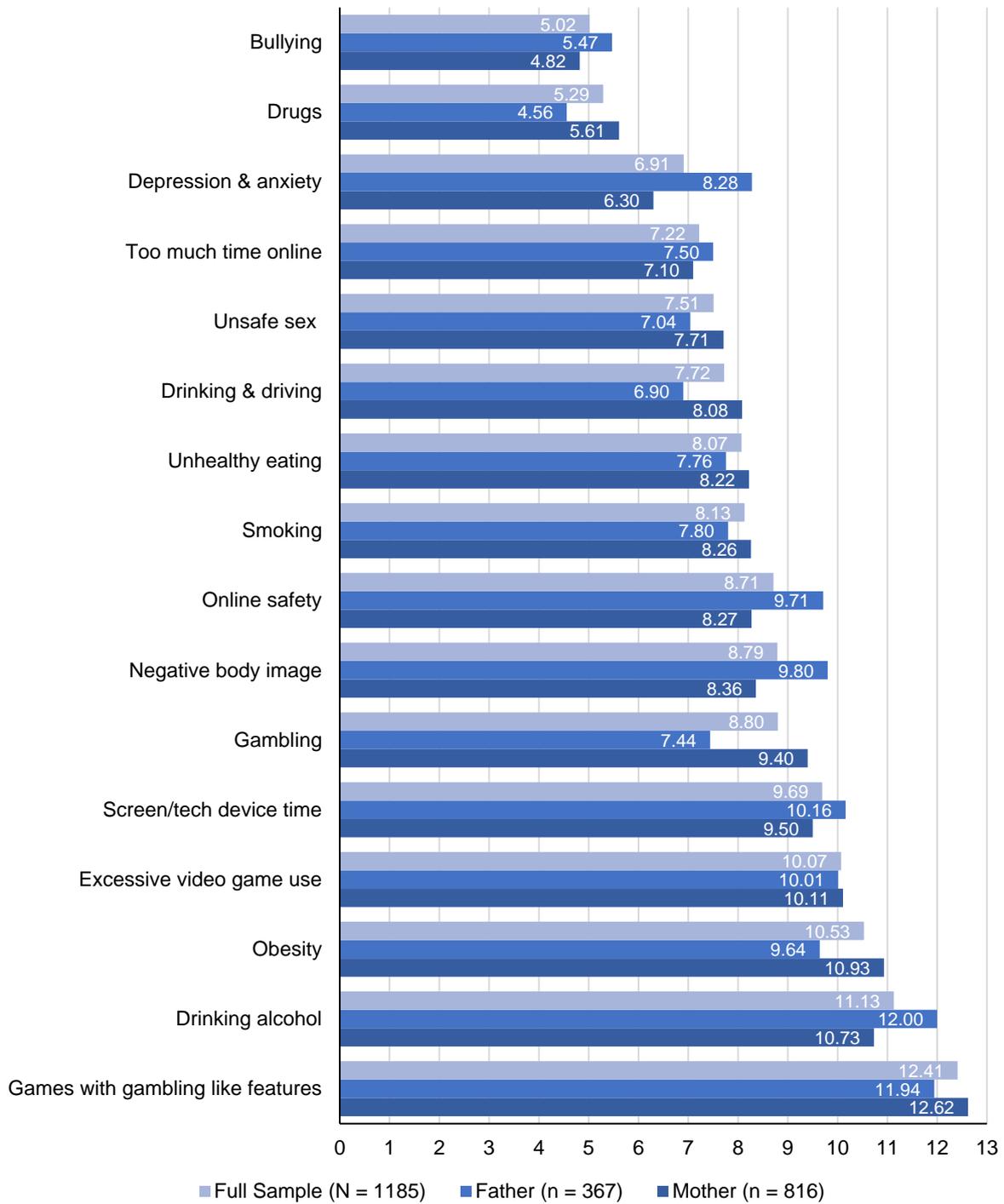


Figure 1 – Mean rank of parental concern about adolescent issues (lower mean reflects higher-ranking concern)

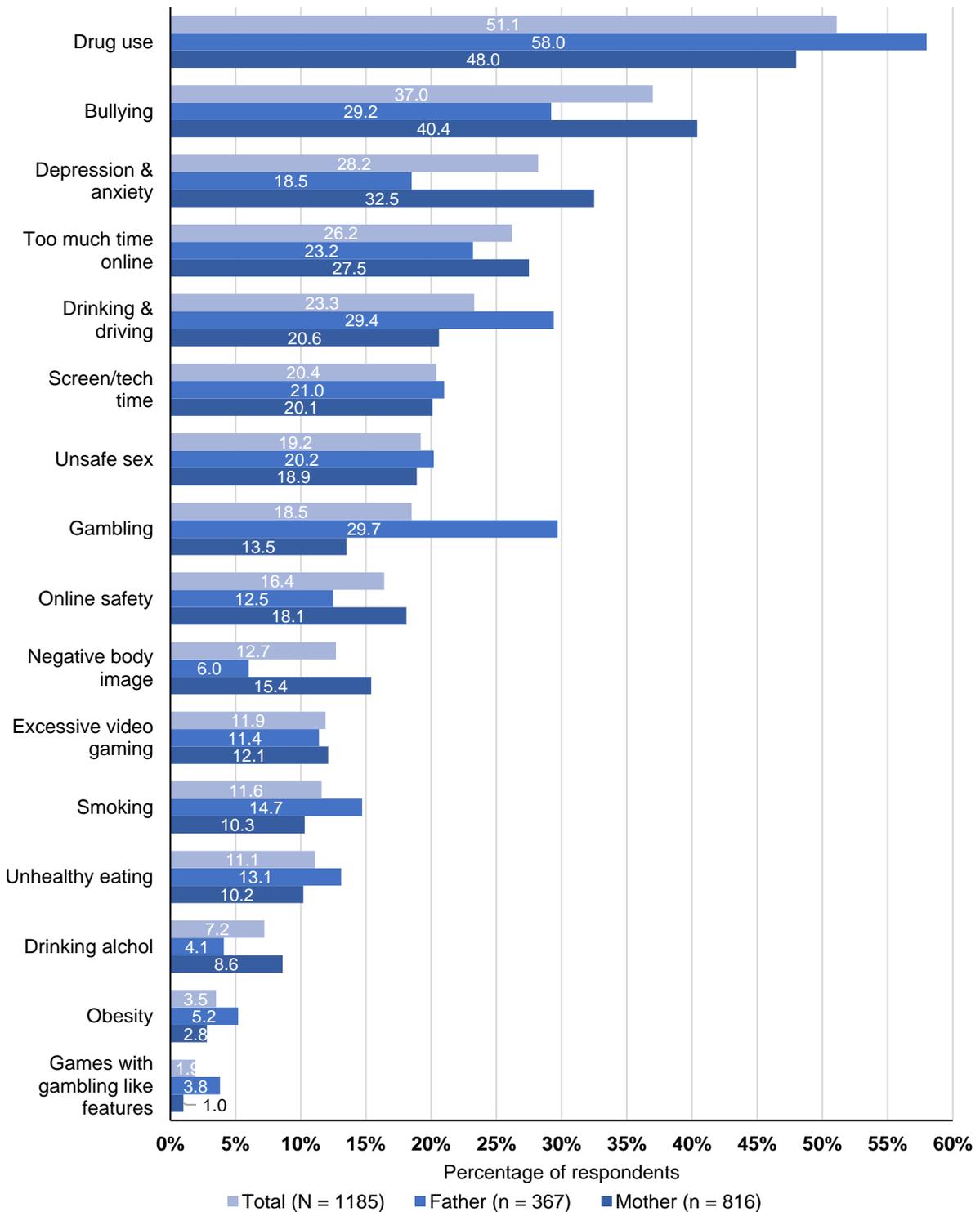


Figure 2 – Proportion of parents who ranked adolescent issue as a top three concern

7.2.2. Attitudes to adolescent gambling

When asked about their attitudes to adolescent gambling, most parents indicated they did not approve of adolescent exposure to gambling and activities that promoted gambling. However, a notable proportion of respondents either endorsed or were ambivalent about adolescent involvement in these activities, based on a response of neutral, agree or strongly agree (see Figure 3). Over a third of parents (36.4%) were either ambivalent or felt it was acceptable for teenagers to watch professional poker tournaments or television shows featuring gambling, while 31.7 per cent were neutral or agreed that it is OK for teenagers to engage in online gambling games as long as it's not for money. Just under a quarter of respondents (22.0%) indicated that they were neutral or agreed that there is nothing wrong with teenagers gambling occasionally.

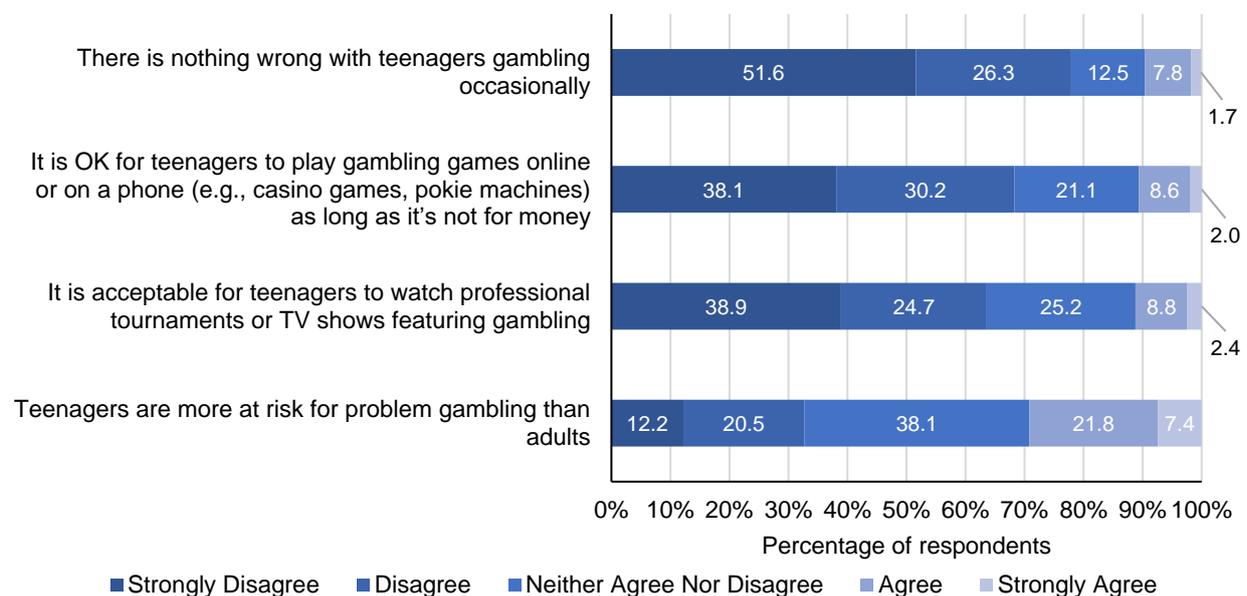


Figure 3 – Parental attitudes toward adolescent gambling

7.2.3. Attitudes to gambling in general

When asked about their approval of gambling in general, most parents held negative attitudes towards gambling (see Figure 4). Most respondents disagreed or strongly disagreed that gambling is a good way to relieve boredom (68.0%), gambling is a good way for communities to raise funds (73.8%), and gambling can be a good way to make money if you know the game (73.0%). In comparison, just over a half of parents (59.1%) disagreed or strongly disagreed that gambling is acceptable if you are just playing with friends, and a third (37.1%) disagreed or strongly disagreed that lottery and scratch tickets should be kept out of sight in stores. Just over a third of parents (35.5%) disagreed or strongly disagreed that it is impossible to gamble responsibly, while 40.6 per cent agreed with this statement. Finally, a small proportion of parents approved of gambling on a regular basis. Around a quarter of respondents (25.2%) agreed that gambling less than once a week was appropriate, and 14.6 per cent agreed that gambling more than once a week was appropriate.

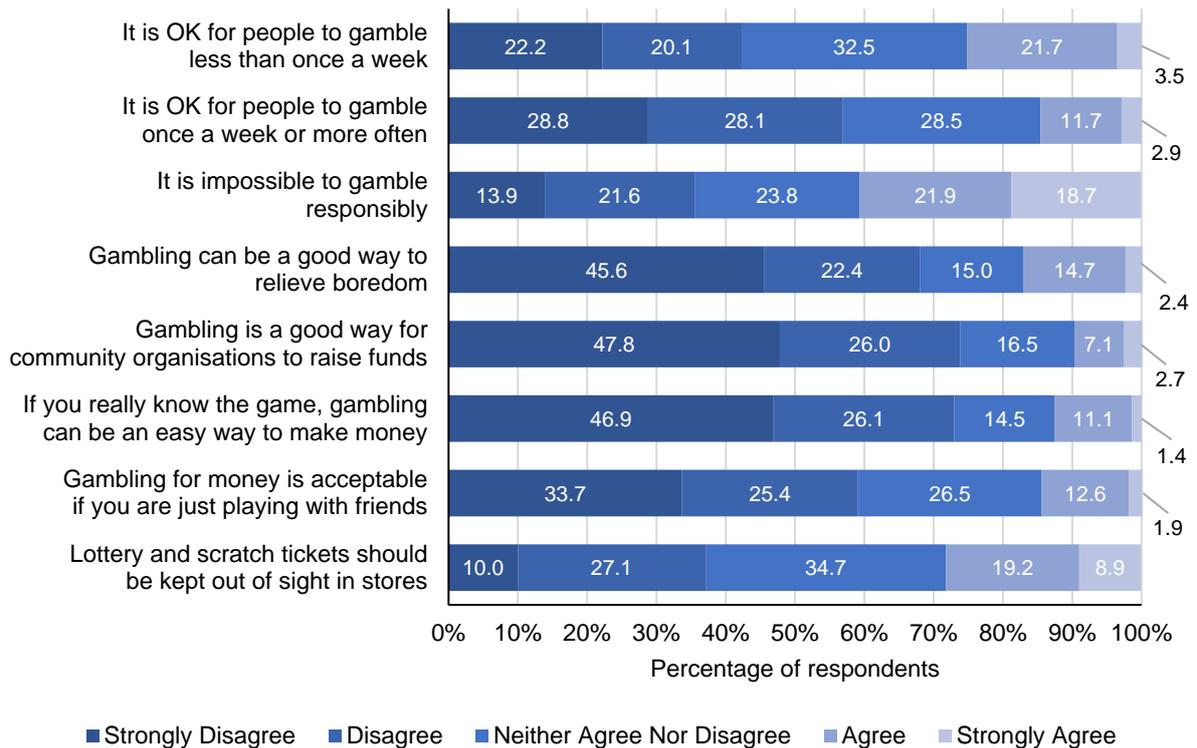


Figure 4 – Parental attitudes toward gambling in general

7.2.4. Attitudes towards risk of harm from gambling

All respondents were asked to indicate the extent to which they agreed that people risked harming themselves (physically, mentally, financially or in other ways) if they gambled either 1) once a week or more often, or 2) less than once a week (see Figure 5). Approximately a third (30.4%) of respondents reported that they agreed or strongly agreed that people who gamble less than once a week are at risk of gambling-related harm. In comparison, half of respondents (50.2%) reported that they agreed or strongly agreed that people who gamble once a week or more are at risk gambling-related harm.

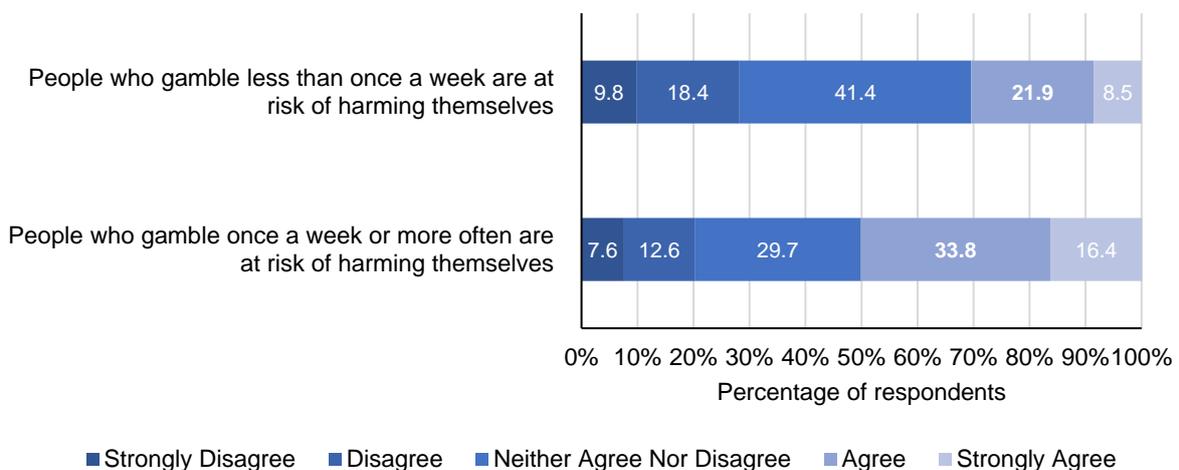


Figure 5 – Parental attitudes toward risk of harm from gambling

7.3. Parental perceptions of the nature and extent of adolescent gambling

7.3.1. Adolescent gambling

Overall, 27.1 per cent of parents ($n = 321$) reported that their adolescent had participated in at least one of the 14 forms of gambling during the past 12 months. Parents indicated that a greater proportion of adolescent males (29.5%) had gambled on at least one activity in the past 12 months, compared to females (24.2%)⁷. There were no significant differences in rates of gambling participation according to adolescent age⁸. However, fathers (36.0%) were more likely than mothers (23.2%) to report that their adolescent had gambled in the past 12 months⁹. Furthermore, fathers reported greater past 12-month gambling participation by their sons (39.8%) in comparison to their daughters (28.5%)¹⁰, but there was no difference between gambling participation between sons (23.5%) and daughters (22.9%) according to mothers' reports¹¹.

When considering commercial forms of gambling only (i.e., excluding informal private betting), 26.5 per cent of parents indicated that their adolescent had gambled for money on at least one activity in the past 12 months. The same pattern of results was found as above, with parents reporting greater commercial gambling participation among adolescent males (28.9%) versus females (23.6%)¹², but no significant differences in gambling participation based on adolescent age¹³. Again, fathers were more likely than mothers to report gambling by their adolescent child overall (35.1% vs. 22.7%)¹⁴, and reported higher rates in their sons (39.0%) compared to their daughters (27.7%)¹⁵.

⁷ $\chi^2(1, N = 1179) = 4.24, p = .040$.

⁸ $\chi^2(2, N = 1185) = 0.63, p = .731$.

⁹ $\chi^2(1, N = 1183) = 21.00, p < .001$.

