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# Problem gaming-related harm experienced by partners and parents of individuals with gaming problems and their help-seeking experiences

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## ABSTRACT

**Background and aims:** Limited research has investigated how individuals' problem gaming affects significant others. The present study investigated the extent to which partners and parents were personally affected by their partner or child's problematic gaming behavior and what steps, if any, were taken in relation to treatment and other help-seeking by the gamers and the respondents themselves. **Methods:** Two targeted samples (parents,  $n = 104$ ; partners,  $n = 264$ ) in Australia were recruited and administered an online survey. The survey assessed gaming-related harm across multiple domains, including financial, relationship, emotional wellbeing, physical health and work/study. Treatment and help-seeking questions referred to seeking psychological assistance, self-help, and community support. Non-parametric tests compared groups on harm measures based on GD status. **Results:** Parents and partners of individuals rated in the 'problem gaming' range reported significantly greater harms compared to those in the at-risk and non-problem categories. The most frequently endorsed harms were in the relationship domain, including neglected household responsibilities, withdrawal from social events, and relationship conflict. Some parents consult with friends and family (15%) to resolve their child's gaming-related problems. Partners reported to seek outside support and assistance for themselves, including 30% who sought a psychologist. No partners reported having consulted a psychologist for their gaming partner. **Discussion:** Problem gaming affects significant others across multiple life areas, but few seek outside help or support, suggesting there may be significant unmet needs. **Conclusions:** Further research should examine factors that influence acceptance and engagement with problem gaming help options. Harm indicators may be useful for evaluating targeted interventions and other measures to reduce problem gaming.

## KEYWORDS

gaming disorder, harm, parents, partners, help-seeking, treatment

## INTRODUCTION

Video gaming can have cognitive, motivational, emotional and social benefits (Granic, Lobel, & Engels, 2014). However, excessive gaming can generate negative consequences for some individuals (Billieux, Stein, Castro-Calvo, Higuchi, & King, 2021; King, Koster, & Billieux, 2019; Reed et al., 2022). In recognition of this, 'Internet gaming disorder' was included in Section III of the DSM-5 in 2013 (American Psychiatric Association, 2013) and the DSM-5-TR in 2022 (American Psychiatric Association, 2022) as a condition for further study, and

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'gaming disorder' (GD) was included as a mental disorder in the ICD-11 (World Health Organization, 2018). GD is characterised by: (1) losing control over playing online or offline games, (2) an overprioritisation of gaming activities, and (3) continuation or escalation of gaming behaviour despite negative consequences. GD has an estimated worldwide prevalence rate of 2–3% (Kim et al., 2022; Stevens, Dorstyn, Delfabbro, & King, 2021) and studies have reported that the condition is associated with increased risk of comorbidities (Bargeron & Hormes, 2017; Brunborg, Mentzoni, & Frøyland, 2014; Gentile et al., 2011; Kim et al., 2016; Männikkö, Billieux, & Käätäinen, 2015; Mentzoni et al., 2011; Ostovar et al., 2016), poorer academic functioning (Brunborg et al., 2014; Choo et al., 2010; Gentile, 2009; Rehbein, Kliem, Baier, Mößle, & Petry, 2015; Stavropoulos, Alexandraki, & Motti-Stefanidi, 2013) and social problems (Choo et al., 2010; Gentile et al., 2011; Müller et al., 2015).

Studies of the negative impacts of addictive disorders on family members have reported: a higher risk of mental health; physical health problems; and, greater financial burden (Browne et al., 2016; Casswell, You, & Huckle, 2011; Hing et al., 2022; Iwen et al., 2010; Orford, Velleman, Natera, Templeton, & Copello, 2013; Velleman & Templeton, 2003). A review of 56 studies of the mental and physical health of families of individuals who use substances reported that family members experienced increased stress and mental health issues, with these effects more pronounced among women, lower-income families, and those co-habiting with the individual who uses substances (Di Sarno et al., 2021). Jeffrey et al.'s (2019) study of gambling-related harms among gamblers and their spouses reported that there was a similar count of total harms reported across domains; however, spouses reported greater harms within the emotional and relationship domains and gamblers experienced greater harms in all other areas.

