

review

The Impact of Problem Gambling on Families and Relationship Partners: A Scoping Literature Review

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Abstract

It has been determined that family members and relationship partners of persons with gambling disorders face a variety of problems. Since their problems have not yet been summarized in the literature, we conducted a scoping review to address this issue, and focused on the studies of problems faced by family members and partners of those with gambling disorders and studies on the effects of gambling problems on family members and partners. We searched electronic databases (PsycINFO, PubMed, and MEDLINE) and the reference lists of included studies published up to February 15, 2021 and extracted 2,760 studies. These studies were examined for eligibility, and yielded 101 items that met our predefined criteria, all of which were reviewed. Overall, this review found that (1) the presence of gamblers in families was related to increased gambling or other addiction-related behaviors among family members; (2) a variety of intra-family conflicts were likely to arise between gamblers and their families and partners; (3) the presence of gamblers in families increased the risk of violence and abuse for family members, partners, and gamblers themselves; and (4) gambling problems generated a variety of physical and mental health problems in gamblers' families as well as among others in their proximity. In the future, it will be important to establish beneficial support and treatment methods by using the difficulties identified by this review as outcomes in the treatment of gamblers, along with their families and partners.

Keywords: problem gambling, relationship partners, family, literature review

Introduction

The lifetime prevalence of gambling disorders in people who speak English and other European languages has been reported as 0.8–1.2% (Stucki & Rihs-Middel, 2007).

Among college and university students, 10.2% have probable gambling disorder (Nowak & Aloe, 2014). Moreover, certain treatment-seeking disordered gamblers display current and lifetime co-morbid Axis I disorders (nicotine dependence, major depressive disorder, alcohol abuse and dependence, and so on; Dowling et al., 2015). Sato (2008) reported that many patients with gambling disorders received no medical care or psychological support. Moreover, their families and relationship partners must confront gambling-related difficulties such as financial, legal, and occupational challenges.

The difficulties faced by families and partners because of gambling behavior are a worldwide problem. For example, Darbyshire et al. (2001) reported that growing up in a family where parents have serious gambling problems could worsen children's overall health and well-being. Moreover, Kourgiantakis et al. (2013) conducted a review of empirical studies published from 1998 to 2013 examining the effects of gambling disorders on families and the impact of family involvement in gambling treatment. This review showed that gambling disorders had several adverse effects on families. Meanwhile, family involvement in treatment of gambling disorders was linked with better treatment outcomes and improved individual and family functioning. In fact, family members' and partners' motivation and assertiveness towards disordered gamblers appear to be important factors for gamblers' treatment entry. As such, community reinforcement and family training could target the acquisition and development of skills by family members and partners (Archer et al., 2020). Family members' and partners' involvement in treatment could certainly improve treatment outcomes. However, given the variety of difficulties family members and partners face, providing them with significant care and support is also crucial. Therefore, updating the findings on difficulties faced by families is important in understanding those families and partners who may be victims of gambling disorders.

The purpose of this scoping review is to consolidate previous findings and identify the impact of gambling disorders on families and partners, to promote the understanding of the relationship between people with gambling disorders and their families and partners. Specifically, we reviewed and summarized the research that has reported on the difficulties faced by family members around people with gambling disorders. In addition, based on the results of this review, we shall discuss ways to support gamblers, their families and partners, as well as the interpersonal relationships between them. Difficulties were faced not only by individual family members or partners (e.g., health problems or behavior) but also included issues that arose between family members and people with gambling disorders (e.g., conflicts and violence). In addition, certain of these issues were reported from the perspectives of family members or partners, while others were from the perspectives of gamblers. All the issues were identified through questionnaire surveys, or by interviewing both parties separately. Therefore, we defined these as difficulties faced by the families or partners.

In this study, "family members" includes parents, children, siblings, grandparents and other relatives, while "relationship partners" includes both close personal friends and persons with whom the subject in question is in a relationship. Furthermore,

previous studies' concept of "pathological gambling" was defined as a gambling disorder in this scoping review because the term pathological gambling is not used in the latest diagnostic criteria (American Psychiatric Association, 2013).

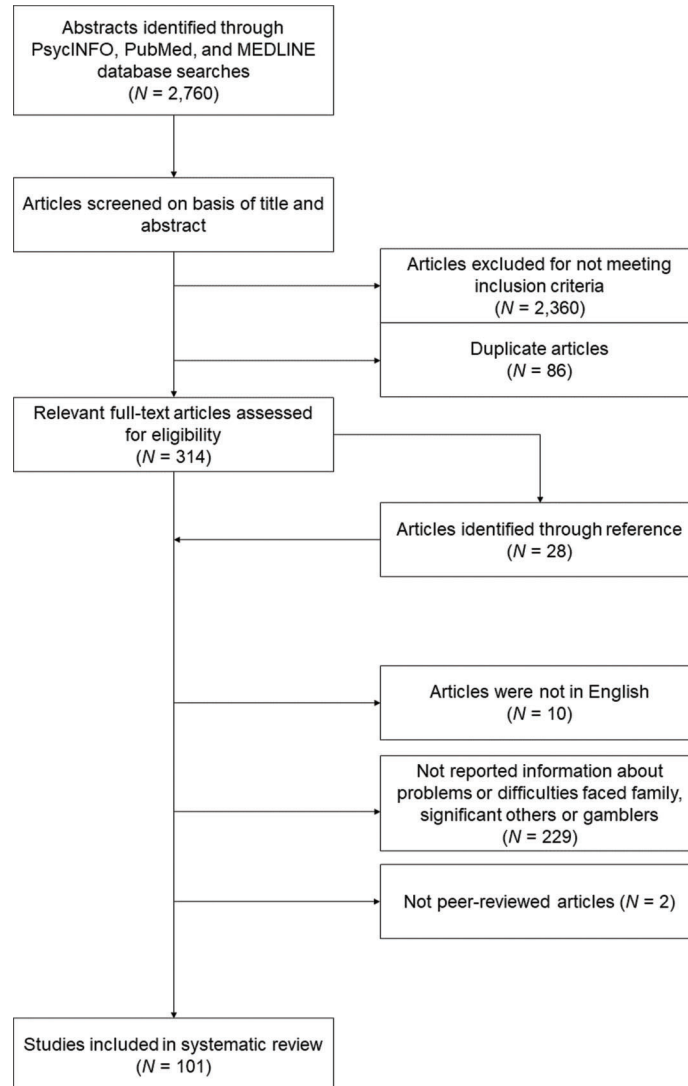
Method

This scoping review searched the following databases (PsycINFO, PubMed, and MEDLINE). The selected search terms were "gambling" and "family, child, adolescent, or significant others." The search included articles published from the earliest data available to February 15, 2021 in each database. Moreover, after these database searches, we also searched the reference sections of the articles for additional sources. The first and second authors independently screened the title and abstract to identify and exclude those that were irrelevant. The first and second authors then independently screened the full text of all remaining articles for relevance. Any discrepancies were discussed and resolved by two authors. Studies included for this review met the following criteria: (1) written in English, (2) published in a peer-reviewed journal, and (3) conducted specifically with families or partners who faced gambling related difficulties or examined the impact of gambler's behaviors and problems on families or partners.