¹⁰ $\chi^2(1, N = 366) = 4.75, p = .030$.

¹¹ $\chi^2(1, N = 811) = 0.45, p = .832$.

¹² $\chi^2(1, N = 1179) = 4.18, p = .041$.

¹³ $\chi^2(2, N = 1185) = 0.38, p = .826$.

¹⁴ $\chi^2(1, N = 1183) = 22.22, p < .001$.

¹⁵ $\chi^2(1, N = 366) = 4.70, p = .030$.

7.3.2. Adolescent participation in each gambling form

Figure 6 displays parents' knowledge of their adolescent's participation in each form of gambling over the past 12 months. According to parents, the most common activity their adolescents took part in was buying instant scratch tickets (10.2%) and buying lottery or lotto tickets (10.0%). The next most common activities were betting on sporting event (7.8%), on keno (7.0%), on bingo (6.9%) and on a racing event (6.8%).

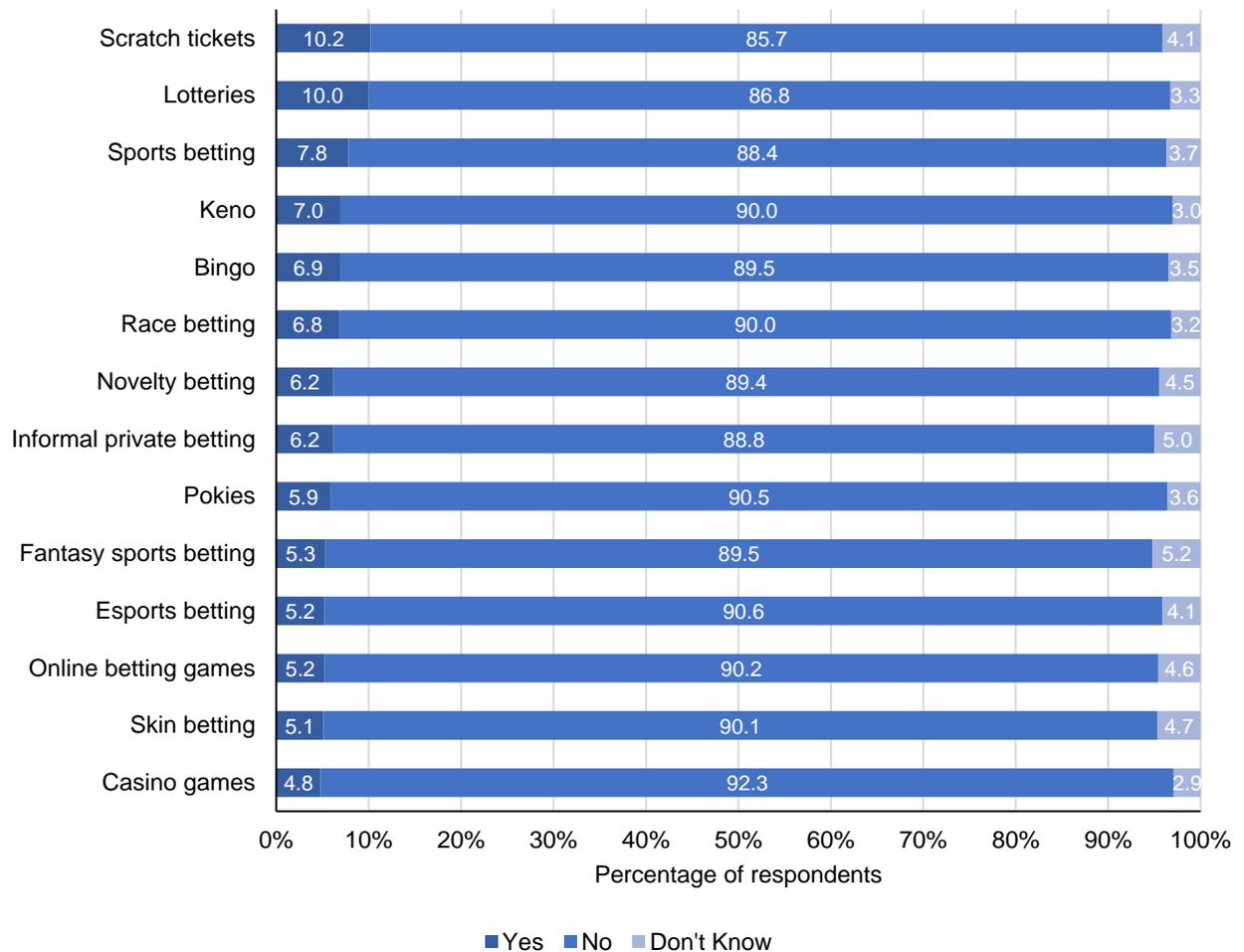


Figure 6 – Parent-reported adolescent participation in each gambling form in the past 12 months

Parents who indicated that their adolescent child had engaged in a particular gambling activity in the past 12 months were asked to indicate how often their adolescent had gambled for money on that activity. Figure 7 displays parent-reported frequency of adolescent participation in each form of gambling among those who had taken part in that activity at least once in the past 12 months.

Given the small number of adolescents who were participating in each activity, it is difficult to comment on which activities adolescents were participating in more frequently than others. However, it is important to note that across all 14 gambling forms included in the survey, there were a small but notable number of adolescents taking part in those activities at least once a week or more.

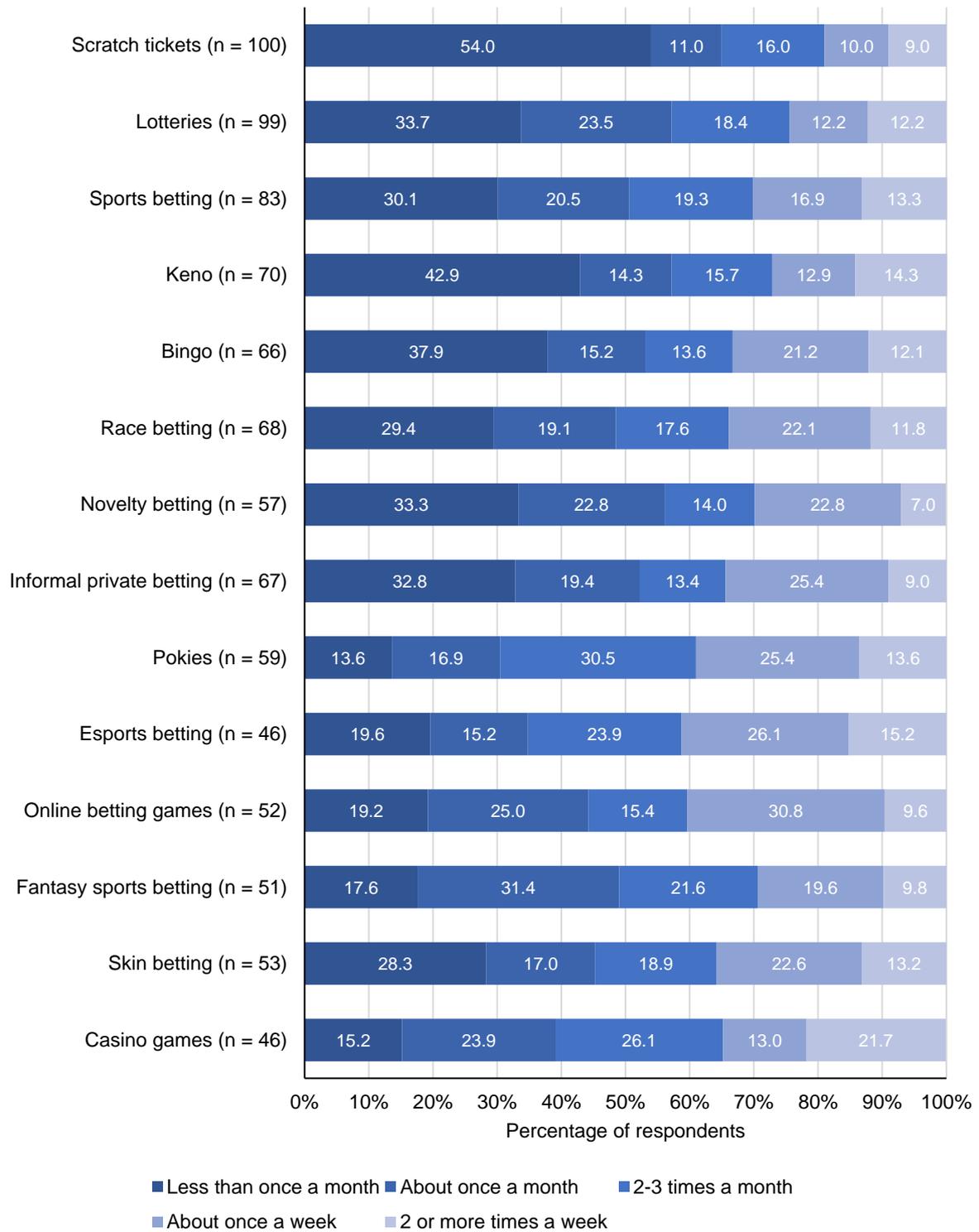


Figure 7 – Frequency of parent-reported adolescent participation in each gambling form in the past 12 months

7.3.3. Adolescent participation in simulated gambling

Parents reported that 27.8 per cent ($n = 330$) of target adolescents had taken part in at least one of the four forms of simulated gambling in the past 12 months. According to parents, a greater proportion of adolescent males (35.3%) compared to females (18.8%) had participated in simulated gambling¹⁶. There were no significant differences in participation in simulated gambling by adolescent age¹⁷. Fathers were more likely to report knowledge of their adolescent’s involvement in simulated gambling compared to mothers (42.0% vs. 21.6%)¹⁸, and reported that adolescent males (48.7%) took part in simulated gambling more than adolescent females (29.2%)¹⁹. Mothers also reported greater simulated gambling participation among adolescent sons (27.5%) compared to daughters (15.6%)²⁰. Figure 8 displays parent-reported adolescent frequency of participation in the four simulated gambling forms included in the survey, with video games containing gambling components being the most popular form.

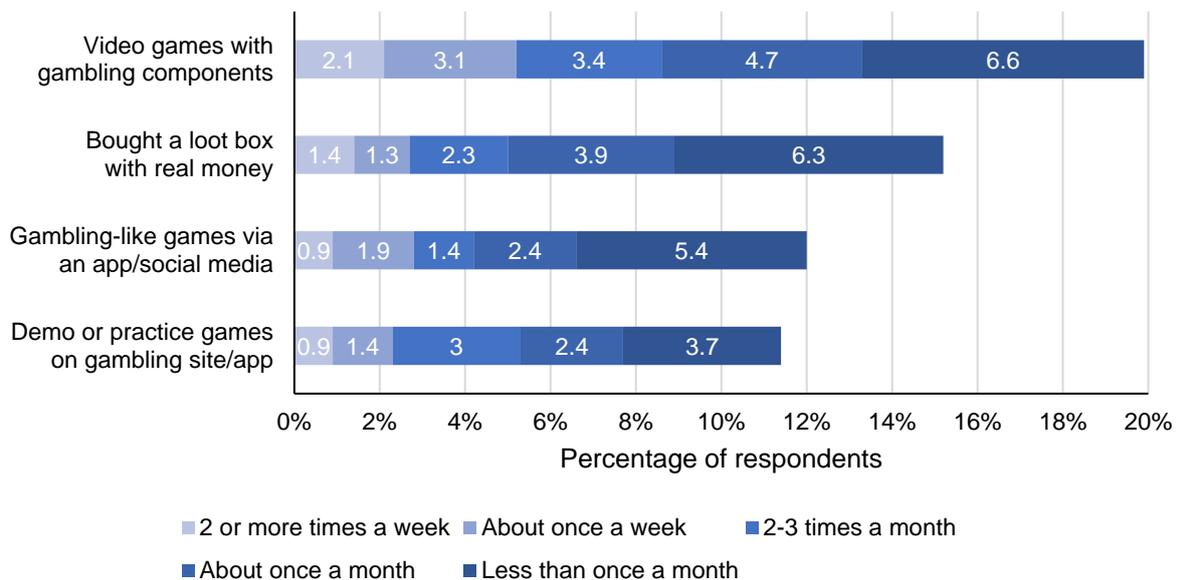


Figure 8 – Parent-reported adolescent participation in simulated gambling forms in the past 12 months

7.3.4. Parent concern and help-seeking about adolescent gambling

While most parents reported that they were not at all concerned about their adolescent’s gambling (80.2%, $n = 950$), 8.9 per cent indicated that they were a little concerned, 4.8 per cent were somewhat concerned, 3.9 per cent were very concerned, and 2.2 per cent were extremely concerned. Consistent with this, 3.9 per cent ($n = 46$) of parents indicated that their adolescent had a problem with gambling,

¹⁶ $\chi^2 (1, N = 1179) = 39.79, p < .001$.

¹⁷ $\chi^2 (2, N = 1185) = 5.50, p = .064$.

¹⁸ $\chi^2 (1, N = 1183) = 53.34, p < .001$.

¹⁹ $\chi^2 (1, N = 366) = 13.10, p < .001$.

²⁰ $\chi^2 (1, N = 811) = 17.12, p < .001$.

and 2.9 per cent ($n = 34$) had sought help because of these concerns. Within this small sample, parents had most commonly sought help informally from friends and family or from a gambling helpline.

Differences in concerns about adolescent gambling between mothers and fathers, and between daughters and sons, were examined based on parents who reported no or little concern versus those who reported that they were somewhat, very or extremely concerned. According to these analyses, parents were more likely to be concerned about the gambling behaviour of their sons (13.5%) compared to their daughters (7.7%)²¹, and about their children in middle adolescence (i.e., 14-15 years old; 14.7%) compared to younger (12-13 years; 9.9%) and older adolescents (16-17 years; 8.0%)²². In addition, fathers (24.3%) were more concerned than mothers (4.9%)²³, and were more concerned about their adolescent sons (29.7%) than about their daughters (13.8%)²⁴. This final difference is consistent with the rates of gambling reported by parents for their male and female adolescents. Mothers, on the other hand, did not differ in levels of concern about gambling regarding their sons (4.0%) compared to their daughters (5.8%)²⁵.

7.3.5. Parent-reported symptoms of problem gambling in their adolescents

Using the scoring procedure and cut-offs for the youth-report version of the DSM-IV-MR-J (Fisher, 2000), parents indicated that an estimated 6.8 per cent of adolescents in the sample were experiencing problems due to gambling. An additional 3.4 per cent of adolescents were classified as at-risk of problem gambling, 15.0 per cent were non-problem gamblers, and 74.8 per cent were considered to be non-gamblers.

Analyses related to parent and adolescent gender and adolescent age were conducted by comparing the proportion of adolescents classified as non-gamblers and non-problem gamblers with those classified as at-risk and experiencing gambling problems. The results of these analyses indicated that males (13.3%) were more likely to be experiencing parent-reported gambling problems than females (6.5%)²⁶, as were young people in early (11.6%) and middle (12.3%) adolescence compared to those in older adolescence (7.0%)²⁷. Fathers (21.3%) reported higher rates of adolescent gambling problems than mothers (5.3%)²⁸. Fathers also reported that their sons (26.3%) were experiencing gambling problems at higher rates than

²¹ $\chi^2 (1, N = 1179) = 10.01, p = .002.$

²² $\chi^2 (2, N = 1185) = 10.27, p = .006.$

²³ $\chi^2 (1, N = 1183) = 97.55, p < .001.$

²⁴ $\chi^2 (1, N = 366) = 11.48, p < .001.$

²⁵ $\chi^2 (1, N = 811) = 1.46, p = .226.$

²⁶ $\chi^2 (1, N = 1179) = 15.19, p < .001.$

²⁷ $\chi^2 (2, N = 1185) = 7.37, p = .025.$

²⁸ $\chi^2 (1, N = 1183) = 70.44, p < .001.$

their daughters (11.5%)²⁹. In contrast, there were no differences in mother-reported rates of gambling problems between daughters (4.9%) and sons (5.8%)³⁰.

7.4. Parent gambling behaviour

7.4.1. Parent gambling and simulated gambling participation

Overall, 79.9 per cent of parents ($n = 947$) reported that they had participated in at least one of the 14 forms of gambling during the past 12 months. More fathers (84.5%) had gambled on at least one activity in the past 12 months, compared to mothers (77.8%)³¹. Further, 32.1 per cent of parents ($n = 380$) reported taking part in at least one form of simulated gambling in the past 12 months, with fathers (49.9%) being more likely than mothers (24.1%) to take part in simulated gambling³². Table 3 displays parental participation in each gambling form in the past 12 months.

7.4.2. Adolescent exposure to parent gambling

Where parents indicated that they had gambled on a particular gambling form in the past 12 months, they were asked to report how often their adolescent was present with them when they gambled. Of the 947 parents who had gambled in the past 12 months, 68.4 per cent ($n = 648$) indicated that their adolescent was present with them when they had gambled at least once in the past 12 months. This equates to 54.7 per cent of the full sample reporting gambling in the presence of their adolescent in the past 12 months.

Comparisons of rates of parent gambling in the presence of their adolescent by parent and adolescent gender and adolescent age were conducted on the sample of parents who reported gambling in the past 12 months ($n = 947$). There were no significant differences in parent-adolescent co-gambling with sons (70.8%) compared to daughters (65.6%)³³. However, parents were more likely to gamble with their younger adolescents aged 12 and 13 years (70.7%) and 14 and 15 years (73.1%) compared to older adolescents aged 16 and 17 years (62.0%)³⁴. Further, fathers (73.2%) reported higher rates of co-gambling compared to mothers (66.1%)³⁵, and reported co-gambling more with their sons (76.8%) versus their daughters (65.7%)³⁶. Mothers were equally likely to gamble with their sons (66.7%) and their daughters (65.7%)³⁷.

²⁹ $\chi^2 (1, N = 366) = 10.95, p < .001$.

³⁰ $\chi^2 (1, N = 811) = 0.32, p = .574$.

³¹ $\chi^2 (1, N = 1183) = 6.97, p = .008$.

³² $\chi^2 (1, N = 1183) = 76.81, p < .001$.

³³ $\chi^2 (1, N = 941) = 2.99, p = .084$.

³⁴ $\chi^2 (2, N = 947) = 10.36, p = .006$.

³⁵ $\chi^2 (1, N = 945) = 4.84, p = .028$.

³⁶ $\chi^2 (1, N = 309) = 4.31, p = .038$.

³⁷ $\chi^2 (1, N = 630) = 0.06, p = .808$.