Currently, little is known about the nature of harms resulting from problem gaming and their negative impact on partners and close family members (Choo, Sim, Liao, Gentile, & Khoo, 2015; Delfabbro, King, & Carey, 2021a, 2021b; King & Delfabbro, 2018a). The emerging research has examined correlates of problem gaming in ways that make it difficult to determine the direct contribution of problem gaming or gaming behaviours to experienced harms. For example, cross-sectional studies of problem gaming and family-related factors (Colasante et al., 2022; Schneider, King, & Delfabbro, 2017) have reported that adolescent GD is associated with a poorer parent-child relationship and a poorer family environment (Charlie, HyeKyung, & Khoo, 2011; Kwon, Chung, & Lee, 2011; Liao et al., 2015; Rikkers, Lawrence, Hafekost, & Zubrick, 2016; Wang et al., 2014). However, it is usually not clear whether these issues were a precursor or a consequence (or both) of problem gaming. A recent study by Carey, Delfabbro, and King (2022) surveyed 471 regular gamers and reported that problem gaming was most strongly associated with physical or psychological harm and that loot box spending was associated with gaming-related financial harm.

Studies of adults who meet the criteria for gaming disorder have found that the negative impacts of problem

gaming can extend to other family members (Lianekhammy & van de Venne, 2015; Northrup & Shumway, 2014). Problem gaming has been associated with lower marital satisfaction (Ahlstrom, Lundberg, Zabriskie, Eggett, & Lindsay, 2012) and less fulfilling interpersonal relationships (Lo, Wang, & Fang, 2005). Coyne et al. (2012) examined problem gaming and conflict and aggression between couples and reported that greater time spent gaming was associated with more conflicts which, in turn, was associated with increased aggression. A qualitative study of spouses of individuals who play games excessively referred to experiences of anger, resentment, stress and frustration in relation to a partner's gaming, particularly in regard to unequal division of tasks such as care for children and household chores (Northrup & Shumway, 2014). Other issues arising included reduced communication and loss of emotional and physical intimacy (Northrup & Shumway, 2014).

Treatments and other interventions for problem gaming have been the subject of increased empirical testing (King et al., 2017). Some promising results have been reported in the areas of cognitive behavioural therapy (Wölfling et al., 2019) and family-based approaches (Liu et al., 2015). However, the extent to which treatments are generally accepted and sought out by those in need is less well-understood (Riley, Baigent, Battersby, & King, 2022; Park, Wilkinson-Meyers, King, & Rodda, 2021; Stevens, Delfabbro, & King, 2021a, 2021b). Some recent data indicate that demand for clinical services for problem gaming has exceeded the capacity of some specialist clinics, including the Outpatient Clinic for Behavioral Addiction located in Mainz, Germany; the ReConnecte Treatment Center for Online Addictive Behaviors located in Geneva, Switzerland; and the Kurihama Medical and Addiction Centre in Kanagawa Prefecture, Japan (King et al., 2022). However, not all individuals and families with gaming-related problems will seek out services of this kind, and the literature is currently unclear about uptake and engagement with other common forms of help-seeking. For these reasons, it was considered timely to investigate the negative impacts of problem gaming on significant others and their engagement with various avenues of help and support for problem gaming.

## The present study

Individuals with gaming disorder are typically ambivalent about seeking treatment or other help despite experiencing serious problems (Higuchi et al., 2017; King et al., 2022; Lindenberg, Szász-Janocha, Schoenmaekers, Wehrmann, & Vonderlin, 2017; Wölfling et al., 2019). However, little is known about the help-seeking behaviour of family members and partners affected by problem gaming and the challenges they face. The present study aimed to examine gaming-related harms among family members of individuals with problem gaming issues. Adopting a multidimensional approach to harm, the study examined five life domains (finances, relationship, emotional wellbeing, physical health, and work/study) of parents and partners according to different types of gaming (GD vs. at risk vs. non-problem). Second, the study aimed to investigate the help-seeking



behaviour of parents and partners and their perceptions of the usefulness of these options. Acknowledging that gaming is not considered harmful per se, we expected: (1) that more severe problem gaming behaviour will correspond to more negative impact on significant others, and (2) more severe problem gaming will correspond to more help or support seeking.