For each study that met the inclusion criteria, the first author extracted data on general study details, participant's characteristics, and the results in relation to the impact of gambler's behaviors and problems on families and partners. And then, second authors checked the data the first author had extracted.

Based on the inclusion criteria, two independent raters evaluated "include," "excluded," and "unsure" for each article. The value of Kappa indicates fair agreement ($\kappa = .50$) (Higgins & Green, 2008). Of the 2,760 articles extracted using the database search, we rejected 2,360 articles for which both the raters evaluated "exclude." This process resulted in 400 articles, of which 25 articles received the same "include" evaluation by both raters, 113 articles received the same "unsure" evaluation by both raters, and 262 articles were evaluated as either "include" or "unsure" by either rater. There were 86 duplicates among the 400 articles. Moreover, as a result of the reference section search, we further extracted 28 articles. Finally, two raters independently read the full texts of the 342 articles and judged whether they should be subject to this review. A total of 101 articles were selected for this review (Figure 1). We further categorized the gambling related difficulties faced by families or partners into (a) gambling behaviors, other addictive behaviors, and related problems; (b) conflicts with gamblers; (c) violence and abuse inflicted upon and perpetrated by them; and (d) physical and mental health problems, based on the information obtained from the extracted papers. Duplicates were counted when multiple reports of impact were included. Incidentally, because almost all families and partners were facing financial problems related to debt or bankruptcy (Grant et al., 2010), we excluded financial problems in this review and focused on other difficulties. In addition, the results and discussion were based on the PRISMA-ScR checklist (Tricco et al., 2018).

Figure 1
Flowchart of Study Selection.



Results

Families' and Relationship Partners' Gambling Behaviors, Other Addictive Behaviors, and Related Problems

The majority of studies focusing on how gamblers' behaviors and related problems could result in families' and partners' gambling behaviors, other addictive behaviors, and related problems were extracted through previous studies. We reviewed two review articles (Kalischuk et al., 2006; Walters, 2001) and 44 observational studies. The details of these studies are presented in Table 1. Forty-one studies examined the impact of gambling behaviors and problems on families' or partners' gambling behaviors and gambling-related problems and five studies examined the impact of

Table 1
Characteristics of Included Studies About Families' and Partners' Gambling Behaviors, Other Addictive Behaviors, and Related Problems

Studies	Year	Demographics, sample	Main findings
Original studies Lorenz & Shuttlesworth	(1983)	1. 144 GamAnon members (age range = 23–70) in Chicago, Illinois	1. 50% of 144 GamAnon members reported dysfunctional behaviors (alcohol, smoking, and under- or over-eating). 2. 25% of 144 GamAnon members' children showed gambling and/or substance abuse behaviors.
Jacobs et al.	(1989)	1. 844 ninth- to twelfth-grade students in four Southern California public high schools 2. 52 students who characterized one or both of their parents as "problem gamblers"	1. Children with problem gambler parents showed more excessive gambling (8% vs. 4%), more gambling-related problems (29% vs. 14%), and higher levels of tobacco (37% vs. 23%) and cocaine use (10% vs. 5%).
Lesieur & Rothschild	(1989)	1. 105 children (mean age = 17.0, range = 12–60) of Gamblers Anonymous members from the United States and Canada	1. 80% of the children of Gamblers Anonymous members had gambled, with 9% doing so weekly. 2. 32% of the children aged 15 to 19 years ($n = 63$) of Gamblers Anonymous members reported that they smoke tobacco on a moderate to heavy basis.
Gambino et al.	(1993)	1. 93 veterans (mean age = 43.5, range = 29–72) attending clinics for problem drinking, drug abuse, and other mental disorders 2. 17.3% were probable pathological gamblers (SOGS = 5) and 14.0% were at-risk gamblers (SOGS = 3 or 4)	1. Veterans whose parents were perceived as at-risk gamblers were three times more likely to score as probable pathological gamblers (by relative risk). 2. Veterans whose grandparents were perceived as at-risk gamblers were twelve times more likely to score as probable pathological gamblers (by relative risk).
Winters & Stinchfield	(1993)	1. 702 adolescents (mean age = 16.2, range = 15–18) from Minnesota in the United States 2. 8.7% were problem gamblers (SOGS-RA ≥ 2), 17.1% were at-risk gamblers (SOGS-RA = 1), and 74.2% were not problem gamblers (no history of gambling; or SOGS-RA = 0)	1. A moderate association was found between adolescents' problem gambling severity and heavy parental gambling: problem gambling = 6.3%, at-risk gambling = 3.8%, and no problem gambling = 1.4% (chi-square statistics).

(Continued)

Table 1 Continued.