7.4.3. Adolescent exposure to parent gambling for each gambling form

For each gambling form a parent had taken part in during the past 12 months, they were asked to indicate how often their adolescent was with them when they gambled. Table 3 shows a) the proportion of parents who had taken part in each gambling form in the past 12 months and b) the frequency of adolescent exposure to parent gambling for each gambling form. The percentages for adolescent exposure to parent gambling are displayed as a proportion of the subset of parents who had gambled in that activity in the past 12 months. For instance, of the 793 parents who had bet on lottery in the past 12 months, 41.1 per cent had not gambled on this form with their adolescent present in the last 12 months, while 58.9 per cent of these parents had.

Based on this table, the activities with the most co-gambling in the past 12 months were skin betting (74.6% of parents who had gambled with skins had done so with their adolescent present) and fantasy sports betting (69.5% of parents who had bet on fantasy sports had done so with their adolescent present), followed by keno (66.2%), online betting (65.1%), scratch tickets (64.7%) and informal private betting (64.5%).

Table 3 – Frequency of adolescent exposure to parent gambling for each gambling form

Gambling form	Parent participation in past 12 months <i>n</i> (% of total sample)	Frequency of gambling with adolescent <i>n</i> (% of subsample)				
		Never	Less than once a month	1 to 3 times a month	Once a week	2 or more times a week
Skin betting	142 (12.1%)	36 (25.4%)	23 (16.2%)	44 (31.0%)	22 (15.5%)	17 (12.0%)
Fantasy sports betting	167 (14.1%)	51 (30.5%)	27 (16.2%)	47 (28.1%)	22 (13.2%)	20 (12.0%)
Keno	308 (26.0%)	104 (33.8%)	93 (30.2%)	61 (19.8%)	31 (10.1%)	19 (6.2%)
Online betting games	192 (16.3%)	67 (34.9%)	26 (13.5%)	59 (30.7%)	20 (10.4%)	20 (10.4%)
Scratch tickets	600 (50.6%)	212 (35.3%)	225 (37.5%)	115 (19.2%)	26 (4.3%)	22 (3.7%)
Informal private betting	197 (16.6%)	70 (35.5%)	39 (19.8%)	49 (24.9%)	18 (9.1%)	21 (10.7%)
Bingo	247 (20.9%)	91 (36.8%)	64 (25.9%)	50 (20.2%)	17 (6.9%)	25 (10.1%)
Novelty betting	213 (17.9%)	81 (38.0%)	42 (19.7%)	49 (23.0%)	26 (12.2%)	15 (7.0%)

Gambling form	Parent participation in past 12 months <i>n</i> (% of total sample)	Frequency of gambling with adolescent <i>n</i> (% of subsample)				
		Never	Less than once a month	1 to 3 times a month	Once a week	2 or more times a week
Esports betting	202 (17.1%)	79 (39.1%)	34 (16.8%)	51 (25.2%)	19 (9.4%)	19 (9.4%)
Sports betting	407 (34.5%)	164 (40.3%)	83 (20.4%)	99 (24.3%)	41 (10.1%)	20 (4.9%)
Lotteries	793 (66.9%)	326 (41.1%)	234 (29.5%)	154 (19.4%)	56 (7.1%)	23 (2.9%)
Race betting	412 (34.8%)	173 (42.0%)	93 (22.6%)	77 (18.7%)	43 (10.4%)	26 (6.3%)
Casino games	237 (20.0%)	108 (45.6%)	37 (15.6%)	52 (21.9%)	23 (9.7%)	17 (7.2%)
Pokies	421 (35.5%)	237 (56.3%)	78 (18.5%)	63 (15.0%)	25 (5.9%)	18 (4.3%)

Note. Parents were asked to rate how often they gambled on each form when their teenager was with them. This may have been interpreted by some parents to mean that their adolescent was present with them, rather than their adolescent being directly included in the gambling activity. For instance, parents who indicated that their adolescent was with them when they gambled on the pokies may have interpreted this as their adolescent being at the venue (e.g., in the dining area), but not necessarily with them in the gaming room.

7.4.4. Parent problem gambling

Parents reported on their own level of gambling problems using the Problem Gambling Severity Index (PGSI). Based on the published cut-off scores for the PGSI (Ferris & Wynne, 2001), 12.6 per cent of parents could be classified as problem gamblers, 10.5 per cent as moderate-risk gamblers, 13.0 per cent as low-risk gamblers, and 63.9 per cent as non-problem or non-gamblers. There were significant differences in rates of problem gambling by parent gender, with fathers reporting higher rates of both problem gambling (22.9% fathers vs. 8.0% mothers) and moderate-risk gambling (18.0% fathers vs. 7.2% mothers)³⁸. These rates are higher than typically reported in population representative surveys, and the current sampling approach should be borne in mind when interpreting the rates reported.

³⁸ $\chi^2(3, N = 1183) = 96.09, p = <.001.$

7.5. Parenting practices related to adolescent gambling

7.5.1. Parent facilitation of adolescent gambling

The frequency by which parents reported engaging in each of the 13 parenting practices hypothesised to facilitate adolescent gambling and four behaviours that may discourage adolescent gambling are shown in Table 4. Based on the proportion of parents who reported engaging in each behaviour at least once in the past 12 months, the most common behaviours that might facilitate adolescent gambling were: talking about their gambling wins with the adolescent (28.5%); asking adolescents to pick 'lucky numbers' in keno or lottery (27.8%), buying scratch tickets or lottery tickets for the adolescent (22.1%) and taking the adolescent to a gambling venue (e.g., poker machine area in a pub or club, casino, race track; 19.7%). In terms of engagement in behaviours that might discourage adolescent gambling, over half of parents had discussed responsible gambling with their adolescent (58.0%), and around a half (49.3%) had discussed the potential risks or harms of gambling. Fewer parents reported keeping conversations about betting and gambling private so their adolescent doesn't hear (25.7%), and fewer reported discussing and agreeing upon rules about gambling with their adolescent (21.4%).

Table 4 – Frequency of engagement by parents in behaviours that may facilitate adolescent gambling

Parenting practice	Never in the last 12 months	Less than once a month	1 to 3 times a month	Once a week	2 or more times a week
Behaviours that may facilitate gambling					
Talked about your own gambling wins	847 (71.5%)	186 (15.7%)	96 (8.1%)	38 (3.2%)	18 (1.5%)
Asked them to pick 'lucky numbers' in keno or lottery	855 (72.2%)	163 (13.8%)	126 (10.6%)	20 (1.7%)	21 (1.8%)
Bought scratch tickets or lottery tickets for them	923 (77.9%)	122 (10.3%)	92 (7.8%)	31 (2.6%)	17 (1.4%)
Taken them to a gambling venue	951 (80.3%)	125 (10.5%)	80 (6.8%)	13 (1.1%)	16 (1.4%)
Involved them in betting on sports or esports	981 (82.8%)	93 (7.8%)	63 (5.3%)	26 (2.2%)	22 (1.9%)
Talked about gambling as something fun or exciting to do	984 (83.0%)	86 (7.3%)	68 (5.7%)	29 (2.4%)	18 (1.5%)
Included them in private betting using money with family or friends	985 (83.1%)	101 (8.5%)	55 (4.6%)	23 (1.9%)	21 (1.8%)
Played cards, board games or other games at home for money	990 (83.5%)	75 (6.3%)	82 (6.9%)	21 (1.8%)	17 (1.4%)

Put a bet on for them for a sport, racing, novelty or esports event	944 (83.9%)	79 (6.7%)	66 (5.6%)	23 (1.9%)	23 (1.9%)
Allowed them to use their own money to gamble	1025 (86.5%)	59 (5.0%)	57 (4.8%)	20 (1.7%)	24 (2.0%)
Given them money to gamble themselves	1030 (86.9%)	56 (4.7%)	53 (4.5%)	24 (2.0%)	22 (1.9%)
Allowed them access to online gambling activities on your account	1039 (87.7%)	51 (4.3%)	58 (4.9%)	24 (2.0%)	13 (1.1%)
Allowed them to use your online gambling account to gamble	1043 (88.0%)	36 (3.0%)	64 (5.4%)	29 (2.4%)	13 (1.1%)

Parenting practice	Never in the last 12 months	Less than once a month	1 to 3 times a month	Once a week	2 or more times a week
Behaviours that may limit gambling					
Discussed responsible gambling	498 (42.0%)	402 (33.9%)	203 (17.1%)	46 (3.9%)	36 (3.0%)
Talked about the potential risks or harms of gambling	601 (50.7%)	320 (27.0%)	194 (16.4%)	40 (3.4%)	30 (2.5%)
Kept conversations about betting and gambling private	880 (74.3%)	145 (12.2%)	95 (8.0%)	38 (3.2%)	27 (2.3%)
Discussed and agreed upon rules about their gambling	931 (78.6%)	117 (9.9%)	86 (7.3%)	29 (2.4%)	22 (1.9%)

7.5.2. Parent online monitoring

Figure 9 shows the frequency by which parents reported specific behaviours aimed at monitoring their adolescent's online usage and activities. Based on responses of sometimes, frequently or almost always, most parents (87.3%) reported that they talked to their adolescent about what they were doing online, and that their adolescent spontaneously tells them what they are doing online (81.1%). Around two thirds of parents had set limits about the amount of time their adolescent spends online (66.0%), and a similar proportion (59.2%) monitored or tracked what their adolescent was doing online (e.g., tracking social media or checking search history). Finally, half of parents reported restricting or blocking certain websites that their adolescent might use (51.5%), and around half only allowed internet access in open, shared areas of the house (e.g., lounge room, kitchen; 48.9%).

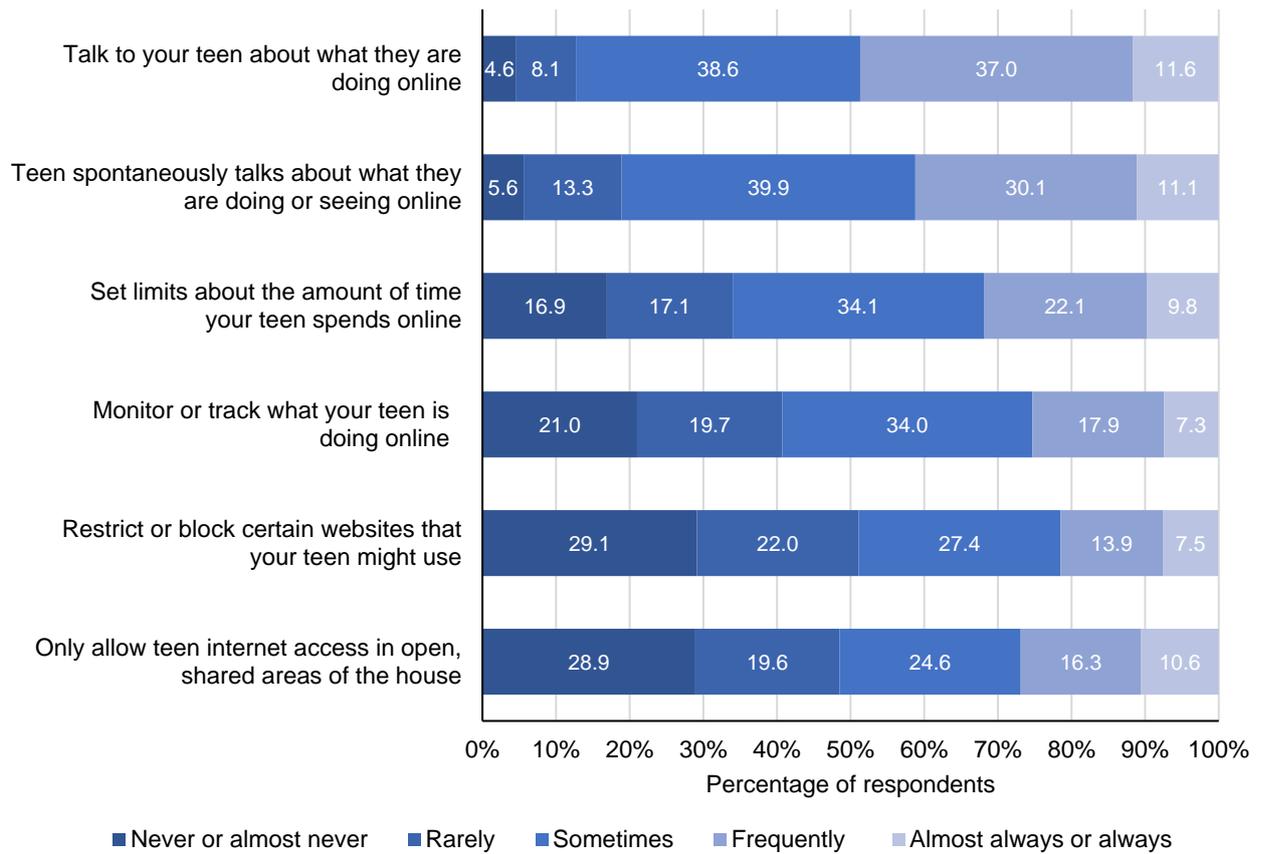


Figure 9 – Frequency of parent online monitoring

7.5.3. Parent confidence in managing gambling and online behaviour

As shown in Table 5, most parents reported feeling most confident talking with their adolescent about the risks of gambling (mean = 86.2), responsible gambling (mean = 85.4) and setting a good example when it comes to responsible gambling (mean = 85.2). Parents reported feeling least confident in monitoring their adolescent's activities outside of the home (mean = 65.3) and their online activities (mean = 64.7).

Table 5 – Parent confidence ratings in preventing and managing adolescent gambling and online behaviour

Parenting behavior	Mean	Median	SD
Talking with your teenager about the risks of gambling	86.2	95.0	19.0
Talking with your teenager about responsible gambling	85.4	93.0	19.6
Setting a good example when it comes to responsible gambling	85.2	95.0	20.8
Helping your teenager if they have a bad experience online	83.5	90.0	19.7
Explaining to your teenager about your own gambling	82.7	92.0	22.6
Helping your teenager if you find out they are gambling	82.3	90.0	21.0
Helping your teenager manage internet safety risks related to online purchases	79.7	84.0	21.4
Helping your teenager manage internet safety risks related to privacy and personal information	79.0	84.0	21.9
Talking with your teenager about how they spend their free time	78.9	83.0	21.3
Talking with your teenager about gambling mini games that appear in apps and on social networking sites	78.1	85.0	24.2
Talking with your teenager about how they spend their time online	76.7	81.0	22.9
Setting a good example when it comes to your own technology use	76.1	80.0	22.8
Setting limits with your teenager about technology use and screen time	73.2	78.0	24.9
Responding effectively when screen time limits are not followed by your teenager	69.9	76.0	26.8
Taking away your teenager's access to technological devices	68.0	75.0	28.9
Monitoring your teenager's activities outside the home	65.3	70.0	26.8
Monitoring your teenager's online activities	64.7	69.0	27.8

7.5.4. Parent-adolescent communication about adolescent issues

Figure 10 shows the frequency that parents reported having a conversation with their adolescent in the last 12 months regarding a range of adolescent issues. Of all issues, parent-adolescent conversations about gambling were least likely to have occurred in the past 12 months, with 45.1 per cent of parents reporting that they had never discussed gambling-like games, and 44.6 per cent of parents indicating that they had not discussed responsible gambling. Parents were most likely to have talked about excessive time online, unhealthy eating, online safety and excessive screen time.

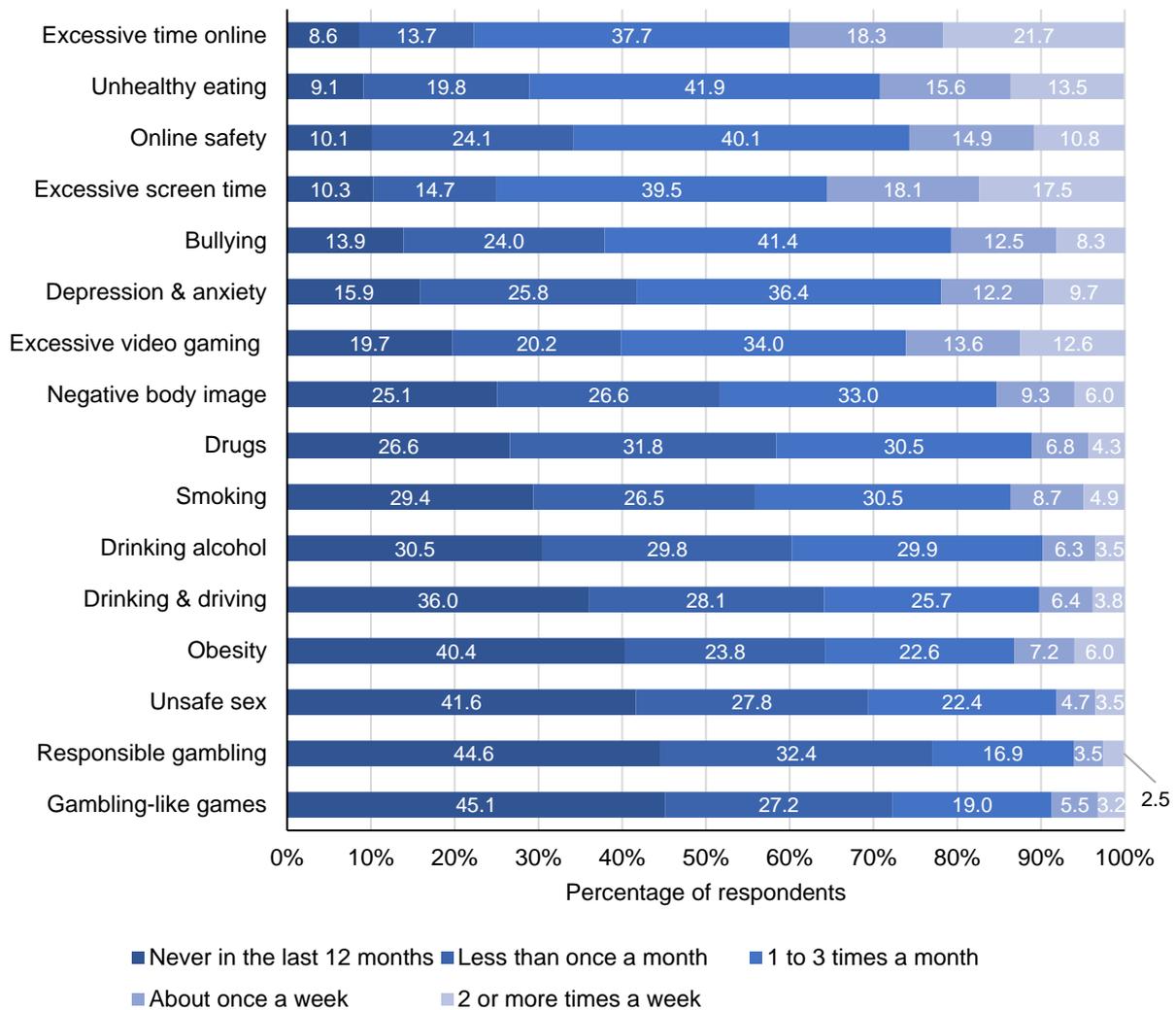


Figure 10 – Frequency of parent-adolescent communication in the last 12 months regarding common adolescent concerns

7.6. Parental preferences for receiving information and support about adolescent gambling

Parents' preferences for accessing support about adolescent gambling are displayed in Figure 11 below. Based on the proportion of parents who responded very or extremely suitable, the most preferred delivery formats were online written materials (47.0%), printed written materials (45.0%) and brief videos on social media (43.6%). The least preferred modalities were in-person parent seminar (23.5%), in-person group sessions (25.1%) and online group sessions (32.4%).