## METHODS

### Participants

A cross-sectional online survey was conducted to assess two targeted samples of participants with a significant other who played video games at least weekly. The survey was hosted on SurveyMonkey. Parent participants were recruited via school newsletters in three Adelaide metropolitan schools in the eastern suburbs seeking participants who were concerned about their adolescent's gaming. Schools were selected by convenience sampling, given their involvement in other research projects in the department. Partners were recruited via Facebook advertising and university social media and email lists, also seeking participants with concerns about a partner's gaming. The resultant geographic scope of the sample was primarily South Australia. An initial sample of 192 parents and 359 partners of gamers consented to take part in the study. A total of 180 participants were excluded from the study, due to non-completion of the study or failing to meet the inclusion criteria (reference person playing games at least weekly, respondent's age 18 years or older, child's age 8 years or older). The final sample consisted of 104 parents and 267 partners. Student participants received course credit, and others entered a prize draw for a \$50 voucher.

### Measures

Participants were asked to provide basic demographic information (age, gender, relationship status, level of education and employment status of themselves and of their child/partner), information about gaming behavior of the gaming child/partner, perceived negative consequences of the child/partner's gaming and help-seeking strategies.

**Problem gaming.** Problem gaming was measured by Petry et al.'s (2014) checklist of DSM-5 criteria for Internet gaming disorder, which encompasses online and offline gaming. This checklist was adapted to refer to either the adolescent or partner of the respondent. Problem status was defined as meeting 5 out of 9 criteria including endorsement of item 9 (harm: risk or loss of significant relationships or opportunities). At-risk status was defined by meeting 3 or 4 criteria, and "non-problem" was defined by meeting fewer than 3 criteria. Cronbach's  $\alpha$  showed good internal consistency (parent sample = 0.87; partner sample = 0.83). Participants also reported the child's/partner's average gaming time per day.

**Gaming-related harms.** Gaming-related harms experienced by parents and partners caused by the gaming child/partner

were assessed across five areas (financial, relationship, emotional wellbeing, physical health, work/study). Items were adapted from Browne et al.'s (2016) study to focus on gaming rather than gambling activities, thus requiring some light modification. Table 1 presents a summary of the items. Reliability indices for all categories of harm ranged from 0.86 to 0.96, except for the financial category which showed a reliability of 0.64–0.67, which may have been due to fewer items. Each category of harm included a general item assessing overall perceived negative impact which was rated on a 4-point Likert scale ("no impact", "minor impairment in one area only", "moderate impairment in more than one area", "major impairment in several areas").

**Help-seeking.** Treatment and help-seeking experiences were measured using a self-developed 11-item survey. Item 1 asks about any past help-seeking ("Have you ever asked your friends or family for advice/support about your child's/partner's gaming?"), with response categories of "Yes", "No", and "I don't need to – it's never been problematic". Another item asked about past-year engagement with help by the child/partner ("Has your child ever sought support (or have you facilitated your child seeking support) for problem gaming?/Has your partner ever sought support for problem gaming?"). Another item refers to the participant's own help-seeking ("Have you sought professional support for yourself to deal with your child's/partner's gaming behaviour?") and includes multiple help options. These options include: (1) family and friends; (2) psychologist or counsellor; (3) online forums or chat; (4) self-help books; and (5) mental health telephone lines (e.g., Lifeline). Participants were asked about potential help-seeking in the future ("If you have not sought help for any impacts associated with your child's/partner's gaming, would you consider it in the future?"). Additionally, participants were asked whether any previous help had been beneficial from the perspective of their child or partner ("If support was sought, do you think your child found it helpful?/If support was sought, did your partner find it helpful in reducing impacts associated with their gaming?"), which could be answered with "Yes" or "No").

### Ethics

Ethics approval was obtained from the Human Research Ethics Subcommittee at the University of Adelaide, South Australia (ID: 17/53 and 17/54). The study procedures were carried out in accordance with the Declaration of Helsinki. All participants were informed that their data would be anonymous and unidentifiable, and they had the opportunity to withdraw at any time. Contact details of mental health services were provided.

## RESULTS

### Demographics and problem gaming

There were 104 parents (94.2% female, 4.8% male and 1.0% other) aged 24–55 years ( $M = 42.4$ ;  $SD = 7.6$ ). Most were

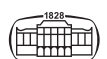




Table 1. Gaming-related harms experienced by parents and partners attributed to the gaming behaviour of the child/partner