Studies	Year	Demographics, sample	Main findings
Browne & Brown	(1994)	<ol style="list-style-type: none"> 288 students in introductory marketing classes at a state university in the Northwest America (mean age = 22.6, range = 18–38) Almost 80% of students had purchased lottery tickets at least once; only 2% reported being frequent lottery players and 63% were occasional players 	<ol style="list-style-type: none"> Students whose parents gambled on lotteries were more likely to buy lottery tickets (ANOVA).
Gupta & Derevensky	(1997)	<ol style="list-style-type: none"> 477 children (age range = 9–14) from grades 4, 6, and 8 in public schools in Montreal 81% of 388 children reporting some gambling experience and 52% reporting gambling at least once per week 	<ol style="list-style-type: none"> 81% of 388 children reported gambling with a family member: 40% reported gambling with their parents, 53% with their sibling, and 46% with other relatives such as grandparents, aunts, and uncles. 20% of 388 children indicated that they are fearful of being caught gambling by a parent or authority figure.
Langhinrichsen-Rohling et al.	(2004)	<ol style="list-style-type: none"> 1,407 adolescents from high schools located in Alabama, Mississippi, and Oregon 2.1% were probable pathological gamblers (SOGS-RA ≥ 6), 3.8% were problem gamblers (SOGS-RA = 4 or 5), and 12.4% were at-risk gamblers (SOGS-RA = 2 or 3) 	<ol style="list-style-type: none"> Probable pathological gamblers reported more parental gambling than individuals in any other groups (problem gamblers, at-risk gamblers, non-problem gamblers, and non-gamblers; discriminant functions analysis).
Oei & Raylu	(2004)	<ol style="list-style-type: none"> 189 first-year psychology students at the University of Queensland (mean age = 20.0, $SD = 3.9$, range = 17–48.1, $SD = 5.1$, range = 30–70; mothers: mean age = 50.5, $SD = 5.5$, range = 35–73) 	<ol style="list-style-type: none"> Both parents' gambling behaviors influenced offspring's gambling behaviors (structural equation modeling).
Vachon et al.	(2004)	<ol style="list-style-type: none"> 938 adolescents (mean age = 15.6, $SD = 0.48$) and both of their parents from the province of Quebec 	<ol style="list-style-type: none"> Both the frequency and severity of parental gambling were associated with adolescent gambling frequency (structural equation modeling). Only paternal severity of gambling problems showed a positive relationship with adolescent gambling problems (structural equation modeling).
Lund	(2007)	<ol style="list-style-type: none"> 4,188 people (age range = 15–74) from Norway's national gambling survey Non-gamblers and current problem gamblers or pathological gamblers were not included in the analysis 3.46% of 4,188 people were current at-risk gamblers who had experienced one or two negative consequences 	<ol style="list-style-type: none"> Gambling problems in the family, which were measured as currently or ever having either parents or other family members with gambling problems, increased the probability of at-risk gambling (logistic regression analysis).

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Table 1 Continued.

Studies	Year	Demographics, sample	Main findings
Blinn-Pike & Worthy	(2008)	<ol style="list-style-type: none"> 156 women (mean age = 21.64, range = 20–25) from a variety of courses at a southeastern university in the United States 22 women who had never gambled, 120 women who had gambled in a casino, and 37 women who had never gambled in a casino 3.3% of 120 women who had gambled in a casino were probable pathological gamblers (SOGS \geq 4) and 5.0% were at-risk gamblers (SOGS = 3); all women who had never gambled or never gambled in a casino had SOGS scores \leq 2 	<ol style="list-style-type: none"> There were no significant differences in parental gambling behaviors (paternal excessive gambling: never gambled = 0, gambled in a casino = 8, never gambled in a casino = 0; maternal excessive gambling: never gambled = 0, gambled in a casino = 2, never gambled in a casino = 3; chi-square statistics).
Dickson et al.	(2008)	<ol style="list-style-type: none"> 2,179 youths (age range = 11–19) from nine school boards in the Province of Ontario 37.9% were classified as non-gamblers, 49.3% as social gamblers (DSM-IV = 0 or 1), 7.8% as at-risk gamblers (DSM-IV = 2 or 3), and 5.0% as probable pathological gamblers (DSM-IV \geq 4) 	<ol style="list-style-type: none"> Differences between four gambler groups were found in frequency of perceived familial gambling problem (mother: non = 2.1%, social = 3.8%, at-risk = 5.3%, pathological = 6.5%; father: non = 2.3%, social = 4.3%, at-risk = 2.9%, pathological = 7.4%; chi-square statistics) Sibling gambling problems increased the likelihood of at-risk and pathological gambling (logistic regression analysis). <ol style="list-style-type: none"> Parents' gambling problem was associated with child's gambling problem (correlation analysis). Offspring of problem-gambling parents were more likely to report gambling problems by mid-adolescence than offspring of non-problem gambling parents (logistic regression analysis).
Vitaro et al.	(2008)	<ol style="list-style-type: none"> 142 adolescents and families from a community sample in the province of Quebec, Canada 42 groups of participants where one or both parents were at-risk gamblers (SOGS \geq 3) 	<ol style="list-style-type: none"> Similar proportions of Asian-American and white callers reported a family history of problems with gambling (38.6% vs. 30.8%) (chi-square statistics).
Barry et al.	(2009)	<ol style="list-style-type: none"> 144 calls to a gambling helpline serving Southern New England from individuals who reported problems with gambling (72 from Asian Americans and 72 from white people) 	<ol style="list-style-type: none"> 172 of the subjects had at least one problem-gambling parent (father = 75, mother = 57, both = 40).
Schreiber et al.	(2009)	<ol style="list-style-type: none"> 517 subjects (aged over 18 years) meeting current DSM-IV criteria for pathological gambling in several clinical research trials 	<ol style="list-style-type: none"> Subjects with a problem-gambling parent had greater rates of daily nicotine use than subjects without a problem-gambling parent (51.7% vs. 35.7%; chi-square statistics)

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Table 1 Continued.