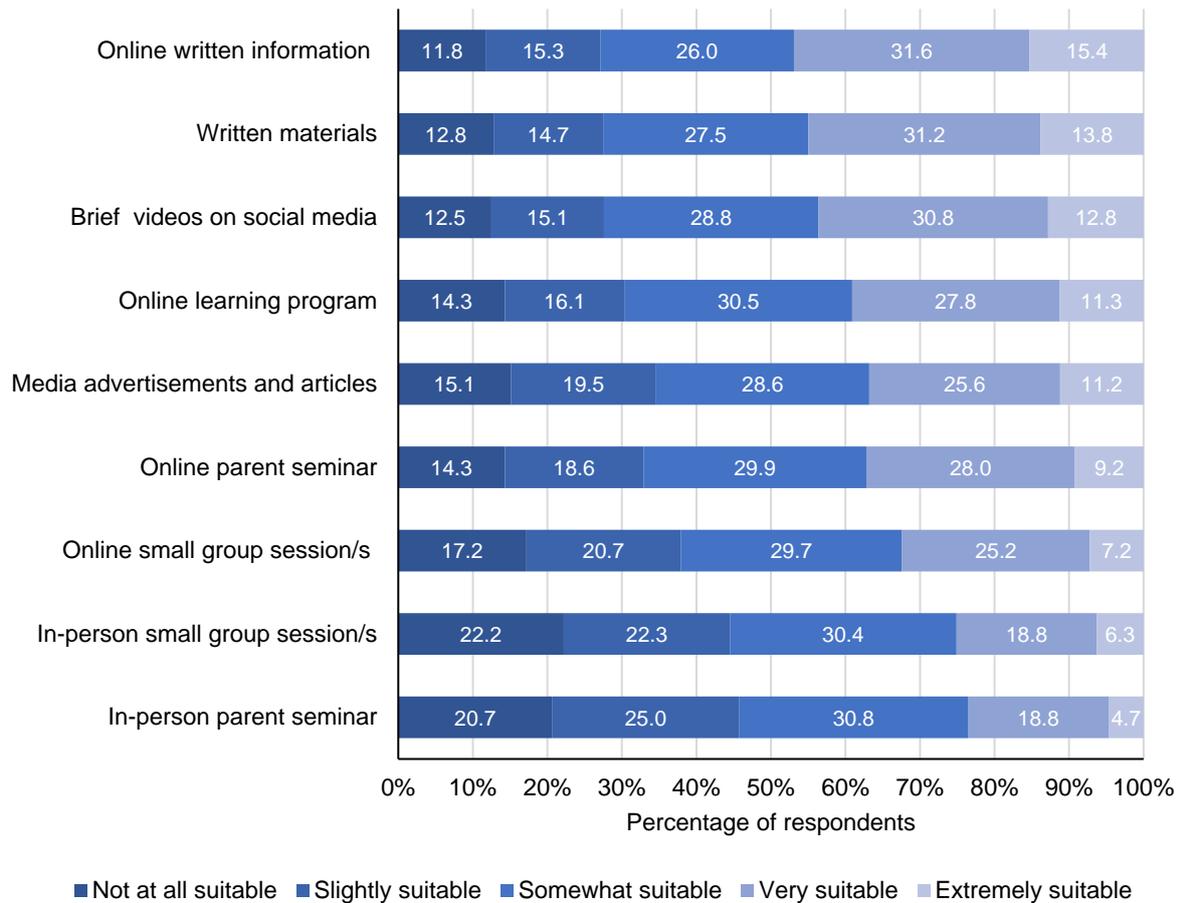


Figure 11 – Parents' delivery preferences for accessing support about adolescent gambling

Differences in delivery preferences between mothers and fathers were examined based on parents who reported that a modality was very or extremely suitable versus those who reported that the modality was not at all, slightly or somewhat suitable. More fathers (31.6%) preferred in-person seminars compared to mothers (19.9%)³⁹, while more mothers (45.8%) preferred brief videos in social media compared to fathers (38.7%)⁴⁰. There were no other differences between mothers and fathers in their delivery preferences.

³⁹ $\chi^2(1, N = 1183) = 19.46, p < .001$.

⁴⁰ $\chi^2(1, N = 1183) = 5.25, p = .022$.

Delivery preferences were also examined between parents who identified as being from an Aboriginal or Torres Strait Islander background compared to parents who did not identify as being Aboriginal or Torres Strait Islander. The only significant difference was found for accessing support via media advertisements and articles, with more parents identifying as being Aboriginal or Torres Strait Islander (47.7%) expressing a preference for this modality compared to other parents (35.9%)⁴¹.

⁴¹ $\chi^2 (1, N = 1183) = 4.72, p = .030$.

8. Factors influencing adolescent gambling participation and gambling problems

8.1. Data analysis approach

There were five steps in the process of identifying risk and protective factors for parent-reported adolescent gambling participation and gambling problems. First, exploratory factor analyses were conducted to support the creation of subscale and scale scores for groups of single items designed to assess a singular construct. Second, data were assessed for the assumptions of correlational and linear regression analyses, including normality, homoscedasticity, multicollinearity, and independence of observations. Third, correlational analyses were conducted on the mother and father samples to assess the bivariate associations between each independent variable and dependent variable.

Finally, a series of multivariate regression analyses were conducted to identify which predictor variables explained variation in parent-reported adolescent gambling participation and gambling problems. Because there has been minimal examination in the literature of maternal versus paternal influences on adolescent gambling, separate models were conducted for mothers and fathers. Note that two parents indicated a gender other than male or female, and these participants could not be included in regression models due to the small cell size⁴².

Four models were evaluated for each dependent variable; 1) parent sociodemographic factors; 2) adolescent factors (impulsivity; emotional adjustment; participation in simulated gambling); 3) parental influences, including parent gambling, parent attitudes to adolescent gambling; general parenting practices, parent-adolescent relationship factors, and parent facilitation of gambling; and 4) sociodemographic factors, adolescent factors and parental influences together. As explained further below, these qualitatively different sets of causal variables themselves likely have complex causal inter-relationships. Thus, approaching them separately provides for more straightforward interpretation of unique effects.

The type of regression used depended on the nature of the dependent variable. The dependent variables assessed, and the regression approach used are below:

- Adolescent gambling participation expressed as total number of activities reported by parents in the past 12 months (linear regression)
- Adolescent gambling problems based on DSM-IV-MR-J total scores (linear regression)

⁴² We understand that this may seem to be an insensitive decision and is only made based on statistical analysis considerations. The other solution would be to include the two respondents in one of the parent categories at random.

- Parental concern about adolescent gambling (logistic regression; reference group = no concern/little concern)

Sociodemographic factors and parental influences were modelled separately to recognise that proximal risk factors (e.g., parent gambling problems) are likely mediators of distal risk factors (e.g., parent demographics). Models that include both proximal and distal risk factors with mediating effects are technically a model misspecification. For example, they could result in the distal risk factors being fully mediated such that they become non-significant predictors of the final outcome. This is not necessarily a reflection that they do not predict gambling problems or behaviour, but instead that distal factors may predict proximal factors, which may in turn predict outcomes. Since our theoretical understanding of the network of causal factors is not developed enough to specify a path analytic model, this is taken into account in the present analyses, by handling distal and proximal risk factors separately. For further details and rationale for such an approach in gambling studies, see Browne et al. (2019a). Doing so also allows the identification of groups of parents, based on sociodemographic or parental risk factors, that may particularly benefit from education or intervention about adolescent gambling.

Finally, it is important to note that variables that were statistically significant in the bivariate analyses, but not statistically significant in the multivariate analyses, are still of interest. The bivariate analyses indicate which of the predictor variables are associated with each outcome. However, because some predictor variables are correlated with each other, the multivariate analyses provide an indication of the portion of that covariance that is uniquely associated with the dependent variable. Thus, a variable may be significantly associated with an outcome variable at the bivariate level but may not have contributed independent variance because of the covariance of other variables in the models. As per the discussion above, such a variable may have a causal role that is mediated by other variables included in the regression.

8.1.1. Creation of scale and sub-scale scores

Because validated published scales for measurement of certain constructs in this study were not available, by necessity we relied on some ad-hoc sets of items intended to measure a unitary construct. Our goal for subscale creation was to reduce the number of variables in the analysis, to avoid entering a series of single items designed to assess a singular construct, and thereby to minimise multicollinearity. Accordingly, ad-hoc scale and subscale scores were created based on the results of Principal Components Analyses (PCA) with oblique (oblimin) rotation (where needed). PCA were conducted on the following sets of items: parental attitudes to adolescent gambling; parental behaviours that facilitate adolescent gambling, parental behaviours that limit adolescent gambling; and online parental monitoring. These analyses, in combination with calculation of internal

consistency coefficients, determined whether it was suitable to combine these sets of items into total or scale scores for use in the bivariate and multivariate analyses. Where analyses indicated it was appropriate to combine items into a scale score, items in each scale were summed and divided by the number of items to create a mean total score.

In each PCA, three criteria were used to ensure that the data was suitable for PCA (Tabachnick & Fidell, 2019): 1) Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy values above 0.50; 2) a significant Bartlett's Test of Sphericity; and 3) inspection of the inter-item correlation matrix for correlations above 0.30. The factor structure (or appropriate number of components in each model) was evaluated based on eigenvalues above 1 and examination of the scree plot. Suitability of items to form a factor (scale) was assessed through inspection of factor loadings, with a 0.40 cut-off used to support inclusion of an item on a factor (Tabachnick & Fidell, 2019). Items with factor loadings below 0.40 were not included in the scale score.

PCA on the 4 items to assess parental attitudes to adolescent gambling supported a one-factor model. However, one item, "teenagers are more at risk for problem gambling than adults" had a low communality value (0.066) and did not load on this factor (loading = 0.257). When the item was dropped from the analysis, the final set of three items explained 72.87 per cent of variance in scores, and factor loadings ranged from 0.844 to 0.865. This set of items had good internal consistency, $\alpha = .813$.

PCA on the 17 items related to parental behaviours that facilitate or limit adolescent gambling indicated that a one-factor model best fit the data. However, three items had low communalities ($<.50$), indicating that they did not fit the latent factor model well, and were removed from the model. These were: "discussed responsible gambling", "talked about the potential risks or harms of gambling", and "kept conversations about betting and gambling private so the adolescent couldn't hear". The final one-factor model containing 14 items accounted for 79.68 per cent of variance in scores, with factor loadings ranging from 0.818 to 0.938. Internal consistency was strong, Cronbach's $\alpha = .980$.

Finally, PCA on the set of online monitoring items indicated that a two-factor model best fit the data, with the first component explaining 52.36 per cent of variance and the second explaining 18.88 per cent of variance. The four items on the first factor had factor loadings ranging between 0.733 and 0.896 and related to parents setting limits and restrictions on adolescent's online use (e.g., you restrict or block certain websites that your teenager might use; you set limits about the amount of time your teenager spends online). This subscale was therefore labelled "online restrictions". The second factor contained two items, "your teenager spontaneously talks to you about what they are doing or seeing online" (factor loading = 0.937) and "you talk to

your teenager about what they are doing online” (factor loading = 0.772). This subscale was labelled, “online conversations”. The internal consistency for both subscales was adequate, Cronbach’s $\alpha = .834$ for online restrictions; $\alpha = .692$ for online conversations. A limitation of this measure was that it included only two items. However, the strong content alignment and the high correlations between these two items warranted combining them into a single variable.

8.1.2. Assumptions checking

Assessment of the assumptions of linear regression revealed no violation of the assumptions of homoscedasticity and independence of observations, and there were no influential cases at a multivariate level. Inspection of correlations among the predictor variables and tolerance values indicated that there were no issues with multicollinearity. The one exception to this was parental facilitation of gambling and parent-adolescent co-gambling in the past 12 months, which were highly correlated in both mother ($r = .826, p < .001$), and father samples ($r = .835, p < .001$). Parental facilitation of gambling was therefore retained in the multivariate analyses. In addition, distributional checks for violations of normality revealed that, in both the mother and father samples, the distributions of the scores on the DSM-IV-MR-J, adolescent gambling participation, PGSI, and parental facilitative behaviours scales were positively skewed. There were also several univariate outliers within each of these distributions. When logarithmic transformations were conducted to reduce the influence of the skew and outliers, there were no substantive changes to the outcome of the correlational analyses. Thus, the original, non-transformed scores were retained in all analyses.

8.2. Factors influencing adolescent gambling participation

8.2.1. Bivariate analyses

The results of bivariate analyses examining correlates of total number of adolescent gambling activities in the past 12 months are presented in Appendix B. Analyses have been conducted separately for mothers and fathers in the sample. In terms of parental sociodemographic factors (see Table B.1), younger parent age and being from an Aboriginal and/or Torres Strait Islander background were correlated with adolescent gambling participation for both mothers and fathers. Higher parental education was a weak correlate for fathers, while family income, family structure and being from a non-English speaking background were not significant correlates in either sample.

In both samples (mothers and fathers), adolescent gambling participation was associated with adolescent emotional adjustment and 12-month participation in simulated gambling, with higher level of adolescent emotional problems and higher simulated gambling participation associated with greater adolescent gambling participation (see Table B.2). In the fathers sample only, adolescent male gender and

higher impulsivity were correlates of adolescent gambling participation. In the mothers sample, adolescent age, gender or impulsivity were not associated with adolescent gambling participation.

Most parental factors were weakly to moderately associated with adolescent gambling participation, although correlations tended to be weaker in the sample of mothers (see Table B.3). Mothers and fathers who reported lower levels of positive parenting, higher inconsistent discipline and poorer supervision also reported higher adolescent gambling participation. Both forms of online monitoring were correlates, with higher online restrictions and fewer online conversations related to adolescent gambling participation. Of the parent-adolescent relationship factors, mothers and fathers who reported higher levels of hostility and lower connectedness with their adolescents also reported higher adolescent gambling participation. Shared activities was not a correlate of adolescent gambling participation for either mothers or fathers.

Finally, gambling-related parental influences were moderately to strongly related to adolescent gambling participation for both mothers and fathers (see Table B.3). Higher levels of parent problem gambling and more positive attitudes to adolescent gambling were related to adolescent gambling participation. Further, parental facilitation of gambling was very strongly related to adolescent gambling participation, as was parental co-gambling with the adolescent in the past 12 months.

8.2.2. Multivariate analyses

Those variables significant at the bivariate level were entered into multivariate regression models with 12-month adolescent gambling participation entered as the dependent variable. Separate models were tested for mothers and fathers. The results of these analyses are presented in Appendix C, with results for the sample of mothers in Table C.1 and for fathers in Table C.2.

The first regression model assessed the influence of parental sociodemographic factors on adolescent gambling participation. For mothers and fathers, younger parent age and Aboriginal and/or Torres Strait Islander status were significant predictors, while higher parent education was also significant in the model for fathers. The second model examined the association between adolescent factors and gambling participation. In both the mother and father samples, higher adolescent emotional problems and 12-month participation in simulated gambling were significant predictors. Adolescent gender and impulsivity were entered as additional variables in the model for fathers, since both were significant bivariate correlates in analyses with the father sample. However, neither of these variables explained unique variance in the multivariate model.

The third model examined the independent influence of the general parental influences and gambling-related parental influences on adolescent gambling

participation. In the analysis of mothers, poor supervision, parent attitudes to adolescent gambling and parent facilitation of gambling were unique predictors. In the analysis with fathers, lower positive parenting, greater parent-adolescent hostility, and greater parent facilitation of gambling were significant predictors.

The final model assessed parent sociodemographic factors, adolescent factors and parental influences simultaneously. In the analysis with mothers, Aboriginal and/or Torres Strait Islander background, 12-month participation in simulated gambling, poor supervision, positive attitudes to adolescent gambling and parent facilitation of gambling each contributed unique variance to adolescent gambling participation. Simulated gambling participation and parent facilitation of gambling were the strongest predictors. For fathers, the independent predictors were lower positive parenting, greater parent-adolescent hostility and greater parent facilitation of gambling. Parent facilitation of gambling was the strongest predictor for fathers.

8.3. Factors influencing adolescent gambling problems

8.3.1. Bivariate analyses

Correlates of adolescent gambling problems were examined using an adapted parent-report version of the DSM-IV-MR-J. The results from bivariate analyses are presented in Appendix B. The pattern of findings for this set of analyses were highly similar to the results of the prior analyses on adolescent gambling participation.

With regard to parental sociodemographic factors (see Table B.1), parental younger age and Aboriginal and/or Torres Strait Islander background and higher paternal education were again significant factors for mothers and fathers. Higher maternal education was additionally related to adolescent gambling problems.

As in the analyses of gambling participation, adolescent factors associated with adolescent gambling problems in both the mother and father samples were emotional problems and 12-month participation in simulated gambling. Similarly, male gender and adolescent impulsivity were correlates of gambling problems in the fathers sample.

The pattern of results for general parental influences was identical to those for adolescent gambling participation. Specifically, for both mothers and fathers, lower positive parenting, higher inconsistent discipline, poorer supervision, higher online restrictions and fewer conversations about online activity were associated with adolescent gambling problems. The findings were also the same for gambling-related parental influences. In both samples, higher parental problem gambling, positive adolescent gambling attitudes, parental facilitation of gambling and parental co-gambling (past 12 months) were significantly related to adolescent gambling problems.

8.3.2. Multivariate analyses

Those variables significant at the bivariate level were entered into multivariate regression models with adolescent gambling problems as measured by DSM-IV-MR-J scores entered as the dependent variable. The results of these analyses are presented in Appendix C. Separate models were tested for the samples of mothers (see Table C.3) and fathers (see Table C.4).

In the first regression model examining parental sociodemographic factors, parent age, Aboriginal and/or Torres Strait Islander status and parent education were significant predictors for mothers and fathers. In the second model examining adolescent factors, parent-reported adolescent emotional problems and 12-month participation in simulated gambling were significant predictors in both the mother and father samples. Since adolescent gender and impulsivity were significant bivariate correlates for fathers, both variables were entered into the multivariate model for fathers but neither accounted for unique variance in the outcome.