Harms related to problem gaming	Parent rating of child			Partner rating of gamer		
	Problem (n = 15) n (%)	At risk (n = 29) n (%)	Non-problem (n = 60) n (%)	Problem (n = 27) n (%)	At Risk (n = 65) n (%)	Non-problem (n = 175) n (%)
<b>Finances</b>						
Less spending on recreational expenses	11 (73.3)	15 (51.7)	15 (25.0)	23 (88.5)	38 (63.3)	52 (42.3)
Less spending on beneficial expenses	6 (40.0)	3 (10.3)	3 (5.0)	12 (50.0)	16 (26.7)	12 (10.6)
Less spending on essential expenses	6 (40.0)	1 (3.4)	3 (5.0)	7 (30.4)	8 (14.0)	7 (6.4)
<b>Relationship</b>						
Spending less time with people they care about	7 (50.0)	3 (11.1)	0 (0.0)	21 (77.7)	11 (18.4)	3 (1.8)
Getting less enjoyment from time spent with people they care about	7 (50.0)	2 (8.0)	1 (1.7)	20 (74.0)	12 (20.0)	3 (1.8)
Neglecting their relationship responsibilities	4 (30.8)	2 (7.7)	0 (0.0)	26 (96.3)	20 (33.3)	4 (2.4)
Spending less time attending social events	4 (28.5)	3 (11.1)	2 (3.4)	25 (92.5)	15 (25.0)	10 (6.0)
Experiencing greater tension in their relationship	10 (71.4)	7 (25.9)	1 (1.7)	25 (92.6)	21 (35.0)	4 (2.4)
Experiencing greater conflict with partner	n/a	n/a	n/a	21 (77.8)	27 (45.0)	4 (2.4)
Feeling belittled in their relationships	7 (50.0)	1 (3.8)	1 (1.7)	21 (77.8)	14 (23.3)	7 (4.2)
Spending more time doing household chores than their partner	n/a	n/a	n/a	24 (88.9)	39 (65.0)	49 (29.2)
Feeling increased threats of separation or ending the relationship	n/a	n/a	n/a	18 (66.6)	12 (20.0)	1 (0.6)
Spending increased time wishing the relationship had never begun	n/a	n/a	n/a	17 (62.9)	7 (11.7)	1 (0.6)
Feeling that the relationship hasn't met expectations	8 (57.1)	4 (15.3)	2 (3.4)	24 (88.9)	17 (28.4)	5 (3.0)
Child's/gaming partner's responsibilities passed on to the parent/partner	11 (84.6)	7 (26.9)	2 (3.4)	20 (74.1)	28 (46.6)	16 (9.5)
<b>Emotional wellbeing</b>						
Feeling distressed about the gaming	7 (53.9)	9 (37.5)	2 (3.4)	18 (69.3)	9 (15.0)	4 (2.4)
Feeling ashamed about the gaming	4 (33.3)	4 (16.7)	0 (0.0)	10 (38.4)	7 (11.7)	3 (1.8)
Feeling like a failure	6 (50.0)	6 (26.1)	1 (1.7)	12 (46.1)	3 (5.0)	3 (1.8)
Feeling insecure or vulnerable	4 (33.3)	4 (17.3)	1 (1.7)	12 (46.2)	11 (18.4)	7 (4.2)
Feeling angry about not being able to control the gaming	6 (50.0)	11 (45.9)	2 (3.4)	16 (61.6)	14 (23.8)	8 (4.8)
Feeling worthless	4 (36.4)	3 (14.3)	2 (3.4)	12 (46.1)	6 (10.0)	3 (1.8)
Having feelings of hopelessness about the gaming	5 (45.5)	8 (36.4)	3 (5.2)	15 (60.0)	7 (11.7)	3 (1.8)

(continued)