Studies	Year	Demographics, sample	Main findings
King et al.	(2010)	<p>1. 581 undergraduate students (mean age = 19.61 years, $SD = 1.92$) from a large public Midwestern university</p> <p>2. 4.6% were problem gamblers, 10.2% were moderate-risk gamblers, 15.5% were low-risk gamblers, 13.4% were negligible-risk gamblers, and 56.2% were non-gamblers (by CAGI)</p>	<p>1. Parental gambling problems increased students' gambling problems and time spent gambling (multiple regression analysis).</p>
Pagani et al.	(2010)	1. 163 children from a prospective longitudinal cohort study in Montreal	1. Parental gambling problems did not increase children's gambling six years later (multiple regression analysis).
Reith & Dobbie	(2011)	1. 50 individuals (problem gamblers in contact with treatment services = 12, problem gamblers not in contact with treatment services = 21, and regular/heavy recreational gamblers = 17); problem gambling: $NODS \geq 3$	1. "Beginning gambling" often included familial and/or relatives gambling. For example, a common pattern involved fathers introducing their sons to sports betting both in the home watching television and in betting shops (interviews).
Versini et al.	(2011)	<p>1. 355 casino gamblers on slot machines in situ at the largest casino in the Paris suburbs</p> <p>2. 96 were pathological gamblers ($DSM-IV \geq 5$ and $SOGS \geq 4$), 116 were at-risk gamblers ($DSM-IV = 3$ and $SOGS = 3$), and 143 were non-problem gamblers ($DSM-IV \leq 2$ and $SOGS \leq 2$)</p>	<p>1. Children of problem-gambling parents are around 3.3 times more at risk of being pathological gamblers than children with non-problem-gambling parents (logistic regression analysis).</p>
Vitaro & Wanner	(2011)	1. 1,125 children (range = end of kindergarten year to end of grade 4) from the Quebec longitudinal study	1. Parental gambling increased the likelihood of child gambling (logistic regression analysis).
Apinuntavech et al.	(2012)	<p>1. 1,694 students (mean age = 16.8 years, $SD = 2.7$) in Bangkok metropolitan area</p> <p>2. 348 students had experienced gambling, 298 were classified as probable pathological gamblers ($DSM-IV \geq 5$)</p>	<p>1. More students who had gambled reported having parents who gambled than students who had never gambled (chi-square statistics).</p>
Boldero & Bell	(2012)	1. 1,000 individuals (age range = 18–24) from computer-assisted telephone interviews in Australia	1. Family gambling participation increased the likelihood of child gambling (logistic regression analysis).
Hodgins et al.	(2012)	<p>1. 1,372 adults from a longitudinal study of gambling involvement in the province of Alberta, Canada</p> <p>2. 60 adults of 199 higher-frequency gamblers who gambled at least once a week in a typical month were categorized as problem gamblers ($PGSI \geq 8$) and 76 adults were categorized as non-problem gamblers ($PGSI = 0$)</p>	<p>1. Problem gamblers were more likely than non-problem gamblers to have parents who were regular gamblers (problem = 45, non-problem = 29).</p>

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Table 1 Continued.

Studies	Year	Demographics, sample	Main findings
Fortune et al.	(2013)	<ol style="list-style-type: none"> 1. 128 gamblers (mean age = 34.2, $SD = 11.7$) from the Athens, Georgia area 2. The sample had a mean DIGS score of 4.5 ($SD = 3.2$). 	<ol style="list-style-type: none"> 1. Participant's gambling severity was only associated with paternal gambling frequency, not with paternal gambling expenditure (no relationships: mother and siblings; correlation analysis). 1. More Asian-American than Caucasian adolescents reported having concerns about gambling among close family members (chi-square statistic).
Kong et al.	(2013)	<ol style="list-style-type: none"> 1. 121 Asian-American and 1,659 Caucasian high-school students from 10 high schools in Connecticut 2. Compared to Caucasians, Asian-American adolescents were less likely to report non-gambling (24.79% vs. 16.40%), more likely to report pathological gambling ($DSM-IV \geq 5$; 13.22% vs. 3.74%), low-risk ($DSM-IV = 0$; 44.63% vs. 57.60%), and at-risk gambling ($DSM = 1$ or 2; 13.22% vs. 17.96%); rate of problem gambling was comparable ($DSM-IV = 3$ or 4; 4.13% vs. 4.70%) 	<ol style="list-style-type: none"> 1. Grandparental gambling problems increased undergraduate students' gambling activity (hierarchical regression analysis).
Lang & Randall	(2013)	<ol style="list-style-type: none"> 1. 213 undergraduate students (mean age = 20.07, $SD = 1.56$, range = 18–25) at an upper Midwestern university 2. 370 secondary-school students in the municipalities of Zenica and Kakanj, Bosnia and Herzegovina 	<ol style="list-style-type: none"> 1. 798 students reported that their family gambled: only father = 348, only mother = 43, both parents = 129, all family members = 73, and brother/sister = 205 (descriptive statistics).
Softić et al.	(2013)	<ol style="list-style-type: none"> 1. 2,370 secondary-school students in the municipalities of Zenica and Kakanj, Bosnia and Herzegovina 2. 839 gambled occasionally and 164 declared that they often gambled 	<ol style="list-style-type: none"> 1. 11 outpatients reported that a second-degree or closer family member had pathological gambling (descriptive statistics).
Komoto	(2014)	<ol style="list-style-type: none"> 1. 141 outpatients (mean age = 44.6, $SD = 12.4$) who were primarily diagnosed as pathological gamblers at a psychiatric hospital in Japan 	<ol style="list-style-type: none"> 1. Significant others concerned about their partner's gambling had higher daily smoking (men: 24.6% vs. 20.2%, women: 23.3% vs. 12.5%) and risky alcohol consumption (men: 46.4% vs. 31.1%, women: 21.7% vs. 17.0%) than non-concerned significant others (chi-square statistics).
Salonen et al.	(2014)	<ol style="list-style-type: none"> 2. 4,484 participants (mean age = 48.2, $SD = 16.8$, range = 15–74) from the Finnish Population Information System 2.7% of 4484 respondents were classified as problem gamblers ($SOGS \geq 3$) 	<ol style="list-style-type: none"> 1. Hierarchical cluster analysis found four clusters of gamblers; the family members of all groups experienced mental health problems (psychological distress = 34.51%, low comorbidity = 14.3%, alcohol abuse = 19.6%, and multimorbidity = 11.5%).
Suomi et al.	(2014)	<ol style="list-style-type: none"> 1. 212 clients in gambling programs in Australia 	

(Continued)

Table 1 Continued.