The third model examined the independent influence of each of the parental factors on adolescent gambling problems. In this model, which contained both the general parenting factors and those that were gambling-related, poor supervision, parent-adolescent connectedness, parent problem gambling and parent facilitation of gambling were unique predictors in the sample of mothers. In the analysis of fathers, parent-adolescent connectedness, parent problem gambling and parent facilitation of gambling were also significant, but poor supervision was not. However, positive parenting was a significant predictor for fathers.

The final model assessed parent sociodemographic factors, adolescent factors and parental influences simultaneously. A slightly different pattern of results were seen for the mother and father samples in these analyses. In the analysis of mothers, level of education, adolescent emotional problems, 12-month participation in simulated gambling, poor supervision, parent-adolescent connectedness, parent problem gambling and parent facilitation of gambling each contributed unique variance to adolescent gambling problems. Simulated gambling participation and parent facilitation of gambling were the strongest predictors. In the analysis of fathers, the independent predictors were adolescent simulated gambling, parent-adolescent connectedness, parent problem gambling and parent facilitation of gambling. Parent facilitation of gambling and parent problem gambling were the strongest predictors for fathers.

9. Discussion and conclusions

Before reviewing the study findings, it should be emphasised that online panel surveys are not population representative. In interpreting the results of the present survey, in common with virtually all other work in this field, there is necessarily some ambiguity in interpreting point estimates of prevalence. In interpreting the results, one should assume that the sample contains an over-representation of parents who are negatively affected by their own gambling, and perhaps by the gambling of other family members. However, patterns of association between variables are less impacted by this sampling bias.

9.1. RQ 1: What attitudes do parents hold towards gambling and gambling harm generally and in relation to adolescents?

9.1.1. Parental attitudes to adolescent gambling

Adolescent gambling was reported by parents to be of lower concern in comparison to other common adolescent issues. Specifically, adolescent gambling and involvement in simulated gambling were ranked 11th and 16th respectively out of the 16 concerns presented to parents. Further, although around half of parents had talked to their adolescent about responsible gambling (58.0%) and the risks and harms of gambling (49.3%), these conversations were less likely to have occurred in the past 12 months in comparison to other adolescent issues. For instance, most parents (85% to 90%) had talked to their adolescent about excessive time online, online safety, unhealthy eating, bullying and depression in the past 12 months.

These findings of low parental concern about gambling in comparison to other adolescent issues are consistent with the results of a Canadian survey of over 3,000 parents regarding adolescent gambling (Campbell et al., 2011). In terms of population prevalence of these issues affecting adolescents, this might be said to be a rational belief given that issues such as bullying and mental health issues, which were ranked as being of highest concern in this sample of parents, affect a greater number of young people. Further, there is likely to be greater awareness of these issues among parents and young people, with policies and education programs in schools and public health messaging specifically targeted at bullying, mental health and substance use issues. However, given parents reported relatively high rates of adolescent gambling and problems, this could also reflect an under-appreciation by parents of the risks and potential harm involved in gambling.

It is notable that a substantial proportion of respondents considered it was okay for teenagers to participate in some forms of gambling or to be passively exposed to gambling and activities that promoted gambling. For example, over a third of parents (36.4%) were either ambivalent or felt it was acceptable for teenagers to watch professional poker tournaments or television shows featuring gambling, while 31.7

per cent were either neutral or agreed that it is okay for teenagers to engage in online gambling games as long as it's not for money. Only 29.2 per cent believed that teenagers are more at risk of problem gambling than adults. These attitudes reflect a disconnect between the research evidence regarding risk to adolescents and public perceptions and present an opportunity for information and educational efforts.

9.1.2. Parental attitudes to gambling in general

In contrast, parental attitudes towards gambling in general were quite negative, which is in line with prior research on gambling attitudes (Donaldson et al., 2016). Most respondents disagreed that gambling is a good way to relieve boredom (68.0%), gambling is a good way for communities to raise funds (73.8%), and gambling can be a good way to make money if you know the game (73.0%). Only a quarter of respondents (25.2%) agreed that gambling less than once a week was appropriate, and only a small proportion of respondents (14.6%) agreed that gambling more than once a week was appropriate. Half of respondents agreed that people who gamble more than once a week are at risk of gambling-related harm.

It is a consistent finding in other research that respondents typically disapprove of gambling in society, even when they are complacent or positive regarding their own gambling. This likely reflects a generic attribution bias in attitudes towards stigmatised behaviours, in which there may be a negative attitude towards the activity in the abstract (e.g., speeding while driving, alcohol consumption), but it is not seen as a problem in personal terms. Accordingly, a promising avenue for attitudinal and behaviour change is to combat this tendency; to translate this general appreciation of risk into personal terms – that is, to advance an understanding that risks from adolescent exposure to gambling can affect 'normal families like us'. Messaging would also profit from emphasising that gambling and gambling exposure in adolescents leads to much greater risk of serious problems in young adulthood. Complacency among parents may be partly due to perceiving that there are no negative repercussions for their adolescents at the present time. Thus, parents would benefit from understanding that psychological impacts (e.g., due to normalisation) may translate into more serious problematic behaviour in later life.

9.2. RQ 2: What are parent perceptions of the nature and extent of gambling, simulated gambling, and gambling problems among adolescents?

9.2.1. Adolescent participation in gambling and simulated gambling

Parents reported high levels of participation in gambling and simulated gambling among their adolescent children. This is concerning given that, except for informal private betting, all forms of gambling included in the survey are illegal for individuals under the age of 18 years in Australia. Specifically, 27.1 per cent respondents indicated that their adolescent had participated in at least one of the 14 forms of

gambling during the past 12 months. The proportion was marginally higher for adolescent males (29.5%) compared to females (24.2%). A similar proportion of parents (27.8%) indicated that their adolescent had participated in at least one form of simulated gambling in the past 12 months. Here, however, much higher rates of simulated gambling participation were reported among adolescent males (35.3%) compared to females (18.8%).

Participation in monetary forms of gambling appeared to take place across the entire spectrum of available forms, although participation was most common for instant scratch tickets and lottery tickets. Although any participation by adolescents is highly problematic, it is significant that more than half of these gambled regularly: 2-3 times a month or more. Furthermore, these rates reflect only the gambling that parents were aware of and does not include gambling that adolescents conceal from their parents. Ambiguity regarding true population prevalence and the sampling limitations of this study notwithstanding, the high risk associated with this behaviour makes it a clear target for parental intervention campaigns. That is, parents would benefit from a clearer understanding that any degree of gambling participation in adolescents is dangerous, with consequences that could unfold over their child's lifespan.

9.2.2. Adolescent exposure to parent gambling

Also of note was the high rates of gambling in the presence of adolescents (68.4%) among parents who gambled. This was comparable to the rate reported in Canadian research (i.e., 60.0%) in one of the only other large surveys of parents regarding youth gambling (Campbell et al., 2011). In addition, parents reported marginally higher rates of gambling with younger adolescents compared to older adolescents. The activities with the most adolescent exposure in the past 12 months included emergent forms of gambling likely to be specifically attractive to adolescents, such as skin betting (74.6% of the 142 parents who played did so with their adolescent present), fantasy sports betting (69.5% of the 167 parents who played did so with their adolescent present), and online betting games (65.1% of the 192 parents who played did so with their adolescent present). Co-gambling was also observed with traditional forms such as keno (66.2% of the 308 parents who played did so with their adolescent present), scratch tickets (64.7% of the 600 parents who played did so with their adolescent present) and electronic gaming machines (43.7% of the 421 parents who played did so with their adolescent present). Thus, co-gambling was not confined to relatively innocuous activities, such as buying a scratch ticket or lottery ticket when their adolescent was present. Decreasing the acceptability of engaging in the most intense and risky forms of gambling in the presence of minors would appear to be a clear avenue for healthy behaviour change.

9.2.3. Adolescent gambling problems

Rates of parent-reported symptoms of problem gambling were also concerning. Using an adapted form of the DSM-IV-MR-J, which is widely used in Australia as an

adolescent self-report measure of gambling problems, parents indicated that an estimated 6.8 per cent of adolescents were experiencing problems due to gambling and a further 3.4 per cent were at-risk of gambling problems. These rates were somewhat higher than typically reported in Australian surveys of adolescents, which have estimated that between 0.7 per cent and 5.4 per cent of adolescents experience gambling problems (King et al., 2020). In the NSW Youth Gambling Study 2020 (Hing et al., 2021), 1.5 per cent of respondents were classified as experiencing gambling problems, and 2.2 per cent were classified as at-risk of gambling problems.

The sampling approach used in the current study and the fact that the DSM-IV-MR-J has not been previously validated for parent report means that any direct comparisons with adolescent-reported rates should be made with caution. However, differences in reporting between adolescents and parents are common, with meta-analytic research indicating that there is low to moderate concordance between parent and adolescent reports of mental health problems (De Los Reyes et al., 2015). Further, there is evidence that adolescents may be more likely to under-report some symptoms and behaviours to present a more positive view of themselves, consistent with a social desirability bias (De Los Reyes et al., 2015; McMahon & Frick, 2005). An important direction for future research will be to obtain data from parent-adolescent dyads to properly assess concordance in reports of adolescent gambling problems, in the same way this has been investigated with other adolescent mental health and behavioural concerns.

9.2.4. Differences in reports of adolescent gambling participation and gambling problems between mothers and fathers

Fathers reported higher rates of awareness of adolescent gambling (36.0% for fathers versus 23.2% for mothers) and simulated gambling (42.0% versus 21.6%), and higher rates of co-gambling with their adolescent (73.2% versus 66.1%). Fathers also reported a much higher rate (21.3%) of adolescent gambling problems than mothers (5.3%). These differences were particularly prominent among fathers who reported on adolescent sons, consistent with the Canadian parent survey (Shead et al., 2011). These large differences are difficult to explain. There is a clear connection between higher levels of fathers' knowledge of adolescent gambling and their co-gambling behaviour, given that a parent is more likely to be aware of their adolescent's gambling if they are directly facilitating that gambling behaviour. It is possible that fathers have a greater awareness of either illicit adolescent activities, or (somewhat less plausibly) a greater appreciation of the risks involved in adolescent gambling. It is somewhat incongruous that fathers reported being concerned about their child's gambling at a much higher rate (24.3%) than mothers (4.9%) yet were more likely than mothers to co-gamble with their adolescent. Alternatively, these differences might be at least partially due to selection effects, given that fathers also reported higher rates of personal gambling participation and simulated gambling

participation compared to mothers in the last 12 months. There is insufficient evidence to make a conclusive finding regarding these parental differences, but the phenomenon warrants further investigation. Nonetheless, these findings point to the need to target fathers in prevention or education efforts to address adolescent gambling.

9.3. RQ 3: What are the parental risk and protective factors for adolescent gambling and gambling problems?

We examined a comprehensive range of potential influences on adolescent last 12-month gambling participation and gambling problems. Consistent with prior research (e.g., Dowling et al., 2017a), we took a bioecological approach by examining the role of parent and family sociodemographic factors (e.g., age, gender, education, Aboriginal and/or Torres Strait Islander status, household income, family structure) and adolescent factors (i.e., age, gender, impulsivity, emotional problems, simulated gambling participation). Importantly, we had a particular focus on parental influences. We examined influences that were directly gambling related (i.e., parent problem gambling, parental attitudes to adolescent gambling, parental facilitation of gambling) as well as general parenting practices (i.e., positive parenting, inconsistent discipline, poor supervision, online monitoring) and dimensions of the parent-adolescent relationship (connectedness, shared activities, hostility). Because of limited examination in prior research on maternal and paternal influences on adolescent gambling, we looked at these set of factors separately in mothers versus fathers.

9.3.1. Sociodemographic factors associated with adolescent gambling participation and gambling problems

Demographic characteristics of mothers and fathers, including younger parental age, being from an Aboriginal and/or Torres Strait Islander background and higher parental education, were significantly associated with adolescent engagement in gambling activities during the past 12 months and adolescent gambling problems. Male gender was the only adolescent demographic factor associated with adolescent gambling participation, but only in the sample of fathers. Household income or family structure were not significant correlates of either outcome.

When these factors were considered alongside adolescent and parental influences, mothers' Aboriginal and/or Torres Strait Islander background continued to be an independent predictor of adolescent gambling participation and higher maternal education was independently associated with adolescent gambling problems. The findings of this study are somewhat consistent with the literature on adolescent gambling. Prior research with adolescents, including longitudinal (Dowling et al., 2017a) and cross-sectional research (Calado et al., 2017), has indicated that low socioeconomic status, growing up in a single-parent household and being from a minority cultural or ethnic background are the most reliable family sociodemographic

risk factors for adolescent gambling. The finding that mothers who were from an Aboriginal and/or Torres Strait Islander background reported greater adolescent gambling participation fits with research indicating minority cultural status is a risk factor for adolescent gambling (Calado et al., 2017). However, we did not find support for lower family income or family structure being correlates of adolescent gambling or gambling problems. Further, the finding that higher maternal education was associated with adolescent gambling problems is surprising and inconsistent with research with adolescents indicating lower socioeconomic status is associated with adolescent gambling (Calado et al., 2017), and research with adults indicating higher education is associated with lower gambling problems (Browne et al., 2019b). It is important to note that, although statistically significant, mothers' Aboriginal and/or Torres Strait Islander status and education level accounted for relatively little variability in adolescent gambling. The effect size decreased further once adolescent and parent influences were considered. This indicates that more proximal factors, particularly those that are potentially modifiable through intervention, are better intervention targets for addressing adolescent gambling and gambling harm.

9.3.2. Adolescent factors associated with adolescent gambling participation and gambling problems

The examination of adolescent factors included distal variables, such as gender and age, as well as more proximal variables, namely emotional problems, impulsivity, and past 12-month participation in simulated gambling. At the bivariate level, adolescent simulated gambling and adolescent emotional problems were associated with adolescent gambling participation and gambling problems for both the mother and father samples. Adolescent male gender and impulsivity were additional correlates of both outcomes in the sample of fathers. In multivariate analyses, adolescent simulated gambling participation was an independent and strong predictor of mother-reported adolescent gambling participation and gambling problems, and of father-reported adolescent gambling problems. Further, adolescent emotional problems continued to explain a small but significant proportion of variation in adolescent gambling problems in the sample of mothers. No other adolescent factor, including gender and impulsivity, were significant predictors once the parental influences were considered.

Male gender and impulsivity are consistently shown to be predictors of adolescent gambling in longitudinal research with adolescents (Allami et al., 2017; Dowling et al., 2017a; Pisarska & Ostaszewski, 2020), while internalising problems like depression and anxiety are common correlates in cross-sectional research but not in longitudinal research (Allami et al., 2017; Dowling et al., 2017a). Our findings did not support male gender and impulsivity as risk factors for gambling. While prior longitudinal research had also examined a comprehensive set of risk and protective factors, one key difference with the current study is that the influence of engagement in simulated gambling had not been previously considered in this research. The

findings from the NSW Youth Gambling Study 2020 (Hing et al., 2021) indicated that simulated gambling among adolescents is common, with between 11.8% and 36.5% of young people engaging in the main forms of simulated gambling. Further, recent cross-sectional research with adolescents suggests that young people who engage in simulated gambling are more likely to gamble on monetary forms and to experience gambling problems (Hing et al., 2022a; Wardle & Zendle, 2021). Longitudinal data is currently not available to support the notion that simulated gambling acts as a 'gateway' to monetary gambling. However, the findings from the current study that these associations between simulated gambling, monetary gambling and gambling problems are also present using parent-reported information adds further weight to the concern about simulated gambling and its potential to encourage and normalise gambling and create false beliefs about gambling (Armstrong et al., 2018; Kristiansen et al., 2018).

9.3.3. Parental influences on adolescent gambling participation and gambling problems

At the bivariate level, almost all general parental influences, including lower positive parenting, inconsistent discipline, poor supervision and online monitoring, lower parent-adolescent connectedness and higher hostility were associated with gambling participation and gambling problems for both mothers and fathers. Similarly, all gambling-related parental influences, including parent problem gambling, positive attitudes to adolescent gambling and parental facilitation of gambling, were significantly related to adolescent gambling participation and gambling problems in both the mother and father samples.

When all factors were considered simultaneously, the extent to which parents facilitate gambling emerged as the strongest predictor of gambling participation and gambling problems in the samples of mothers and fathers. Other gambling-related parental factors also predicted independent variation in adolescent gambling outcomes, with maternal positive attitudes to adolescent gambling independently related to adolescent gambling participation, and maternal and paternal problem gambling independently related to adolescent gambling problems. However, the effect of parental gambling facilitation was independent of and stronger than these other gambling-related parental influences, which are identified in the literature as key risk factors for adolescent gambling (Calado et al., 2017; McComb & Sabiston, 2010). A large body of research with adolescents (e.g., Freund et al., 2019; Hing et al., 2021; Warren & Yu, 2018) and findings from Canadian research with parents (Campbell et al., 2011; Shead et al., 2011) indicates that parents often endorse and are actively involved in their adolescent's gambling. Taken together, the findings from this study build on this work by showing a direct relationship between parental facilitation of gambling and adolescent gambling participation.

The very strong direct effect of parental gambling facilitation speaks to the major role that parents play in condoning (or preventing) their adolescent's gambling behaviour and is likely to be a key mechanism for explaining the relationship between parental gambling and adolescent gambling. Table 4 in Section 7.5.1 describes the parental behaviours that comprised this measure of parental gambling facilitation. Among the most reported behaviours by parents were talking about their gambling wins with their adolescent (28.5%); asking adolescents to pick 'lucky numbers' in keno or lottery (27.8%), buying scratch tickets or lottery tickets for the adolescent (22.1%) and taking the adolescent to a gambling venue (e.g., poker machine area in a pub or club, casino, racetrack; 19.7%). These concrete parental behaviours represent logical points of focus in terms of parental behaviours that could be targeted in parent education campaigns to prevent adolescent gambling.

Despite the strong contribution of parental gambling facilitation to adolescent gambling participation and problems, several factors illustrative of the broader parenting and parent-adolescent relationship context emerged as independent predictors. For mothers, poor monitoring of their adolescent's activities and whereabouts was associated with gambling participation and gambling problems, which is consistent with prior cross-sectional (Canale et al., 2016; Molinaro et al., 2014) and longitudinal work (Lee et al., 2014) with adolescents. In comparison, online monitoring was not a significant predictor of adolescent gambling or gambling participation, which supports previous research on adolescent internet misuse that found general parental monitoring is more important than monitoring aimed specifically at adolescent technology and internet use (Vaala & Bleakley, 2015).