Table 1. Continued

	Parent rating of child			Partner rating of gamer		
	Problem ( <i>n</i> = 15) <i>n</i> (%)	At risk ( <i>n</i> = 29) <i>n</i> (%)	Non-problem ( <i>n</i> = 60) <i>n</i> (%)	Problem ( <i>n</i> = 27) <i>n</i> (%)	At Risk ( <i>n</i> = 65) <i>n</i> (%)	Non-problem ( <i>n</i> = 175) <i>n</i> (%)
Harms related to problem gaming						
Having thoughts of running away or escape	2 (16.7)	2 (9.1)	0 (0.0)	13 (52.0)	4 (6.7)	0 (0.0)
<b>Physical health</b>						
Reduced physical activity	5 (38.5)	3 (13.0)	3 (5.3)	15 (62.5)	18 (31.6)	12 (7.3)
Stress related health issues	7 (53.9)	2 (9.1)	3 (5.3)	13 (54.2)	10 (17.5)	7 (4.3)
Loss of sleep	8 (61.6)	4 (17.3)	1 (1.8)	16 (66.6)	13 (22.8)	7 (4.3)
Neglected hygiene and self-care	4 (30.8)	0 (0.0)	2 (3.6)	8 (33.4)	2 (3.6)	1 (0.6)
Neglected my medical needs	2 (15.4)	1 (4.3)	0 (0.0)	6 (25.0)	3 (5.3)	1 (0.6)
Overeating or not eating enough	5 (38.5)	3 (13.0)	3 (5.3)	15 (62.5)	14 (24.6)	12 (7.4)
Increased use of tobacco or alcohol	2 (15.4)	2 (8.7)	1 (1.8)	11 (45.8)	9 (15.8)	3 (1.8)
<b>Work/study</b>						
Reduced performance at work/study	5 (38.5)	1 (4.3)	2 (3.6)	10 (41.6)	4 (7.1)	3 (1.8)
Was late for work or study	3 (23.1)	1 (4.3)	1 (1.8)	9 (37.5)	3 (5.3)	0 (0.0)
Absent from work or study	1 (7.7)	1 (4.3)	0 (0.0)	7 (29.2)	1 (1.8)	0 (0.0)
Hindered my job seeking efforts	3 (25.0)	0 (0.0)	0 (0.0)	7 (29.2)	3 (5.3)	2 (1.2)
Used my work or study time or resources to attend to issues caused by the gaming	3 (23.1)	1 (4.3)	1 (1.8)	11 (45.9)	4 (7.0)	0 (0.0)
Conflict with my boss or people I work with	0 (0.0)	0 (0.0)	1 (1.8)	5 (20.8)	1 (1.8)	0 (0.0)

Note. The frequencies reflect affirmative responses to “moderate” and “major” harm categories. GD = gaming disorder.



partnered or married (57.6%). Most were employed (35.6% full-time and 30.8% part-time), with about a third (33.7%) not in paid employment. Parents tended to complete the survey in relation to a male child (83.7%), with a mean age of 15.1 years ( $SD = 4.4$ ). Based on problem gaming scores, 15 children (14.4%) were classified as potentially having GD, 29 children (27.9%) were at-risk and 60 (57.7%) were non-problematic. The mean daily gaming time among children was 4.7 h ( $SD = 3.4$ ).

There were 267 partners of gamers (90.6% female, 9.0% male and 0.4% other) aged 18–59 years ( $M = 24.5$ ;  $SD = 6.7$ ). About a quarter (24.7%) were in a de facto relationship, and 13.1% were married. Some participants (5.6%) reported they were single, having ended the relationship with the gamer in the last 12 months. Most partner respondents worked part-time (51.5%), 27.8% worked full-time, and 20.7% were not in employment. Most respondents (90.2%) reported that their partner was male, with a mean age of 25.7 years ( $SD = 6.9$ ). Based on problem gaming scores, 27 partners (10.1%) were classified as meeting GD criteria, 65 partners (24.3%) were at-risk, and 175 (65.5%) were non-problematic. The average daily gaming time of participants' partners was 3.8 h ( $SD = 2.9$ ).

### Harm and negative consequences

Table 1 displays the harms and other negative consequences due to the gaming behavior of the child/partner in the five predefined harm domains (finances, relationship, emotional wellbeing, physical health, and study/work) according to problem gaming status. The results showed that both parents and partners reported higher levels of negative consequences in all harm domains in the problem gaming categories as compared to the at-risk and non-problem categories. Notably, in response to an item about overall relationship harm, the majority (96.3%) of partner respondents reported that their partner was neglecting their relationship responsibilities and most (92.6%) reported experiencing greater tension in their relationship due to excessive gaming.

Figure 1 presents the computed mean scores of the ratings for each harm area. Harm scores were consistently higher for parents of children with problem gaming than

parents with children in the at-risk and non-problem groups. Kruskal-Wallis  $H$  tests confirmed that parents with children with problem gaming scored significantly higher than both the at-risk and non-problem groups on all four harm domains, including relationship ( $H$  value = 44.7,  $P < 0.01$ ), emotional well-being ( $H$  value = 38.3,  $P < 0.01$ ), physical or mental health ( $H$  value = 30.3,  $P < 0.01$ ), and work or study ( $H$  value = 13.6,  $P < 0.01$ ). This pattern of results was also observed among partner respondents, with the group with partners with problem gaming scoring higher than the at-risk and non-problem groups on these domains of harm. Kruskal-Wallis  $H$  tests confirmed that respondents with partners with problem gaming scored significantly higher than both the at-risk and non-problem groups on all four harm domains, including relationship ( $H$  value = 120.9,  $P < 0.01$ ), emotional well-being ( $H$  value = 101.4,  $P < 0.01$ ), physical or mental health ( $H$  value = 93.4,  $P < 0.01$ ), and work or study ( $H$  value = 47.4,  $P < 0.01$ ).