Studies	Year	Demographics, sample	Main findings
Wong & So	(2014)	<ol style="list-style-type: none"> 1,004 high school students (mean age = 14.7, <i>SD</i> = 2.1, range = 12–19) in Hong Kong 2.5 students were classified as probable pathological gamblers (DSM-IV-MR \geq 4) and 45 were at-risk gamblers (DSM-IV-MR = 2 to 3) 	<ol style="list-style-type: none"> 10 at-risk and probable pathological Internet gamblers reported that family members ($n = 5$) gambled regularly either online or offline (descriptive statistics). The relationship between DSM-IV-MR scores and family influences was positive ($r = 0.298$; correlation analysis) <ol style="list-style-type: none"> For men and women, their partner's level of gambling problem increased the personal gambling problem (by logistic regression analysis). The cross-spouse effect of gambling severity was far stronger in wives than husbands (multilevel analysis).
Cheung	(2015)	<ol style="list-style-type: none"> 1,620 married couples (men: mean age = 42.10, <i>SD</i> = 6.55; women: mean age = 38.27, <i>SD</i> = 6.66) in Hong Kong 207 men and 85 women were classified as probable at-risk gamblers (DSM-IV = 1–4) and 41 men and 4 women were probable pathological gambling (DSM-IV \geq 5) 	<ol style="list-style-type: none"> Regarding family history, having a pathological gambler in the family increased the likelihood of children having a gambling problem (logistic regression analysis).
Hanss et al.	(2015)	<ol style="list-style-type: none"> 2,055 17-year-olds in Norway 5 participants were classified as problem gamblers (PGSI \geq 8), 31 as moderate-risk gamblers (PGSI = 3–7), 84 as low-risk gamblers (PGSI = 1 or 2), and 416 were non-problem gamblers (PGSI = 0) 	<ol style="list-style-type: none"> 10 of 11 girls and 16 of 40 boys reported that they had started gambling with their parents or other family members (interviews).
Kristiansen et al.	(2015)	<ol style="list-style-type: none"> 52 adolescents (age range = 12–20) from primary schools, tech colleges, and high schools in the Aalborg region in Denmark 11 were classified as problem gamblers (SOGS-RA \geq 4), and 25 were at-risk gamblers (SOGS-RA = 2 to 3) 	<ol style="list-style-type: none"> There was a relationship between paternal-and-participant and maternal-and-participant problem gambling (chi-square statistics). Compared to their peers, problem gambling participants were more likely to be moderate and problem gamblers (chi-square statistics).
Dowling et al.	(2016)	<ol style="list-style-type: none"> 3,953 participants in Australia 0.9% of participants were classified as problem gamblers (PGSI \geq 8), 1.7% as moderate-risk gamblers (PGSI = 3–7), 4.9% as low-risk gamblers (PGSI = 1 to 2) 	<ol style="list-style-type: none"> Students with parents who gambled had increased gambling behaviors than students with non-gambling parents (logistic regression analysis).
Sheela et al.	(2016)	<ol style="list-style-type: none"> 2,262 students (mean age = 14.2, <i>SD</i> = 1.5, range = 12–17) in the state of Negeri Sembilan, Malaysia 3.6% of students were classified as problem gamblers (SOGS-RA \geq 4) 	<ol style="list-style-type: none"> Family gambling problems were predictors of participants' at-risk problem gambling status (logistic regression analysis).
Dowling et al.	(2017)	<ol style="list-style-type: none"> 612 adolescents (age range = 12–18) from seventeen Australian secondary schools 4.9% were classified as at-risk gamblers (DSM-IV-MR-J) 	

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Table 1 Continued.

Studies	Year	Demographics, sample	Main findings
Cicolini et al.	(2018)	<ol style="list-style-type: none"> 1,083 nursing students (mean age = 22.6, <i>SD</i> = 7.5) from seven different Italian Universities 2.7% of the participants were classified as pathological gamblers (<i>SOGS</i> ≥ 5), and 83.3% as gamblers with some problems (<i>SOGS</i> = 1–4) 	<ol style="list-style-type: none"> 1. Familiar pathological gambling did not increase nursing students' gambling symptoms (general regression model).
Shirk et al.	(2018)	<ol style="list-style-type: none"> 1. 61 treatment-seeking veterans (mean age = 50.8, <i>SD</i> = 9.25) who met the criteria for a gambling disorder 	<ol style="list-style-type: none"> 1. 50 veterans reported that at least one of their family members gambled: father = 28, mother = 25, and siblings = 33 (descriptive statistics). 1. Participants' parents either gave participants money for gambling, took them to gambling venues, or held their 18th birthday party in a gambling venue (interviews).
McCarthy et al.	(2020)	<ol style="list-style-type: none"> 1. 45 women (mean age = 24.3, <i>SD</i> = 4.1, range = 18–34) who gambled at least once in the past 12 months in Victoria, Australia 4.4% of the participants were classified as problem gamblers (<i>PGSI</i> ≥ 8), 26.7% as moderate-risk gamblers (<i>PGSI</i> = 3–7), 48.9% as low-risk gamblers (<i>PGSI</i> = 1 to 2) 	
Tulloch et al.	(2020)	<ol style="list-style-type: none"> 1. 15,475 participants (18 years over, 53.2% female) from the National Health Survey in Australia 	<ol style="list-style-type: none"> 1. People whose family members had gambling problems were at a significantly higher risk of experiencing alcohol or drug problems than those without gambling problems.
Dowling et al.	(2020)	<ol style="list-style-type: none"> 1. 97 treatment-seeking gamblers (55 males, 41 females, 1 unreported, mean age = 48.1, <i>SD</i> = 12.2) 	<ol style="list-style-type: none"> 1. One-quarter (25.5%) of the participants reported that at least one family member (16.5% father, 7.5% mother, 7.6% siblings) who lived with them when they were growing up had a gambling problem.
Walters	(2021)	<ol style="list-style-type: none"> 1. 3,089 adolescents (1,576 males, 1,513 females) from Cohort K of the Longitudinal Study of Australian Children (LSACK). 	<ol style="list-style-type: none"> 1. While the child delinquency–child gambling relationship was not significant when parental gambling was low (<i>b</i> = 0.27, 95% <i>CI</i> = -0.02 to 0.61), it was significant when parental gambling was medium and high level (medium: <i>b</i> = 0.43, 95% <i>CI</i> = 0.08 to 0.88, high: <i>b</i> = 0.58, 95% <i>CI</i> = 0.12 to 1.21).
Review studies Walters	(2001)	<ol style="list-style-type: none"> 1. 2 twin studies and 17 investigations employing the family history or family study method were included in this meta-analysis from the MEDLINE and PsycInfo databases for studies published between 1970 and 2000 	<ol style="list-style-type: none"> 1. A summation of the 19 studies produced a small but significant overall effect size of behavioral genetics on gambling.

(Continued)

Table 1 Continued.