Finally, dimensions of the parent-adolescent relationship were independently related to adolescent gambling. Parent-adolescent connectedness was negatively associated with adolescent gambling problems for mothers and fathers, while hostility in the father-adolescent relationship was positively associated with adolescent gambling participation. Taken together, these findings suggest that relationships between parents and adolescents that are high in connectedness and support, and low in hostility and criticism, may protect against adolescent gambling problems and gambling-related harm. The protective role of positive parent-adolescent relationships is supported by several other cross-sectional (Floros et al., 2013; Haroon et al., 2004; Molinaro et al., 2014) and longitudinal studies (Pisarska & Ostaszewski, 2020) with adolescents.

Although less strongly related to adolescent gambling than parental gambling facilitation, the potentially protective role of appropriate parental monitoring and positive parent-adolescent relationships warrants further investigation. Prior research has indicated that positive parent-adolescent relationships buffer the effect of parental gambling (Dowling et al., 2017b) and adolescent exposure to gambling advertising (Parrado-González & León-Jariego, 2020) on gambling outcomes for

adolescents. Given the strong influence of parental facilitation of gambling in this study, it is possible that effective monitoring and strong parent-adolescent relationships may moderate the negative effects of parental facilitation of gambling on adolescent gambling outcomes. Further research, preferably longitudinal in nature, is needed to properly investigate this hypothesis.

9.4. RQ 4: What target groups of parents are likely to benefit most from education and intervention about adolescent gambling?

The findings from this study provide an indication of the types of parents who might benefit from education about adolescent gambling, although it is important to consider these suggestions within the limitations of the sampling approach used. Overall, the results suggest that there are two main groups of parents that should be considered in the design and delivery of any education and support about adolescent gambling: fathers (particularly fathers who gamble), and parents who engage in behaviours that actively facilitate adolescent gambling.

Fathers reported higher rates of adolescent gambling, simulated gambling and gambling problems, indicating that they may have greater knowledge than mothers of their adolescent's gambling behaviour. Further, they reported higher rates of co-gambling with their adolescent, particularly with their adolescent sons compared to their daughters. Thus, universal messaging about the harms of adolescent gambling (e.g., through social or traditional media platforms), might need to consider how to engage fathers by ensuring they are represented in these campaigns and tailoring messaging to their preferred forms of gambling. Video-based messaging, particularly gain-framed messages focusing on the benefits of a certain recommendation, have been shown to promote behaviour change across a broad range of health behaviours (Tuong et al., 2014) Thus, visual messaging that includes fathers engaging in positive and protective behaviour with sons may be effective in the context of adolescent gambling. Fathers may benefit from education regarding adolescent simulated gambling, given that half of this sample of fathers (49.9%) had taken part in simulated gambling in the past 12 months (compared to 24.1% of mothers), and thus may be more likely to view this as an acceptable activity for their teen. Importantly, however, any efforts to engage fathers should not be at the cost of excluding mothers, given that they too reported concerning rates of co-gambling.

The findings from this research highlight that adolescents are more likely to engage in monetary gambling and be at risk of gambling problems if they have a parent who facilitates and encourages adolescent gambling behaviour. The survey results indicated that parental gambling facilitation can occur in different ways, including by involving adolescents in parent's own gambling, providing the means for adolescents to gamble themselves (e.g., putting on bets for them, providing them with money to gamble), or otherwise behaving in a way that normalises and endorses gambling

(e.g., talking about gambling wins, taking them to a gambling venue). Thus, education for parents should focus on helping parents understand the impact of this type of behaviour on their adolescent by increasing awareness of the potential risks and providing them with suggestions to reduce or stop their engagement in behaviour that encourages adolescent gambling.

9.5. RQ 5: What are parents' preferences for receiving information and support about protecting their adolescent children from gambling and gambling harm?

When asked about their preferences for receiving information about adolescents and gambling, parents indicated that their most preferred delivery formats were online written materials (47.0%), printed written materials (45.0%) and brief videos on social media (43.6%). Parents rated in-person parent seminars (23.5%), in-person group sessions (25.1%) and online group sessions (32.4%) as their least preferred options. This suggests that low intensity, easily accessible and self-directed delivery options are the preferred means of accessing support. This is consistent with prior research on parent preferences for delivery of parenting programs (Metzler et al., 2012; Tully et al., 2017) as well as research that indicates that parenting websites and social media are common methods used by parents to access parenting information (Baker et al., 2017).

9.6. Study limitations

The results of this study should be interpreted considering the following limitations. The use of online panels for data collection enabled us to obtain a large sample that included a good proportion of fathers (31.0%), single parents (19.7%), families with household incomes below the national median (38%), and parents from an Aboriginal and/or Torres Strait Islander background (7.3%). However, as stated above (Section 9), the sample is not representative of the larger NSW population because of the online panel sampling method. Thus, any rates of gambling participation or gambling problems should not be interpreted as population prevalence rates and comparison to prior representative surveys needs to be done cautiously.

Another limitation is the cross-sectional design, in which data was collected at a single point in time. While potential associations between variables were identified, direct causation could not be inferred. This limitation could be addressed by using prospective longitudinal designs in the future, although these methods are more demanding in terms of time and money.

Furthermore, the study relied solely on parent-report data, with the findings reflective of only parental perceptions of adolescent gambling. While the lack of parental data is an important gap in the literature that this study helps to address, research shows

that there are discrepancies in parental and adolescent perceptions of adolescent mental health problems and externalising behaviour (De Los Reyes et al., 2015). Consequently, future research would benefit from collecting data from parents and adolescents to assess concordance in reports of adolescent gambling participation and gambling problems.

Finally, the measure used to assess adolescent gambling problems (i.e., DSM-IV-MR-J) was modified in the current study to allow for parent report of adolescent gambling behaviour. This instrument and its associated cut-offs for categories of gambling problems has only been validated as a self-report measure for adolescents. Therefore, the results related to rates of adolescents at-risk of gambling problems or experiencing gambling problems should be interpreted with caution.

Despite these limitations, this study provides valuable insight into parent perspectives of adolescent gambling and simulated gambling, along with information about potentially modifiable parental risk and protective factors that might be addressed in education for parents about adolescent gambling.

9.7. Conclusions

This study demonstrated that parents are aware of, and have the capacity to report on, adolescent gambling, simulated gambling, and gambling problems. In comparison to mothers, fathers reported higher levels of participation in gambling and simulated gambling among their adolescents, as well as higher levels of gambling problems. Of particular concern was the high level of adolescent exposure to parental gambling via parent-adolescent co-gambling as well as engagement by parents of behaviours that facilitate adolescent gambling. Potentially because of this high level of co-gambling, parents tended to be less concerned about adolescent gambling and less likely to have had conversations with the adolescent about gambling and gambling-like games in comparison to other adolescent issues. Consistent with this, a significant proportion of parents held neutral or positive attitudes towards adolescent gambling and less than a third believed that adolescents are more at risk of problem gambling than adults.

Thus, among adolescents whose parents gamble, the findings from this study indicated that adolescents are not only directly observing their parent's gambling but are also supported or encouraged to gamble themselves in their parent's presence. Parental approval and facilitation of adolescent gambling is likely to convey the message to adolescents that gambling is an acceptable and harmless activity. This suggestion was highlighted by the findings of the current study, such that parental facilitation of adolescent gambling was found to be the strongest predictor of adolescent gambling participation and gambling problems. Put another way,

adolescents were more likely to engage in monetary gambling and experience gambling problems if their parent facilitated their gambling behaviour.

Another important finding from this study was the strong association between adolescent simulated gambling and adolescent gambling participation and gambling problems. This adds to research with adolescents and provides further support for simulated gambling as a risk factor for monetary gambling and gambling problems among adolescents. Finally, parental monitoring and positive parent-adolescent relationships were related to adolescent gambling outcomes, suggesting that these aspects of the parenting environment might help to protect adolescents from gambling problems.

Overall, longitudinal research, involving both parents and young people, is needed to better understand the temporal associations among adolescent simulated gambling, parental gambling facilitation, parental monitoring, and positive parent-adolescent relationships. Importantly, such research is needed to examine how parental influences might mediate and/or moderate relationships between risk factors for adolescent gambling and adolescent gambling outcomes over time. This type of research would help to inform parent-focused and youth-focused initiatives to address youth gambling, which may have long-term preventative effects on adult gambling problems, risks, and harms.

10. Implications

10.1. Implications for the design and evaluation of prevention and intervention efforts to address adolescent gambling

Best practice models of program development emphasise that high quality and effective programs must pass through a consumer-focused, iterative, and multi-stage process to ensure effective dissemination and uptake of the program (Bertram et al., 2015; Sanders & Kirby, 2015). Drawing on a model that has been used successfully to disseminate evidence-based parenting support (Sanders et al., 2014), Sanders and Kirby (2015) have described this multi-step process as involving: 1) building the theoretical and empirical rationale for the program, its components and content; 2) program development and design; 3) initial program evaluation and refinement; 4) efficacy and effectiveness trials; 5) further program refinement; and 6) scaling up for dissemination and implementation.

The current study, in combination with the NSW Youth Gambling Study 2020 (Hing et al., 2021), fits within the first stage of program development as these studies have provided the empirical rationale for addressing adolescent gambling by focusing on parental behaviour. In addition, both studies have provided information regarding the components or content of such an intervention. Specifically, parental co-gambling, parental facilitation of gambling, and parental awareness of the immediate and long-term risks of adolescent gambling and simulated gambling should be important intervention targets. Moreover, a comprehensive, stepped care model is likely to be needed that combines universal messaging and education for all parents (especially fathers) with targeted support for adolescents at risk of gambling problems. Considering the current findings, targeted interventions for adolescent gambling are likely to be most effective if they aim to reduce parental facilitation of gambling, alongside building effective parenting practices and strong and connected parent-adolescent relationships. This study also provided insight into parents' preference for easily accessible and self-directed forms of information about adolescent gambling, although further work is needed to investigate whether parents' preferences are different if they are looking to access intervention for an adolescent with gambling problems.

The recommended next step in this program of research then is to take the knowledge from the current study and the NSW Youth Gambling Study 2020 (Hing et al., 2021) to inform the development of initiatives or programs to address adolescent gambling. Consistent with evidence-based prevention science principles (Bertram et al., 2015; Sanders & Kirby, 2015), this program should then be subject to pilot evaluation and feasibility testing with parents and adolescents to enable further refinement and larger efficacy trials. These phases of program development should take account of the ecological context within which the program will be delivered. Sanders and Kirby (2015) emphasise the importance of incorporating the

perspectives of end users and stakeholders (e.g., practitioners, agencies, cultural organisations) and consumers (parents, adolescents) regarding the appropriateness, usefulness, feasibility, and cultural relevance of the program and its delivery modality. It is recommended that this can be done via focus groups with parents and community stakeholders, as well as through brief acceptability surveys.

10.2. Implications for future research into adolescent gambling

This study makes an important contribution to our understanding of adolescent gambling in several ways. While there are many Australian and international surveys involving very large samples of adolescents examining the nature, extent and influences on adolescent gambling, very little research has examined these issues from the perspective of parents. In addition, no prior study has provided such a comprehensive examination of parental influences on adolescent gambling, nor has there been appropriate consideration in the literature of both the general parenting and parent-adolescent relationship context, alongside parenting factors specifically associated with gambling. Further, the inclusion of adolescent simulated gambling in this study is an important contribution given that this has not been assessed from parents' perspective in previous research. Thus, this study provides unique and essential information regarding the role of parents in adolescent gambling and does so from the perspective of parents.

However, the cross-sectional nature of this study means that we cannot draw any causal conclusions based on the current results. Further, while it was important to collect information from parents, a more comprehensive account of adolescent gambling would be provided by obtaining both adolescent and parent reports. Thus, prospective, longitudinal research of adolescent gambling that takes a multi-informant approach to assessment is needed. Such a study would need to be well-resourced with incentives put in place to recruit and retain parents and adolescents over the course of the study.

Longitudinal research would allow current knowledge regarding parenting and adolescent gambling to move beyond descriptive data and cross-sectional analyses, to focus on the influence of parenting on transitions in young people's gambling and simulated gambling over time. This would enhance understanding of the causal factors influencing harmful gambling and simulated gambling among young people, to valuably inform initiatives to prevent and reduce this harm during adolescence and into adulthood.

11. References

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12. Appendices

12.1. Appendix A. Survey instrument

Project Overview

This survey is being conducted by CQUniversity and is being funded by the NSW Office of Responsible Gambling.

By participating, you can help us learn about parents' knowledge and awareness of gambling and gambling-like activities among teenagers. This study will also help us to better understand the parenting and family factors that influence teen gambling behaviour and simulated gambling activities.

The anonymous online survey will take around 20 minutes to complete. It consists of questions about your parenting practices, the relationship between yourself and your teen, your perceptions of teen gambling and any other experiences with gambling behaviours.

If you have any questions about this project, please contact the Lead Investigator Dr Cassandra Dittman via c.dittman@cqu.edu.au.

Ethical clearance

This project has been approved by the CQUniversity Human Research Ethics Committee (Clearance number: 23502).

Information Sheet

What is this study about?

The study aims to gain parental perspectives on gambling among teenagers aged 12 to 17 years. We are interested in looking at the parenting practices, behaviours and attitudes that might protect teenagers from gambling risks and harms.

Who is conducting the study?

The study is being conducted by a team of researchers from Central Queensland University. The project team includes Dr Cassy Dittman, Professor Nerilee Hing, Professor Matthew Rockloff, Professor Matthew Browne, Associate Professor Alex Russell, and Dr Lisa Lole. One student researcher, Nathaniel Hill, will use data from this study to write their thesis as part of the requirements of a Master of Clinical Psychology. Nathaniel is being supervised by Dr Cassy Dittman. The study is funded by the NSW Office of Responsible Gambling.

What will you be asked to do?

Complete an anonymous online survey at a time and place of your choosing. The survey contains questions about your parenting, relationship with your teenager, and your teenager's wellbeing and behaviour. You will also be asked questions about your own and your teenager's participation in gambling and gambling-like activities and your attitudes towards gambling. The survey, including the consent process, will take around 20 minutes to complete.

How is my privacy and confidentiality protected?

The survey is anonymous and no identifying information will be collected. This means you are not required to provide us with any names or contact details. All information will be reported at a group level so that no one will be able to tell what your individual answers were. Data will be securely stored and retained in accordance with the CQUniversity Code of Conduct for Research. The de-identified data (the data collected without any way of identifying you) may be used in future research projects that are an extension of the current project, such as for reanalysis purposes or by future postgraduate research students.

Is my participation voluntary?

Yes! Participation in this study is completely voluntary and you are free to withdraw by choosing not to submit the survey, with no consequences for you or your family. As your responses are anonymous it

will not be possible to withdraw once you have submitted the online survey to the researchers.

Are there any risks involved?

Participation in this research should not cause any undue discomfort beyond that experienced in normal day to day living. While unlikely, parents can briefly feel upset when answering personal questions about parenting and personal wellbeing, or about their teenager's behaviour and wellbeing. If that happens, you can skip to the next question.

If you are worried about yourself or your teenager or experience discomfort at any point during the survey, please seek support. You can contact the Gambling Help Line on **1800 858 858** or <https://www.gamblinghelponline.org.au/>, Lifeline on **13 11 14** or Parent Line NSW on **1300 1300 52** or <https://www.parentline.org.au/>. These are free and confidential help services that operate 7 days a week.

Where will the results be reported?

Information about the results of the research will be made available to the public through CQUniversity's Gambling Research Facebook page: <https://www.facebook.com/cquegr/>. A report detailing the findings of the study will be prepared for the NSW Office of Responsible Gambling. The findings will also be reported in Master of Clinical Psychology thesis, scientific, peer-reviewed journal articles, and conference presentations. No individual will be identifiable in any report of the study.

Where can I get further information?

If you want further information about the study or have any questions, please contact the Lead Researcher, Dr Cassy Dittman, via email: c.dittman@cqu.edu.au. If you have any ethical concerns about this research, you are welcome to contact the Ethics and Compliance Officer at the Office of Research at CQUniversity on +61 7 4923 2603 or ethics@cqu.edu.au.

I'm ready to participate. What do I do next?

If you would like to participate, please indicate that you have read and understood this information and consent to taking part in this study in the Electronic Consent on the next page. You will then be asked some questions to determine your eligibility and, if selected, you can then take part in our online survey.

Qualtrics is helping us to recruit participants for this study. Note that you will be compensated by your panel provider for your participation in this study according to the usual terms of your agreement with them.

Ethical clearance

This project has been approved by the CQUniversity Human Research Ethics Committee (Clearance number: 23502).

Consent

By clicking on the 'Yes' button below, I am agreeing that:

1. I am 18 years of age or older, and living in New South Wales, Australia.
 2. I have read and understood the Information Sheet that describes this study.
 3. Any questions I had about the study were answered to my satisfaction by either the Information Sheet or the researchers.
 4. I understand I have the right to withdraw from the study at any time up to the point that I submit the survey.
 5. I give my consent for the data I provide in the following survey to be used for the research purposes described.
 6. I voluntarily provide my consent to participate in the study.
- Yes, I consent **[continue to the next question]**
 - No, I do NOT consent **[screen out]**

Screening

Are you a permanent resident of New South Wales?

- Yes
- No

What is your postcode?

Are you the parent or main caregiver of a child living in your house aged between **12 and up to and including 17 years**?

- Yes
- No

How many children are there living in your household in total?

- 0
- 1
- 2
- 3
- 4
- 5 or more

Thanks for answering those questions. You can now move onto the rest of the survey. The survey is broken into six main sections.

1. Background information about yourself and your teenager.
2. Your teenager's adjustment and wellbeing.
3. Parenting your teenager.
4. Your personal gambling attitudes and behaviour.
5. Gambling around your teenager.
6. Knowledge of your teenager's gambling behaviour.

Throughout the survey, you will be asked questions about one child in your care and living in your household aged **between 12 and up to and including 17 years**. If you have more than one child in your household in that age range, please think about the child with the **next birthday**. For the rest of this survey, that child will be referred to as '**your teenager**'.

Section 1. Background Information About Yourself and Your Teenager

Personal Background Information

To get started, please answer the following questions about your own personal background.

What is your age?

What is your gender?

- Male
- Female
- Other

Do you identify as Aboriginal and/or Torres Strait Islander?

- Yes, Aboriginal
- Yes, Torres Strait Islander
- Yes, both Aboriginal and Torres Strait Islander
- No, neither Aboriginal or Torres Strait Islander

Is English the main language spoken in your household?

- Yes
- No

What is the main language spoken in your household?

(Only shown to respondents that indicated English is NOT their main language)

What is the highest level of education you have completed?