### Help-seeking

Table 2 presents an overview of respondents' treatment and help-seeking experiences. Only 10 parents (11.2%) reported that they had sought any support or help for their child, and 8 parents (9.0%) reported that they had sought help for themselves. There were only 6 (2.6%) partner respondents who had sought any help for their gaming partner, and 21 (8.9%) who had sought support or help for themselves. None of the partners had sought help from a psychologist or counsellor for a partner. The overall professional help-seeking rate was 11 out of 371 participants (3.0%). Help-seeking of any kind for gaming children was highest in the problem group ( $n = 4$ , 33.3%) followed by the at-risk group ( $n = 4$ , 18.2%).

Few participants reported positive experiences with support and help. Only 4 parent respondents reported that the help or support had been helpful. Follow up open-ended questions identified helpful options including: "family and friends" ( $n = 1$ ), "psychologist or doctor" ( $n = 2$ ), and "stimulus control" ( $n = 1$ ). Only 1 partner respondent reported that the help or support they sought ("counselling") had been helpful. Three partners reported three unhelpful sources of help, including "online forums and chats",

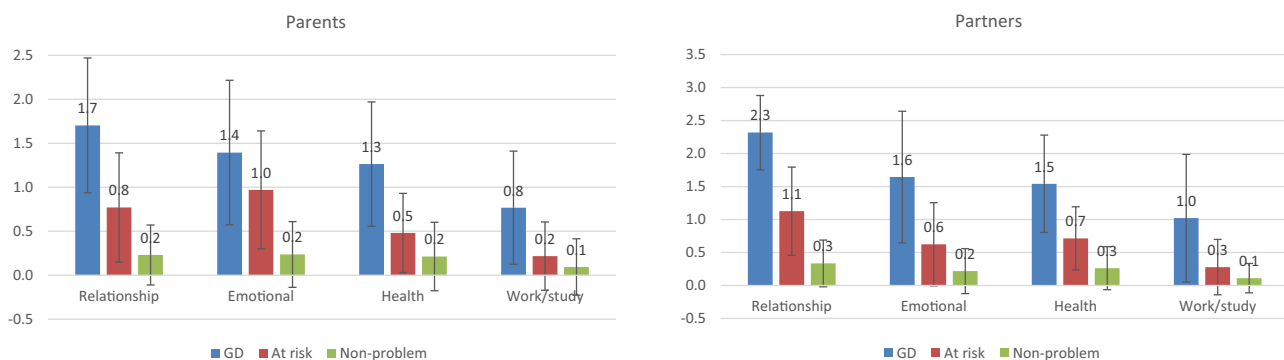


Fig. 1. Parents' and partners' mean ratings of harm and negative consequences

Note. Negative consequences were rated on a 4-point Likert scale (0 = "never", 1 = "sometimes", 2 = "most of the time", 3 = "almost always"). GD = gaming disorder



Table 2. Help-seeking among partners and parents of problem, at-risk, and non-problem gamers