Studies	Year	Demographics, sample	Main findings
Kalischuk et al.	(2006)	1. 81 family-focused and/or gambling-related articles, books, reports, and government documents were included in this review from six databases: Academic Search Premier, Cumulative Index to Nursing and Allied Health Literature, Expanded Academic ASAP, Health Source Nursing/Academic Edition, PsycInfo, and ProQuest Nursing Journals	<ol style="list-style-type: none"> 1. Problem gamblers are more likely to have a parent who has experienced problem gambling. As results are mixed, it is unclear if the familial influence is genetic or environmental. 2. Children of compulsive gamblers are more likely to gamble themselves, often being introduced to gambling by their parents.

gambling behaviors and problems on families' or partners' substance abuse behaviors and related problems.

The two review studies (one literature review, one meta-analysis review) indicated that the disordered gambler is more likely to have a parent who has experienced gambling disorder (Kalischuk et al., 2006). The results of the meta-analysis in relation to examining familial effect on disordered gambling showed a small but significant overall effect size (weighted $\phi = .10$; 95% confidence interval = .08 to .12) (Walters, 2001). These results indicate that having a family member who gambled or was a disordered gambler could be a factor resulting in other family members' gambling or disordered gambling (Apinuntavech et al., 2012; Barry et al., 2009; Browne & Brown, 1994; Dowling et al., 2017; Dowling et al., 2020; Oei & Raylu, 2004; Shirk et al., 2018). Therefore, much evidence has emerged in existing studies that family dynamics can influence the development of gambling disorders.

Regarding these dynamics, earlier research indicated that most children of parents who had gambled or been classified as disordered gamblers also gambled (Boldero & Bell, 2012; Sheela et al., 2016; Vachon et al., 2004; Vitaro & Wanner, 2011). In particular, Lesieur and Rothschild (1989) reported that 80% of 105 children of Gamblers Anonymous members have gambled. Moreover, some research has indicated that children gambled with their family members and that children's gambling was caused by forced involvement in parental gambling. Through interviews, Reith and Dobbie (2011) reported that, regarding first gambling participation, a respondent had said, "when my father asked me to buy lotteries on lottery house, I bought father's lotteries and my own lotteries out of interest." McCarthy et al. (2020) reported that parents either gave their children money for gambling, took them to gambling venues, or held their eighteenth birthday party in a gambling venue. Moreover, Gupta and Derevensky (1997) found that 20% of children were fearful of being caught by other family members helping their parent's gambling. Furthermore, Dickson et al. (2008) conducted a survey of 2,179 students (aged 11–19 years) from 32 schools in Ontario, Canada, to determine whether their parents had gambling problems. The results showed that the group of children with the most-severe gambling problems had a higher percentage of parents with gambling-related problems, but even in the group of children with lower levels of gambling problems, a certain number of parents were found to maintain gambling-related problems. Dowling et al. (2016) conducted a telephone survey of 3,953 Australian residents (aged 18–70 years) about the presence of gambling-related problems in their parents. Results revealed that gambling-related problems in parents were more prevalent in the more severe gambling group, but gambling-related problems were also found in parents among those who did not gamble. As mentioned above, earlier research has indicated that gamblers' behaviors affect the gambling behaviors of their family members, especially adolescents or children, but the severity, with which it affects them is still not known.

For other substance abuse-related addictive behavior and problems, Jacobs et al. (1989) reported that 52 of 844 high-school students had one or both parents who

were problem gamblers; these children had a higher prevalence of gambling behaviors (8% vs. 4%), smoking behaviors (37% vs. 23%), and cocaine use (10% vs. 5%) than children whose parents did not have these problems. Regarding smoking behaviors, Schreiber et al. (2009) observed a similar tendency (children whose parents had problem gambling vs. children whose parents did not: 51.7% vs. 35.7%). Tulloch et al. (2020) found that people whose family members had gambling problems were at a significantly higher risk of experiencing alcohol or drug problems than those without gambling problems.

In summary, earlier studies indicated that the presence of gamblers in families is related to increased gambling or other addiction-related behaviors among family members.

Conflicts Between a Gambler and Family Members or Relationship Partners

In this domain, we reviewed two review articles (Kalischuk et al., 2006; McComb et al., 2009) and 34 observational studies. The details of these studies' results are summarized in Table 2. Fifteen studies examined worsening relationships, including sexual relations, between gamblers and family members or partners, 11 studies examined arguments with family members or partners, 5 studies declining communication, and 3 studies gamblers' lying and hiding behaviors.

Kalischuk et al. (2006) indicated that family conflicts, such as arguments and poor communication with gamblers, could have the most serious impacts on their family members. McComb et al. (2009) conducted a literature and clinicians' experience review on the effects of disordered gambling on families and partners. The results showed that gamblers are in danger of losing their partner's trust, have impairment in roles and responsibilities, lack satisfaction in sexual relationships, face the possibility of separation or divorce, and have low quality marital relationships.

Many studies reported that people with gambling disorders had worse relationships with their families and partners (e.g., Bergh & Kühn, 1994; Carr et al., 2018; Dowling et al., 2009; Lorenz & Shuttlesworth, 1983; Pietrzak & Petry, 2006). For example, Crisp et al. (2001) conducted an interview survey of 440 family members and partners around gamblers who used a counselling service for gambling problems in Victoria, Australia, between 1997 and 1998. The results showed that 71.3% of men and 75.9% of women reported having interpersonal problems with gamblers. Thus, the problems associated with gambling give rise to conflicts with gamblers' families and those around them. Dickson-Swift et al. (2005) conducted interviews with seven family members and partners living in Australia and summarized their relationships with gamblers. All of the participants' relationships with gamblers were deteriorating. Three had severed the relationship through divorce or breakup, and one participant was frustrated but unable to break up the relationship. All four of those who had an ongoing relationship reported that they did not trust the gambler.