- No schooling
- Completed primary school
- Completed junior high school (Year 10)
- Completed senior high school (Year 12)
- A trade, technical certificate, or diploma
- An undergraduate university degree
- A postgraduate university degree

Which of the following best describes your current work status?

- Working full-time
- Working part-time
- Home duties
- Full-time student
- Retired (self-supporting, in receipt of superannuation)
- Pensioner
- Unemployed (or looking for work)
- Other (please specify)

Which of the following income bands best describe the **total gross income** for your family (that is, the total amount all family members earn before tax is taken out)?

- Under \$385 per week (under \$20,000 per year)
- \$386 - \$577 per week (\$20,001-\$30,000 per year)
- \$578 - \$769 per week (\$30,001-\$40,000 per year)
- \$770 - \$961 per week (\$40,001-\$50,000 per year)
- \$962 - \$1154 per week (\$50,001-\$60,000 per year)
- \$1155 - \$1346 per week (\$60,001-\$70,000 per year)
- \$1347 - \$1538 per week (\$70,001-\$80,000 per year)
- \$1539 - \$1731 per week (\$80,001-\$90,000 per year)
- \$1732 - \$1923 per week (\$90,001-\$100,000 per year)
- \$1924 - \$2308 per week (\$100,001-\$120,000 per year)
- \$2309 - \$2692 per week (\$120,001-\$140,000 per year)
- \$2693 - \$3077 per week (\$141,000-\$160,000 per year)
- \$3078 - \$3462 per week (\$161,000-\$180,000 per year)
- \$3463 - \$3846 per week (\$181,000-\$200,000 per year)
- \$3846 and over per week (\$200,001 and over per year)
- I don't know or wish to disclose our total family income

What is your current marital status?

- Married or living with a partner
- Separated or divorced (not living with a partner)
- Widowed (not living with a partner)
- Single/never married/never de facto
- Other (please specify)

Which statement best describes your household?

- Two-parent original family
- Stepfamily (two parents, one being a stepparent)

- Blended family (two parents, children from both partners' prior relationships present)
- Sole parent family
- Other (please describe)

Teen Background Information

When answering the following questions, remember to think about the teenager in your household with the **next birthday**. Remember, we are interested only in teenagers who are **aged 12 to 17 years**. For the rest of the survey, that child will be referred to as '**your teenager**'.

What year was your teenager born?

What gender is your teenager?

- Male
- Female
- Other

What is your relationship to this teenager?

- Biological or adoptive parent
- Stepparent
- Grandparent
- Other (please specify)

Does your teenager live some of their time with another parent or caregiver?

- Yes
- No

On average, how many **days per month** does your teenager spend in your household?
(Only shown to respondents that indicated their teenager sometimes lives with another parent/caregiver)

Is your teenager currently at school?

- Yes
- No

What year is your teenager in at school?

(Only shown to respondents that indicated their teenager is currently at school)

- Year 5 or below
- Year 6
- Year 7
- Year 8
- Year 9
- Year 10
- Year 11
- Year 12

What does your teenager do instead of going to school?

(Only shown to respondents that indicated their teenager is NOT currently at school)

- They work full-time
- They work part-time
- They are studying at TAFE or a technical college
- They are studying at university
- They are completing a traineeship or apprenticeship
- They are not working or studying

Section 2. Your Teenager's Adjustment and Wellbeing

Common Issues That Affect Teenagers

Below is a list of issues that may affect teenagers. By dragging and dropping each issue, rank them in order from the issue that concerns you most to the issue that concerns you least. That is, put the most concerning issue at the top, and then place the other issues in order from top to bottom.

- Drug use
- Gambling
- Drinking and driving
- Unsafe sex
- Bullying (either at school or online)
- Smoking
- Unhealthy eating
- Obesity
- Spending too much time online
- Negative body image
- Depression and anxiety
- Excessive video game playing
- Online safety
- Playing games with gambling-like features (e.g., roulette, poker, and pokies) but don't involve winning real money
- Drinking alcohol
- Too much screen time or time on technological devices

Teen Emotions and Behaviour: Part 1

Think back to the **past four (4) weeks**. How true were each of the following statements of your teenager?

My teenager...	Not at all true (0)	(1)	(2)	(3)	(4)	True most of the time (5)
Constantly seeks reassurance						
Hurts me or others (e.g., hits, pushes, kicks)						
Loses their temper						
Puts themselves down						
Uses tobacco, drugs or alcohol						
Comes home late or misses their set curfew						
Seems unhappy or sad						
Rudely answers back to me						
Refuses to do jobs around the house when asked						
Is irritable						
Engages in risky or unhealthy activities						
Skips school, classes or work						
Gets upset or angry when they don't get their own way						
Whines or complains						
Talks back or argues when asked to do something						

Seems fearful and scared						
Worries						
Spends time with undesirable peers						

Teen Emotions and Behaviour: Part 2

For each of the following statements, please select the response that indicates how well it describes **your teenager**.

My teenager...	Rarely or never (1)	Occasionally (2)	Often (3)	Almost always or always (4)
Plans tasks carefully				
Does things without thinking				
Does not "pay attention"				
Is self-controlled				
Concentrates easily				
Is a careful thinker				
Says things without thinking				
Does things with little planning (e.g., acts on the spur of the moment)				

Section 3. Parenting Your Teenager

The following section asks questions about parenting your teenager. Please respond to the questions with **your nominated teenager** in mind.

Parenting Practices

Read each statement and rate how often each item typically occurs in your home.

	Never or almost never (1)	Rarely (2)	Sometimes (3)	Frequently (4)	Almost always or always (5)
You let your teenager know when they are doing a good job with something					
You threaten to punish your teenager and then do not actually punish them					
Your teenager fails to leave a note or to let you know where they are going					
Your teenager talks you out of being punished after they have done something wrong					
Your teenager stays out in the evening past the time they are supposed to be home					
You compliment your teenager when they do something well					
You praise your teenager if they behave well					
Your teenager goes out with friends you don't know					

You let your teenager out of a punishment early (like lift restrictions earlier than you originally said)					
--	--	--	--	--	--

Supervising Your Teenager

Read each statement and rate how often each item typically occurs in your home.

	Never or almost never (1)	Rarely (2)	Sometimes (3)	Frequently (4)	Almost always or always (5)
You restrict or block certain websites that your teenager might use					
You set limits about the amount of time your teenager spends online					
You monitor or track what they are doing online e.g., tracking social media or checking search history					
You talk to your teenager about what they are doing online					
Your teenager spontaneously talks to you about what they are doing or seeing online					
You only allow internet access in open, shared areas of the house (e.g., lounge room, kitchen)					

Confidence in Parenting Your Teenager

The following questions are about how confident you feel in a range of practices related to parenting teenagers. The responses are on a sliding scale from 0 (certain I can't do it) to 100 (certain I can do it). Please move the slider to show how confident you feel about doing each of the following.

- Talking with your teenager about the risks of gambling
- Talking with your teenager about responsible gambling
- Setting limits with your teenager about technology use and screen time
- Taking away your teenager's access to technological devices
- Responding effectively when screen time limits are not followed by your teenager
- Monitoring your teenager's online activities
- Monitoring your teenager's activities outside the home
- Talking with your teenager about how they spend their time online
- Talking with your teenager about how they spend their free time
- Talking with your teenager about gambling mini games that appear in apps and on social networking sites
- Helping your teenager manage internet safety risks related to privacy and personal information
- Helping your teenager manage internet safety risks related to online purchases
- Setting a good example when it comes to responsible gambling
- Setting a good example when it comes to your own technology use
- Helping your teenager if they have a bad experience online
- Helping your teenager if you find out they are gambling
- Explaining to your teenager about your own gambling

Your Relationship With Your Teenager

Read each statement and rate how true it typically is of your relationship with your teenager.

	Not at all true (0)	A little of the time (1)	Some of the time (2)	A lot of the time (3)	Most of the time (4)	Nearly always or always true (5)
We eat meals together						
We spend time together doing activities we each like						
We go to family events together						
I encourage my teenager to get support from me or others						
I show affection to my teenager (e.g., hugs, kisses, smiling, arm around shoulder)						
I comfort my teenager when he/she is upset						
I make negative comments about my teenager to others						
During stressful time in my teenagers' life, I check if he/she is okay						
I get upset when my teenager disagrees with me						
I play sport or do other physical activities with my teenager						
My teenager complains about me						
I encourage my teenager to do things he/she is interested in or enjoys						
I criticise my teenager						
I think my teenager needs to change his/her attitude						
I encourage my teenager to talk about their thoughts and feelings						

Conversations With Your Teenager

Below is a list of issues that may affect teenagers. In the **last 12 months**, how often have you had a conversation with **your teenager** about each of these issues?

	Never in the last 12 months (1)	Less than once a month (2)	About once a month (3)	2 to 3 times per month (4)	About once a week (5)	2 to 3 times a week (6)	4 or more times a week (7)
Drug use							
Responsible gambling							
Drinking and driving							
Unsafe sex							
Bullying (either at school or online)							
Smoking							
Unhealthy eating							
Obesity							
Spending too much time online							
Negative body image							
Depression and anxiety							
Excessive video game playing							
Online safety							
Gambling-like games (e.g., simulated pokies, poker, or roulette)							
Drinking alcohol							
Too much screen time/time on technological devices							

Section 4. Your Personal Gambling Attitudes and Behaviour

This section asks you to think about **your own** attitudes and behaviour when it comes to gambling.

Your Attitudes Toward Gambling

To what extent do you agree or disagree with each of the following statements?

	Strongly Disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly Agree (5)
If you really know the game, gambling can be an easy way to make money					
Gambling is a good way for community organisations to raise funds					
Gambling can be a good way to relieve boredom					
It is acceptable for teenagers to watch professional poker tournaments or TV shows featuring gambling					
Gambling for money is acceptable if you are just playing with friends					

There is nothing wrong with teenagers gambling occasionally					
It is impossible to gamble responsibly					
Lottery and scratch-it tickets should be kept out of sight in stores					
Teenagers are more at risk for problem gambling than adults					
It is OK for teenagers to play gambling games online or on a phone (e.g., casino games, pokie machines) as long as it's not for money					
It is OK for people to gamble once a week or more often					
It is OK for people to gamble less than once a week					
People who gamble once a week or more often are at risk of harming themselves (physically, mentally, financially or in other ways)					
People who gamble less than once a week are at risk of harming themselves (physically, mentally, financially or in other ways)					

Your Participation in Gambling Activities

Please respond to these questions about your **own behaviour**.

During the **last 12 months**, about how often did **you gamble for money** on each of the following activities? Please note that this includes gambling in land-based venues and online. If you do not know what one of these activities are, select 'Never' for that activity.

	Never in the last 12 months (1)	Less than once a month (2)	About once a month (3)	2 to 3 times per month (4)	About once a week (5)	2 to 3 times a week (6)	4 or more times a week (7)
Bought lottery or lotto tickets							
Bought instant scratch-it tickets							
Played the pokies/gaming machines							
Bet on a sporting event							
Bet on a racing event							
Bet on novelty events, like who will win a reality TV show, or elections							
Played bingo							
Played keno							
Played casino games							
Bet on an esports event (a professional video game competition)							
Entered a paid fantasy sports or daily fantasy sports competition							

Gambled using skins or skin deposits for currency							
Informal private betting for money like playing cards, Mahjong or betting on sports with family, friends or colleagues							
Played online (including via a mobile phone) casino games (e.g., Blackjack, Roulette, or poker machine games) for money rather than points							

Your Involvement in Gambling-Like Activities

During the **last 12 months**, about how often did you take part in each of the following activities? If you do not know what one of these activities are, select 'Never' for that activity.

	Never in the last 12 months (1)	Less than once a month (2)	About once a month (3)	2 to 3 times per month (4)	About once a week (5)	2 to 3 times a week (6)	4 or more times a week (7)
Played video games with gambling components, like Grand Theft Auto's casino level							
Bought a loot box with real money or via virtual currency that you purchased with real money							
Played gambling-like games (e.g., simulated pokies, poker, roulette) via an app or on social networking sites							
Played free demo or practice games on real gambling websites or apps, for example Mobile Casinos							

Your Gambling Behaviour

The next questions are also about **your own gambling**.

In the **last 12 months**, how often...

	Never (0)	Sometimes (1)	Most of the time (2)	Almost always (3)
Have you bet more than you could really afford to lose?				
Have you needed to gamble with larger amounts of money to get the same feeling of excitement?				
Have you gone back another day to try to win back the money you lost?				
Have you borrowed money or sold anything to get money to gamble?				
Have you felt that you might have a problem with gambling?				
Have people criticised your betting or told you that you had a gambling problem, regardless of whether or not you thought it was true?				

Have you felt guilty about the way you gamble, or what happens when you gamble?				
Has your gambling caused you any health problems, including stress or anxiety?				
Has your gambling caused any financial problems for you or your household?				

Do you have concerns about the gambling behaviour of anyone in your teenager's family? (Please select all that apply)

- No [EXCLUSIVE ANSWER]
- Yes, myself
- Yes, their other parent/major caregiver
- Yes, their sibling
- Yes, their grandparent
- Yes, another family member (please specify)

Has anyone in your teenager's family ever sought professional help for problem gambling (e.g., from a psychologist or counsellor, gambling support service)? (Please select all that apply)

- No [EXCLUSIVE ANSWER]
- Yes, I have
- Yes, their other parent/major caregiver has
- Yes, one of their siblings has
- Yes, one of their grandparents has
- Yes, another family member has (please specify)

Section 5. Gambling and Your Teenager

Now think about any gambling you have done around **your teenager**.

How often during the **last 12 months** did you gamble for money on each of the following activities when your teenager was with you?

	Never in the last 12 months (1)	Less than once a month (2)	About once a month (3)	2 to 3 times per month (4)	About once a week (5)	2 to 3 times a week (6)	4 or more times a week (7)
Bought lottery or lotto tickets							
Bought instant scratch-it tickets							
Played the pokies/gaming machines							
Bet on a sporting event							
Bet on a racing event							
Bet on novelty events, like who will win a reality TV show, or elections							
Played bingo							
Played keno							
Played casino games							
Bet on an esports event (a professional video game competition)							

Entered a paid fantasy sports or daily fantasy sports competition							
Gambled using skins or skin deposits for currency							
Informal private betting for money like playing cards, Mahjong or betting on sports with family, friends or colleagues							
Played online (including via a mobile phone) casino games (e.g., Blackjack, Roulette, or poker machine games) for money rather than points							

How often have you engaged in the following activities with **your teenager** in the **past 12 months**?

	Never in the last 12 months (0)	Less than once a month (1)	About once a month (2)	2 to 3 times per month (3)	About once a week (4)	2 to 3 times a week (5)	4 or more times a week (6)
Discussed responsible gambling							
Taken them to a gambling venue (e.g., poker machine area in a pub or club, casino, racetrack)							
Bought scratch-it or lottery tickets for them							
Asked them to pick 'lucky numbers' in keno or lottery							
Talked about your own gambling wins							
Involved them in betting on sports or esports (e.g., by asking them to pick the winning team or the first points scorer)							
Put a bet on for them for a sport, racing, novelty or esports event							
Played cards, board games or other games at home for money							
Talked about gambling as something fun or exciting to do							
Allowed them to use your online gambling account to gamble							
Given them money to gamble themselves							
Allowed them to use their own money to gamble							
Kept conversations about betting and gambling private so they couldn't overhear							
Included them in private betting using money with family or friends (e.g., picking racehorses, Melbourne Cup sweepstakes, footy tipping)							
Talked about the potential risks or harms of gambling							

Allowed them access to online gambling activities on your account (e.g., sports and race betting, casino games, poker machines)							
Discussed and agreed upon rules about their gambling							

Section 6. Knowledge and Your Teenager's Gambling Behaviour

We'd like you to think once again about your **nominated teenager**. Please answer the following questions about your teenager.

Your Teenager's Participation in Gambling Activities

Based on your knowledge, has your teenager taken part in the following activities for money during the **past 12 months**?

	Yes	No	Don't know
Bought lottery or lotto tickets			
Bought instant scratch-it tickets			
Played the pokies/gaming machines			
Bet on a sporting			
Bet on a racing event			
Bet on novelty events, like who will win a reality TV show, or elections			
Played bingo			
Played keno			
Played casino games			
Bet on an esports event (a professional video game competition)			
Entered a paid fantasy sports or daily fantasy sports competition			
Gambled using skins or skin deposits for currency			
Informal private betting for money like playing cards, Mahjong or betting on sports with family, friends or colleagues			
Played online (including via a mobile phone) casino games (e.g., Blackjack, Roulette, or poker machine games, for money rather than points			

Based on your knowledge, **how often** did your teenager take part in each of the following activities for money during the **past 12 months**? (Only shown to respondents who selected Yes for teen participation in any gambling form, and only those forms were displayed)

	Never in the last 12 months (1)	Less than once a month (2)	About once a month (3)	2 to 3 times per month (4)	About once a week (5)	2 to 3 times a week (6)	4 or more times a week (7)
Bought lottery or lotto tickets							
Bought instant scratch-it tickets							
Played the pokies/gaming machines							
Bet on a sporting event							
Bet on a racing event							
Bet on novelty events, like who will win a reality TV show, or elections							
Played bingo							
Played keno							
Played casino games							
Bet on an esports event (a professional video game competition)							
Entered a paid fantasy sports or daily fantasy sports competition							
Gambled using skins or skin deposits for currency							
Informal private betting for money like playing cards, Mahjong or betting on sports with family, friends or colleagues							
Played online (including via a mobile phone) casino games (e.g., Blackjack, Roulette, or poker machine games) for money rather than points							

Your Teenager's Involvement in Gambling-Like Activities

Based on your knowledge, has your teenager taken part in any of the following activities during the past 12 months? If you do not know what one of these activities are, select 'I don't know' for that activity.

Please note that the following four questions were presented on a Likert scale.

Played video games with gambling components, like Grand Theft Auto's casino level

- I don't know (0)
- Never in the last 12 months (1)
- Less than once a month (2)
- About once a month (3)
- 2 to 3 times per month (4)
- About once a week (5)
- 2 to 3 times a week (6)
- 4 or more times a week (7)

Bought a loot box with real money or via virtual currency that you purchased with real money

- I don't know (0)
- Never in the last 12 months (1)
- Less than once a month (2)
- About once a month (3)
- 2 to 3 times per month (4)
- About once a week (5)
- 2 to 3 times a week (6)
- 4 or more times a week (7)

Played gambling-like games (e.g., simulated pokies, poker, roulette) via an app or on social networking sites

- I don't know (0)
- Never in the last 12 months (1)
- Less than once a month (2)
- About once a month (3)
- 2 to 3 times per month (4)
- About once a week (5)
- 2 to 3 times a week (6)
- 4 or more times a week (7)

Played free demo or practice games on real gambling websites or apps, for example Mobile Casinos

- I don't know (0)
- Never in the last 12 months (1)
- Less than once a month (2)
- About once a month (3)
- 2 to 3 times per month (4)
- About once a week (5)
- 2 to 3 times a week (6)
- 4 or more times a week (7)

Are you concerned about the gambling behaviour of your teenager?