	Parents ( <i>n</i> = 104)			Partners ( <i>n</i> = 267)		
	Problem ( <i>n</i> = 12) <i>n</i> (%)	At risk ( <i>n</i> = 22) <i>n</i> (%)	Non-problem ( <i>n</i> = 55) <i>n</i> (%)	Problem ( <i>n</i> = 23) <i>n</i> (%)	At Risk ( <i>n</i> = 56) <i>n</i> (%)	Non-problem ( <i>n</i> = 156) <i>n</i> (%)
<b>Support or help for gamer (child/adult)</b>						
From family or friends	3 (25.0)	2 (9.1)	1 (1.8)	1 (4.3)	1 (1.8)	1 (0.6)
From a psychologist or counsellor	4 (33.3)	4 (18.2)	1 (1.8)	0 (0.0)	1 (1.8)	1 (0.6)
From online forums or chat	1 (8.3)	0 (0.0)	0 (0.0)	2 (8.7)	0 (0.0)	1 (0.6)
From self-help books	0 (0.0)	0 (0.0)	0 (0.0)	1 (4.3)	0 (0.0)	1 (0.6)
From phone chat services	1 (8.3)	0 (0.0)	1 (1.8)	0 (0.0)	0 (0.0)	0 (0.0)
Asked friends or family for advice/ support about child's/partner's gaming	10 (83.3)	11 (50.0)	8 (14.5)	14 (60.9)	18 (32.1)	9 (5.8)
<b>Support or help for oneself</b>						
From family or friends	3 (25.0)	2 (9.1)	0 (0.0)	7 (30.4)	5 (8.9)	5 (3.2)
From a psychologist or counsellor	2 (16.7)	2 (9.1)	2 (3.6)	7 (30.4)	4 (7.1)	3 (1.9)
From online forums or chat	0 (0.0)	0 (0.0)	0 (0.0)	3 (13.0)	1 (1.8)	1 (0.6)
From self-help books	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (0.6)
From phone chat services	0 (0.0)	0 (0.0)	0 (0.0)	1 (4.3)	0 (0.0)	0 (0.0)

Note. Problem refers to meeting five or more criteria on the gaming disorder checklist.

“talking”, and “advice from others who haven’t experienced the situation”.

## DISCUSSION

The present study provides insights into an understudied area of problem gaming research: how significant others are affected by a close individual’s problem gaming and their help or support seeking behaviours. This research found that parents and partners of individuals with gaming problems reported experiencing a range of harms and negative consequences. Respondents with individuals in the problem gaming category reported significantly more harms across life domains than those in at-risk and non-problem categories. A common burden was relationship stress and conflict, with most respondents reporting that their partners neglected household responsibilities, withdrew from social events, and created relationship tension. Partners reported psychological distress due to gaming, including anger and hopelessness about their partner’s gaming behaviour, sleeping less often, and having less money for recreational spending. These results support previous studies that report that the negative effects of gaming are not limited to gamers themselves but also to people close to them (Ahlstrom et al., 2012; Coyne et al., 2012; Lianekhammy & van de Venne, 2015; Northrup & Shumway, 2014), and show that family members may have their own counselling or other treatment needs. Furthermore, the results highlight important areas for assessment and intervention for professionals of health care services (e.g. assisting couples or offering counselling for family members).

Parents with a child with gaming problems primarily reported that they experienced strains in their relationship

with the child due to their excessive gaming. Many parents with a child who they rated as meeting the gaming disorder criteria endorsed the statement that they felt “like a failure”. These results show that excessive gaming can affect the quality of the parent-child relationship, consistent with previous studies (Charlie et al., 2011; Demirtas-Zorbaz, Ulas, & Kizildag, 2015; Kwon et al., 2011; Rikkers et al., 2016; Wang et al., 2014). The results also suggest that there may be gaming-specific issues that generate relational conflict, including: complex negative emotions (anger, shame, frustration, hopelessness) stemming from difficulties in managing the child’s gaming and feeling personal responsibility. Similarly, partners’ relationship difficulties may be complex in relation to how individuals view the origins and progression of gaming-related problems, including how the gamer and non-gamer attribute responsibility for problems (e.g., “my gaming is *her* problem”). Health professionals may need, for example, to address self-defeating, avoidant, and blaming cognitions to increase therapeutic engagement and change.

The present study contributes to the limited research on the financial vulnerabilities and negative financial consequences of problem gaming (Delfabbro, King, & Carey, 2021b; Garea, Drummond, Sauer, Hall, & Williams, 2021; Gibson, Griffiths, Calado, & Harris, 2022). Although some academic papers and studies have drawn comparisons between gaming and gambling (Colder Carras et al., 2018; Delfabbro & King, 2020; Gainsbury, Hing, Delfabbro, Dewar, & King, 2015; King & Delfabbro, 2020; King, Russell, Gainsbury, Delfabbro, & Hing, 2016; Wardle, 2019; Zende & Bowden-Jones, 2019), there is limited data on the extent to which excessive financial expenditure on gaming may have negative consequences for individuals close to the player. Gaming can be a relatively low-cost activity once an individual has acquired the necessary equipment and



software. However, continuous spending is possible and encouraged in some games, such as in the form of micro-transactions (including 'loot boxes') and monetisation systems that may be broadly classified as 'predatory' (King & Delfabbro, 2018b; King et al. 2019; King, Koster, & Billieux, 2019). About half of parents and a third of partners reported a moderate to major overall negative impact on their financial situation, which included a small proportion for whom spending on gaming had affected their means to afford essential purchases. Further research is needed to better understand this impact and to determine if it tends to be isolated to gaming or is part of a broader pattern of compulsive spending.