In a survey of gamblers, the percentage experiencing arguments with family members and partners ranged from 0.07% to 61.3% (Abbott & Cramer, 1993; Downs &

Table 2
Characteristics of Included Studies About Conflicts Between Gamblers and Family Members or Relationship Partners

Studies	Year	Demographics, sample	Main findings
Original studies Lorenz & Shuttlesworth Lorenz & Yaffee	(1983) (1988)	1. 144 GamAnon members (age range = 23–70) in Chicago, Illinois 1. 215 spouses (age range = 22–76) of pathological gamblers at the Gamblers Anonymous in Pittsburgh	1. 50% of 144 GamAnon members appeared to lose interest in sexual relations, and 78% threatened separation or divorce. 1. 43% of 215 spouses reported being dissatisfied by their sexual relations. 2. 37% of 215 spouses believed gamblers did not spend enough time with their children.
Blaszczynski et al.	(1989)	1. 77 pathological gamblers attending a treatment program and 32 Gamblers Anonymous members (mean age = 39.21, <i>SD</i> = 10.57) in Australia	1. 6 of 109 participants reported not caring for their children, and 19 reported not staying with their partner.
Lorenz & Yaffee	(1989)	1. 151 couples (compulsive gamblers [mean age = 48, range = 25–77] and their spouses [mean age = 45, range = 18–75]) from the Gamblers Anonymous in Pittsburgh	2. 74 participants reported lying to others. 1. 65 of the GamAnon members reported the gambler was not spending enough time with their children. 2. 26 gamblers reported that their children were indifferent or hostile towards them, while 42 spouses reported the children were reacting negatively towards the gambler.
Abbott & Cramer	(1993)	1. 420 adults (mean age = 47.0, median = 42, range = 19–91) in Nebraska 2. 52% of the sample reported that they or someone in their household had played a game for money or bet money in the past year	1. 10% reported that gambling had a negative effect on family life (for example, by causing arguments among family members).
Ciarrocchi & Reinert	(1993)	1. 50 male members of Gamblers Anonymous and 36 married female members of GamAnon, and 1,125 normal families as the control sample	1. Gamblers Anonymous members were less able to talk about issues openly (ANOVA). 2. Long-term Gamblers Anonymous members reported lower levels of argumentativeness and verbal and physical aggression than normal families (ANOVA).
Bergh & Kühlhorn	(1994)	1. In an interview study, 42 adults (median age = 37, range = 20–70) who fulfilled the DSM-III-R criteria for pathological gambling; and 63 adult pathological gamblers in a case-finding study (median = 36, range = 22–74)	1. 45% of 40 interviewees reported impaired relations with family and friends.

(Continued)

Table 2 Continued.

Studies	Year	Demographics, sample	Main findings
Dickerson et al.	(1996)	1. 290 gamblers who gambled at least once a week (mean age = 45.16, <i>SD</i> = 15.92) of 2,744 participants in Sydney, Melbourne, Adelaide, and Brisbane 2. 107 of 290 were classified as probable pathological gamblers (<i>SOGS</i> \geq 5); 22 gamblers scored \geq 10.	1. 77.3% of 22 gamblers who scored \geq 10 on <i>SOGS</i> reported that gambling had caused arguments about money with family or friends, and 45.5% reported that gambling had caused the break-up of an important relationship.
Crisp et al.	(2001)	1. 440 partners who sought help in a 12-month period from the BreakEven problem-gambling counselling services in the state of Victoria, Australia	1. 71.3% of male partners and 75.9% of female partners experienced interpersonal problems with gamblers.
Darbyshire et al.	(2001)	1. 15 Australian children and adolescents (age range = 7–18)	1. Participants perceived that their parent no longer really loved or cared about them as gambling was their top priority.
Gerdner & Svensson	(2003)	1. 178 male adolescents (16 or 18 years old) in Jämtland, a county in the north-central part of Sweden	1. 12 of 178 responded positively to the <i>SOGS</i> item: "Did you ever have heated arguments in your family concerning your gambling?"
Dickson-Swift et al.	(2005)	1. 5 women and 2 men (age range = 35–65) who are partners or spouses of a problem gambler	1. Partner's gambling had negatively impacted their relationships (e.g., relationship ended through separation or divorce, partner expressed frustration with their inability to leave, trust had been lost in the relationship).
Pietrzak et al.	(2005)	1. 96 users (mean age = 67.9, <i>SD</i> = 6.9) of senior centers and outpatient medical clinics in Connecticut 2. Mean scores on the lifetime and past-two-month versions of the <i>SOGS</i> were 7.0 (<i>SD</i> = 4.0) and 3.9 (<i>SD</i> = 3.1)	1. Probable disordered gamblers had more serious conflicts with family members in past month than non/infrequent gamblers (14.6 % vs. 0.0%; chi-square statistics).
Burge et al.	(2006)	1. 236 pathological gamblers who met the diagnosis of DSM and at least one gambling day in the past two months in Connecticut 2. 72 (mean age = 43.7, <i>SD</i> = 1.3) began gambling during adolescence (mean age = 10.5) and 164 (mean age = 45.4, <i>SD</i> = 0.8) began gambling later in life (mean age = 23.0)	1. Early-onset gamblers reported more days of conflict (mean = 3.0, <i>SD</i> = 0.9) with family in past month than later-onset gamblers (mean = 2.0, <i>SD</i> = 0.6), but this result was not significant (ANOVA).
Martinotti et al.	(2006)	1. 65 participants (mean age = 38.12, <i>SD</i> = 13.56, range = 18–65) in a gambling site in Rome 2. 27 of 65 gamblers were classified as probable pathological gamblers (<i>SOGS</i> \geq 5) and 38 were classified as non-pathological gamblers (<i>SOGS</i> \leq 4)	1. Factors distinguished between non-pathological and pathological gamblers were: money-related arguments with relatives about gambling (0.80), lying about gambling and winning (0.54), and hiding signs of gambling from significant others (0.73; mean squared contingency coefficient).

(Continued)

Table 2 Continued.