- Not at all concerned
- A little concerned
- Somewhat concerned
- Very concerned
- Extremely concerned

Do you think your teenager has a problem with gambling?

- No
- Yes

Have you ever sought help because of concerns about your teenager's gambling?

- No
- Yes

What kind of help have you sought for your teenager? (Please select all that apply)

(Only shown to respondents who selected Yes for seeking help related to their teenager's gambling)

- Informal help from friends or family
- Family doctor or paediatrician
- Psychologist, counsellor social worker
- Teacher or school staff member

- School counsellor or guidance officer
- Gambling Helpline
- Other gambling counselling service
- Other telephone counselling service (e.g., Kids Helpline, Lifeline)
- Church or religious worker
- Indigenous or ethnic community service
- Online resources or information
- Other (please describe)

Your Teenager's Gambling Behaviour

This section is about **your teenager's behaviour** related to gambling in the **last 12 months**. Please answer as best as you can based on your knowledge and observations of your teenager's behaviour. We understand that these questions might not apply to your teenager, but it is still important information for us to obtain. If the questions don't apply, please select "I Don't Know".

During the last 12 months, how often has your teenager talked to you about gambling or planning to gamble?

- Never
- Once or Twice
- Sometimes
- Often

During the last 12 months, has your teenager needed to gamble with more and more money to get the amount of excitement they want?

- I Don't Know
- No
- Yes

During the last 12 months...	I don't know	Never	Once or twice	Sometimes	Often
Has your teenager ever spent much more money than they planned on gambling?					
Has your teenager felt bad or fed up when trying to cut down or stop gambling?					
How often has your teenager gambled to help them escape from problems when they are feeling bad?					
Has your teenager ever lied to your or other family members about their gambling?					
Has your teenager ever had arguments with you, other family members, friends or others about their gambling?					
Has your teenager ever missed school, TAFE or work because of their gambling?					

During the last 12 months, after losing money gambling, has your teenager returned another day to try and win back money they lost?

- I Don't Know
- Never
- Less than half the time
- More than half the time
- Every time

During the last 12 months, has your teenager ever taken money from the following without permission to spend on gambling? If you don't have each source of money below select "Never" for that item.

	I don't know	Never	Once or twice	Sometimes	Often
School lunch money or fare money					
Money from you/your family					
Money from outside the family					

Parent Support

Your Preferences for Accessing Support About Teen Gambling

Parents can access information to help their teenagers and support their own parenting in lots of different ways. Please rate how suitable the following types of delivery formats would be for you if you wanted to access information about teenagers and gambling.

	Not at all suitable (1)	Slightly suitable (2)	Somewhat suitable (3)	Very suitable (4)	Extremely suitable (5)
In-person parent seminar (i.e., attending a seminar with many other parents, run through schools or community groups)					
Online parent seminar (i.e., as above but made available for viewing online)					
In-person group session/s with a smaller number of other parents					
Online group session/s with a smaller number of other parents					
Written materials (i.e., information and advice provided in a tip sheet or booklet format)					
Online written information on a website (e.g., articles or blogs)					
Online learning program (i.e., work through a series of online modules)					
Brief online videos shown through social media					
Media advertisements and articles					

12.2. Appendix B. Results of bivariate analyses

Table B.1 – Bivariate relationships (95% confidence intervals) between parent sociodemographic factors and criterion measures for mothers and fathers

	Mothers (<i>N</i> = 816)		Fathers (<i>N</i> = 367)	
	Teen gambling participation (total past 12 months)	Teen gambling problems (DSM-IV-MR-J)	Teen gambling participation (total past 12 months)	Teen gambling problems (DSM-IV-MR-J)
	Correlation	Correlation	Correlation	Correlation
Parent sociodemographic factors				
Age	-.115*** (-.182, -.047)	-.110** (-.177, -.042)	-.164** (-.262, -.062)	-.188*** (-.285, -.087)
Aboriginal and/or Torres Strait Islander status (ref: not)	.175*** (.108, .241)	.173*** (.106, .239)	.220*** (.120, .315)	.238*** (.139, .332)
English as main language (ref: no)	.016 (-.052, .085)	.023 (-.046, .092)	.063 (-.040, .164)	.000 (-.102, .103)
Education	.034 (-.035, .102)	.127*** (.059, .194)	.174*** (.073, .272)	.170*** (.069, .268)
Income ^a	.053 (-.018, .124)	.032 (-.068, .069)	.028 (-.076, .131)	.046 (-.058, .149)
Family structure	-.008 (-.076, .061)	.000 (-.068, .069)	-.056 (-.157, .047)	-.042 (-.143, .061)

Note. Both parametric (i.e., Pearson's *r*) and non-parametric (i.e., Spearman's Rho) correlations were calculated for categorical predictor variables. Because there was no substantive difference in the results of these analyses, Pearson's *r* values are reported.

^a Based on *N* = 767 for mothers and *N* = 358 due to respondents indicating they did not know or wish to disclose their family income.

* *p* < .05, ** *p* < .01, *** *p* < .001

Table B.2 – Bivariate relationships (95% confidence intervals) between adolescent factors and criterion measures for mothers and fathers

	Mothers (N = 816)		Fathers (N = 367)	
	Teen Gambling Participation (total past 12 months)	Teen Gambling Problems (DSM-IV-MR-J)	Teen Gambling Participation (total past 12 months)	Teen Gambling Problems (DSM-IV-MR-J)
Adolescent factors				
Age	.011 (-.057, .080)	-.055 (-.123, .014)	-.017 (-.119, .086)	-.061 (-.163, .041)
Gender (ref: male)	-.024 (-.093, .045)	-.013 (-.082, .056)	-.124* (-.224, -.022)	-.132* (-.231, -.030)
Impulsivity	.025 (-.044, .093)	.040 (-.028, .109)	.107* (.005, .207)	.142*** (.040, .241)
Emotional problems	.160*** (.093, .227)	.252*** (.187, .315)	.415*** (.327, .496)	.526*** (.447, .596)
Participation in simulated gambling (past 12 months)	.540*** (.489, .587)	.575*** (.527, .619)	.590*** (.519, .653)	.720*** (.667, .766)

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

Table B.3 – Bivariate relationships (95% confidence intervals) between general parental influences and gambling-related parenting influences and the criterion measures for mothers and fathers

	Mothers (N = 816)		Fathers (N = 367)	
	Teen gambling participation (total past 12 months)	Teen gambling problems (DSM-IV-MR-J)	Teen gambling participation (total past 12 months)	Teen gambling problems (DSM-IV-MR-J)
Parental influences – general				
Positive parenting	-.187*** (-.253, -.120)	-.235*** (-.298, -.169)	-.248*** (-.342, -.149)	-.175*** (-.273, -.074)
Inconsistent discipline	.179*** (.112, .245)	.205*** (.138, .270)	.311*** (.216, .401)	.384*** (.293, .468)
Poor supervision	.317*** (.254, .377)	.375*** (.314, .432)	.461*** (.376, .538)	.513*** (.433, .584)
Online restrictions (monitoring)	.076* (.007, .144)	.089* (.020, .157)	.264*** (.167, .357)	.318*** (.223, .407)
Online conversations (monitoring)	-.078* (-.146, -.010)	-.128*** (-.195, -.060)	.150** (.048, .248)	.196*** (.096, .293)
Parent-adolescent connectedness	-.209*** (-.274, -.142)	-.282*** (-.344, -.218)	-.218*** (-.313, -.118)	-.295*** (-.386, -.198)
Parent-adolescent shared activities	-.004 (-.072, .065)	-.016 (-.085, .053)	-.029 (-.131, .074)	-.088 (-.189, .014)
Parent-adolescent hostility	.193*** (.126, .258)	.239*** (.174, .303)	.451*** (.365, .529)	.476*** (.393, .552)

	Mothers (N = 816)		Fathers (N = 367)	
	Teen gambling participation (total past 12 months)	Teen gambling problems (DSM-IV-MR-J)	Teen gambling participation (total past 12 months)	Teen gambling problems (DSM-IV-MR-J)
Parental influences – gambling related				
Parent problem gambling	.428*** (.370, .483)	.522*** (.417, .571)	.567*** (.493, .632)	.714*** (.659, .760)
Parent attitudes to teen gambling	.356*** (.294, .414)	.325*** (.262, .385)	.444*** (.358, .522)	.529*** (.451, .599)
Parent facilitation of gambling	.657*** (.616, .694)	.633*** (.590, .672)	.716*** (.662, .763)	.797*** (.757, .832)
Co-gambling with adolescent (total in past 12 months)	.646*** (.590, .683)	.639*** (.590, .683)	.685*** (.621, .740)	.722*** (.664, .772)

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

12.3. Appendix C. Results of multivariate analyses

Table C.1 – Results of linear regression analyses with mothers ($N = 816$) examining predictors of adolescent gambling participation (past 12 months)

	Model 1 Parent sociodemographic factors			Model 2 Adolescent factors			Model 3 Parental influences			Model 4 All predictors simultaneously		
	<i>B</i>	<i>SE</i>	β	<i>B</i>	<i>SE</i>	β	<i>B</i>	<i>SE</i>	β	<i>B</i>	<i>SE</i>	β
Parent age	-.022	.008	-.091*							.001	.007	.004
Aboriginal and/or Torres Strait Islander status (ref: not)	1.028	.221	.161***							.419	.173	.066*
Adolescent emotional problems				.087	.042	.062*				-.015	.040	-.011
Simulated gambling (past 12 months)				.950	.054	.528***				.227	.067	.126***
Positive parenting							-.009	.026	-.012	-.010	.025	-.013
Inconsistent discipline							.006	.021	.008	.007	.020	.011
Poor supervision							.048	.020	.076*	.044	.020	.070*
Online restrictions (monitoring)							.015	.045	.010	.028	.046	.018

	Model 1 Parent sociodemographic factors			Model 2 Adolescent factors			Model 3 Parental influences			Model 4 All predictors simultaneously		
	<i>B</i>	<i>SE</i>	β	<i>B</i>	<i>SE</i>	β	<i>B</i>	<i>SE</i>	β	<i>B</i>	<i>SE</i>	β
Online conversations (monitoring)							.088	.059	.048	.069	.059	.038
Parent-adolescent connectedness							-.053	.062	-.031	-.033	.062	-.019
Parent-adolescent hostility							-.041	.054	-.023	-.043	.055	-.025
Parent problem gambling							.012	.014	.029	.006	.014	.014
Parent attitudes to teen gambling							.168	.058	.086**	.154	.058	.078**
Parent facilitation of gambling							1.432	.090	.576***	1.234	.106	.496***
	$R^2 = .039, F(2, 813) = 16.361, p < .001$			$R^2 = .295, F(2, 813) = 170.333, p < .001$			$R^2 = .448, F(10, 805) = 65.310, p < .001$			$R^2 = .462, F(14, 801) = 49.062, p < .001$		

Note. * $p < .05$, ** $p < .01$, *** $p < .001$.

Table C.2 – Results of linear regression analyses with fathers ($N = 367$) examining predictors of adolescent gambling participation (past 12 months)

	Model 1 Parent sociodemographic factors			Model 2 Adolescent factors			Model 3 Parental influences			Model 4 All predictors simultaneously		
	<i>B</i>	<i>SE</i>	β	<i>B</i>	<i>SE</i>	β	<i>B</i>	<i>SE</i>	β	<i>B</i>	<i>SE</i>	β
Parent age	-.058	.024	-.123*							.012	.018	.025
Aboriginal and/or Torres Strait Islander status (ref: not)	2.399	.605	.201***							.880	.457	.074
Parent education	.569	.164	.173***							.078	.123	.024
Adolescent gender (ref: male)				-.322	.294	-.047				-.035	.258	-.005
Adolescent impulsivity				-.025	.037	-.031				-.021	.035	-.027
Adolescent emotional problems				.552	.141	.200***				-.126	.148	-.046
Simulated gambling (past 12 months)				1.093	.105	.493***				.171	.129	.077
Positive parenting							-.164	.072	-.107*	-.198	.073	-.130**
Inconsistent discipline							-.053	.062	-.041	-.043	.067	-.033

	Model 1 Parent sociodemographic factors			Model 2 Adolescent factors			Model 3 Parental influences			Model 4 All predictors simultaneously		
	<i>B</i>	<i>SE</i>	β	<i>B</i>	<i>SE</i>	β	<i>B</i>	<i>SE</i>	β	<i>B</i>	<i>SE</i>	β
Poor supervision							.039	.063	.033	.031	.063	.027
Online restrictions (monitoring)							.037	.151	.011	.040	.153	.012
Online conversations (monitoring)							.189	.179	.047	.207	.183	.052
Parent-adolescent connectedness							.054	.165	.015	.044	.168	.013
Parent-adolescent hostility							.328	.159	.100*	.373	.163	.114*
Parent problem gambling							.022	.030	.041	.006	.031	.011
Parent attitudes to teen gambling							.058	.144	.018	.033	.144	.010
Parent facilitation of gambling							1.528	.152	.596***	1.436	.175	.564***
	$R^2 = .095, F(3, 363) = 12.628, p < .001$			$R^2 = .374, F(4, 361) = 54.029, p < .001$			$R^2 = .538, F(10, 356) = 41.488, p < .001$			$R^2 = .551, F(17, 348) = 25.108, p < .001$		

Note. * $p < .05$, ** $p < .01$, *** $p < .001$.

Table C.3 – Results of linear regression analyses with mothers ($N = 816$) examining predictors of adolescent gambling problems (past 12 months)

	Model 1 Parent sociodemographic factors			Model 2 Adolescent factors			Model 3 Parental influences			Model 4 All predictors simultaneously		
	<i>B</i>	<i>SE</i>	β	<i>B</i>	<i>SE</i>	β	<i>B</i>	<i>SE</i>	β	<i>B</i>	<i>SE</i>	β
Parent age	-.014	.006	-.086*							.005	.004	.034
Aboriginal and/or Torres Strait Islander status (ref: not)	.719	.147	.169***							.150	.112	.035
Parent education	.128	.032	.139***							.086	.024	.093***
Adolescent emotional problems				.141	.027	.150***				.061	.026	.065*
Simulated gambling (past 12 months)				.657	.035	.547***				.270	.043	.225***
Positive parenting							-.009	.017	-.017	.000	.016	-.001
Inconsistent discipline							-.006	.014	-.014	-.006	.013	-.014
Poor supervision							.052	.013	.123***	.045	.013	.105***
Online restrictions (monitoring)							.054	.030	.053	.058	.030	.057
Online conversations (monitoring)							.020	.039	.016	.008	.038	.006

	Model 1 Parent sociodemographic factors			Model 2 Adolescent factors			Model 3 Parental influences			Model 4 All predictors simultaneously		
	<i>B</i>	<i>SE</i>	β	<i>B</i>	<i>SE</i>	β	<i>B</i>	<i>SE</i>	β	<i>B</i>	<i>SE</i>	β
Parent-adolescent connectedness							-.097	.041	-.084*	-.106	.040	-.092**
Parent-adolescent hostility							-.009	.036	-.007	-.031	.035	-.026
Parent problem gambling							.052	.009	.191***	.048	.009	.177***
Parent attitudes to teen gambling							.055	.038	.042	.027	.037	.020
Parent facilitation of gambling							.715	.059	.431***	.470	.068	.283***
	$R^2 = .056, F(3, 812) = 17.093, p < .001$			$R^2 = .352, F(2, 813) = 221.152, p < .001$			$R^2 = .457, F(10, 805) = 67.874, p < .001$			$R^2 = .499, F(15, 800) = 53.042, p < .001$		

Note. * $p < .05$, ** $p < .01$, *** $p < .001$.

Table C.4 – Results of linear regression analyses with fathers ($N = 367$) examining predictors of adolescent gambling problems (past 12 months)

	Model 1 Parent sociodemographic factors			Model 2 Adolescent factors			Model 3 Parental influences			Model 4 All predictors simultaneously		
	<i>B</i>	<i>SE</i>	β	<i>B</i>	<i>SE</i>	β	<i>B</i>	<i>SE</i>	β	<i>B</i>	<i>SE</i>	β
Parent age	-.048	.017	-.145**							.001	.010	.002
Aboriginal and/or Torres Strait Islander status (ref: not)	1.820	.425	.216***							.306	.259	.036
Parent education	.391	.115	.168***							.038	.070	.016
Adolescent gender				-.184	.173	-.037				.052	.146	.011
Adolescent impulsivity				-.020	.022	-.035				-.014	.020	-.024
Adolescent emotional problems				.534	.083	.272***				.080	.084	.040
Simulated gambling (past 12 months)				.943	.062	.597***				.285	.073	.180***
Positive parenting							.101	.041	.093*	.085	.041	.078 ^a
Inconsistent discipline							.004	.036	.004	-.005	.038	-.006
Poor supervision							.012	.036	.015	.006	.036	.008

	Model 1 Parent sociodemographic factors			Model 2 Adolescent factors			Model 3 Parental influences			Model 4 All predictors simultaneously		
	<i>B</i>	<i>SE</i>	β	<i>B</i>	<i>SE</i>	β	<i>B</i>	<i>SE</i>	β	<i>B</i>	<i>SE</i>	β
Online restrictions (monitoring)							.065	.087	.027	.071	.086	.030
Online conversations (monitoring)							.190	.102	.066	.142	.104	.049
Parent-adolescent connectedness							-.415	.094	-.166***	-.360	.095	-.144***
Parent-adolescent hostility							.100	.091	.043	.110	.092	.047
Parent problem gambling							.095	.017	.249***	.084	.017	.219***
Parent attitudes to teen gambling							.127	.082	.057	.110	.081	.049
Parent facilitation of gambling							.925	.087	.510***	.693	.099	.382***
	$R^2 = .107, F(3, 363) = 14.515, p < .001$			$R^2 = .573, F(4, 361) = 121.301, p < .001$			$R^2 = .698, F(10, 356) = 82.385, p < .001$			$R^2 = .717, F(17, 352) = 51.812, p < .001$		

Note. a. This variable had a significant beta weight at $p < .05$. However, this relationship was negative in the bivariate analysis but has become positive in this multivariate analysis. This is a sign of a negative suppression effect of this variable and means that the association between positive parenting and gambling problems is difficult to interpret (Pandey & Elliott, 2010). Thus, it has not been included as an independent predictor in the discussion of results of this analysis in Section 8.3.2.

* $p < .05$, ** $p < .01$, *** $p < .001$.



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