Another noteworthy finding was that only a minority of affected respondents reportedly sought any help or support. Fewer than 1 in 10 respondents (specifically, 9.0% of parents and 8.9% of partners) reported that they had ever sought any help for themselves, consistent with research that suggests that few affected others gain access to help (Copello & Orford, 2002; Rane et al., 2017). None of the respondents who identified that their partner had gaming problems had sought psychological help or counselling for their partner. As Orford et al. (2013) notes, this may be due to a 'coping dilemma', referring to the complexity of individuals' strong feelings toward the addicted relative and their behaviour; their obligations to the relative and desire to maintain stability for others in the family; as well as other responsibilities toward the addicted relative and the whole family and place financial and other constraints on help-seeking. Other barriers to seeking help may include embarrassment or fear (e.g., stigmatization) and unwanted reactions of the addicted family member.

Although based on limited responses, the present study suggested that individuals sought out a range of different help options, including professional help and informal avenues, but very few were reported to be successful. Future studies may benefit from examining types of help and referral pathways in more detail (e.g., teacher, family doctor, etc.). The extent to which professional help is effective long-term, and in what ways, particularly for reducing burdens on family and significant others, warrants further examination. Treatment studies that evaluate the efficacy of therapies, such as cognitive-behavioural therapy, may wish to consider evaluating the collateral therapeutic benefits of these treatments (i.e., how treatment for an individual with gaming problems might improve the quality of life of that individual's family and support network). Treatments programmes for problem gaming may wish to consider some active involvement of affected others, even in the limited capacity of tracking improvements in the individual's interpersonal functioning. This is in light of research which suggests that treatment modalities that involve parents can have a positive and lasting treatment effect on adolescents with Internet addiction (Liu et al., 2015; Zhong et al., 2011).

The present study had several limitations. First, this research involves some non-parametric tests but mainly used descriptive statistics due to relatively small samples and cell sizes. The study was based on purposive samples to target specific groups with concerns about gaming, so it may not be representative of the pattern of harms experienced in

the wider gaming population. The sample was primarily female, which was to be expected due to the higher proportion of male problem gamers (Király et al., 2014; Mentzoni et al., 2011; Wittek et al., 2016) and the tendency for females to more often be negatively affected by addicted others than males (Orford et al., 2013). The study relied on retrospective questions to measure harm and negative consequences, which is a valid and conventional approach (Browne et al., 2016), but may be subject to various recall biases. This study was cross-sectional, and therefore was not able to examine the progression of harms or their longer-term consequences. Another limitation was the reliance on second-hand accounts of problem gaming to determine the status of the excessive gamer. The designation of problem gaming and at-risk gaming should be treated with caution. Relatedly, participants elected to participate in this study but not all gaming individuals were rated as having problems according to the GD checklist. This appears to reflect that not all problem gaming is appropriately conceptualised or meets the threshold to be considered as addictive, and may reflect other more primary issues (e.g., depression) or relationship difficulties. Future research using clinical samples or samples with first-hand reports of problems would provide more reliable information on which to examine GD-related harms, including differences between gamers' and affected others' responses.

## Conclusion

Problem gaming affects multiple life domains of parents and partners of affected individuals. Problem gaming was associated with relationship difficulties, including conflict, unmet expectations and unequal responsibilities, and feelings of frustration, regret, and resentment. The present study suggests that there is a gap between the needs of affected individuals and the availability and/or provision of effective help and support options. Few respondents reported to have accessed professional help which may indicate some uncertainty about the availability and/or suitability of options. Health care services could consider providing more resources for families and other supports, as well as facilitating the inclusion of partners and family members and provide low-threshold services or otherwise identify and monitor appropriate support for their needs. Further research should examine harms experienced by individuals with gaming disorder, particularly in evaluations of interventions and policy measures that aim to reduce problem gaming.

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*Authors' contribution:* CSJ reviewed the literature, conducted the statistical analysis, and prepared the first draft of the manuscript. MM and HG collected the data. MM, HG and





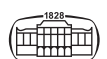
DLK designed the study and Authors PD and DLK supervised the study and revised drafts. All authors contributed to the design of the study and have approved the final manuscript.

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