Studies	Year	Demographics, sample	Main findings
Pietrzak & Petry	(2006)	1. 31 gamblers (aged over 60 years) from 8 senior centers, 5 bingo sites, and 3 outpatient medical clinics in Connecticut 2. 21 of 31 gamblers were classified as probable pathological gamblers (SOGS \geq 5) and 10 were classified as non-pathological gamblers (SOGS = 3 or 4)	1. Pathological gamblers had more serious conflicts with children (28.6% vs. 0.0%), spouse or partner (14.3% vs. 0.0%), and other family members (33.3% vs. 20.0%) in the past month than problem gamblers, but results were not significant (chi-square statistics).
Momper & Jackson	(2007)	1. 150 mothers (mean age = 41.0, median = 40.0, range = 22–82) who gambled at the casino, with a child aged between 6 and 15	1. A negative relationship was found between parenting in the home environment scores and parent's pathological gambling symptoms ($r = -0.29$; correlation analysis).
Wenzel et al.	(2008)	1. 3,483 individuals (age range = 16–74) from the part of the Norwegian national postal gambling survey	1. 2.9% of 3,483 reported that a close relative lied about the amount they gambled. 2. 70 concerned significant others (whose close relatives had lied about their amount of gambling and spent increasing sums on it) had more conflicts with family members (64.9% vs. 1.2%) and less contact with family and friends (8.7% vs. 0.2%) than non-concerned significant others (chi-square statistics).
Dowling et al.	(2009)	1. 29 partners (mean age = 45.2, $SD = 10.2$, range = 29–71) of female pathological gamblers attending an outpatient treatment program	1. Partners in this sample reported a lower Dyadic Adjustment Scale score, which measures the quality of adjustment to marriage relationships, than a standardization sample (t -test).
Mazzoleni et al.	(2009)	1. 25 wives of pathological gamblers (mean age = 40.6, $SD = 9.1$) from a Gambling Outpatient Unit and at GamAnon, and 25 wives of non-gamblers (mean age = 40.8, $SD = 9.1$) in São Paulo	1. Wives of pathological gamblers reported high family membership factor scores on the Social Adjustment Scale, which measure the quality of adjustment to marriage relationships, than those of standardization sample (Mann-Whitney's U test).
Patford	(2009)	1. 23 women (range = 22–62) who had concerns about a current or previous partner's gambling in Australia	1. They had verbal disagreements and unexpressed resentments, not only in regard to their partner's gambling expenditure, but also in regard to their partner's lying, absences, freeloading, and neglect of family responsibilities. 2. One of the most distressing effects of gambling was the dissipation of trust.

(Continued)

Table 2 Continued.

Studies	Year	Demographics, sample	Main findings
Corney & Davis	(2010)	1. 25 women (age range = 22–59) in the United Kingdom 2. 16 were classified as problem gamblers (PGSI \geq 8)	1. Participants reported that one of their major regrets was the deception and lies. 2. Participants with younger children reported they reduced the amount of time they spent with their children or the quality of attention given. 1. 70.3% of participants argued about money and 61.3% of those arguments were related to gambling. 53.3% of the control group argued about money and 16.0% of those arguments were related to gambling.
Downs & Woolrych	(2010)	1. 18 problem gamblers with related debt or who were over-indebted	1. Participants faced tension and turmoil causing severe ongoing strain in familial relationships and accompanying upheaval in family members' lives. 2. Some members chose to end a familial relationship through divorce.
Kalischuk	(2010)	1. 37 individuals (14 gamblers, 12 spouses of gamblers, 3 siblings of gamblers, and 8 children of gamblers)	1. Conflict factor scores on the Family Environment Scale, which measures the adolescent's perception of their family's functioning, increased with the likelihood of more severe gambling states (logistic regression analysis).
Casey et al.	(2011)	1. 436 adolescents (mean age = 13.93, range = 13–16) from the province of Alberta, Canada 2. 4 of 31 gamblers were classified as problem gamblers (DSM-IV-MR-Juvenile \geq 4), 38 as moderate-risk gamblers, 100 as low-risk gamblers, and 99 as non-problem gamblers	1. 8.3% of students who had gambled reported not having good relationships within the family.
Apinuntavech et al.	(2012)	1. 1,694 students (mean age = 16.8, <i>SD</i> = 2.7) in Bangkok metropolitan area 2. 348 students experienced gambling, 298 were classified as probable pathological gamblers (DSM-IV \geq 5)	1. Pathological gamblers had increased communication problem factor scores on the Family Assessment Device, which assesses facets of family life, than non-pathological gambling subjects (logistic regression analysis).
Black et al.	(2012)	1. 95 pathological gamblers (mean age = 45.6, <i>SD</i> = 12.8) and 91 control subjects who were not pathological gamblers (mean age = 49.4, <i>SD</i> = 16.0)	1. 24.9% of adolescents reported having arguments with family/friends.
Goldstein et al.	(2013)	1. 249 adolescents (age range = 14–18) from a larger randomized controlled trial of an alcohol and violence intervention in Flint, Michigan, who have gambled at least once in the previous year	

(Continued)

Table 2 Continued.

Studies	Year	Demographics, sample	Main findings
Svensson et al.	(2013)	1. 1,472 concerned significant others (age range = 16–84) from the Swedish Total Population Register	<ol style="list-style-type: none"> 1. Among men, concerned significant others had more arguments with someone close than non-concerned significant others (16.7% vs. 10.0%; chi-square statistics). 2. Among women, concerned significant others had more arguments with someone close than non-concerned significant others (29.8% vs. 16.8%; chi-square statistics).
Hing et al.	(2014a)	<ol style="list-style-type: none"> 1. 489 men (age range = 18–34) at Indigenous festivals, online and in several communities 2. 29.1% of 406 respondents were classified as problem gamblers (PGSI \geq 8), 24.1% as moderate-risk gamblers (PGSI = 3–7), and 15.0% as low-risk gamblers (PGSI = 1 to 2) 	<ol style="list-style-type: none"> 1. 47.4% of 120 problem gamblers reported having arguments within their household, and 28.9% had separated from or divorced their partner.
Kumagami	(2014)	<ol style="list-style-type: none"> 1. 500 gamblers (age range = 20–69) in Japan 2. 351 were classified as pathological gamblers (SOGS \geq 5) and 143 classified as problem gamblers (SOGS = 3 or 4) 	<ol style="list-style-type: none"> 1. 23.6% of probable pathological gamblers reported having arguments about the amount of money spent on gambling with family members.
Lee	(2014)	1. 8 couples (one partner meeting pathological gambling criteria based on DSM-IV-TR) at a gambling treatment program in Canada	<ol style="list-style-type: none"> 1. The couples presented limited range and depth of communication.
Dowling et al.	(2015)	1. 212 treatment-seeking problem gamblers (mean age = 47.2, <i>SD</i> = 13.2, range = 22 to 79) from the Australian study	<ol style="list-style-type: none"> 1. 46.6% of gamblers reported having communication breakdowns with family members (“often”: 25.4%; “sometimes”: 21.2%).
Carr et al.	(2018)	1. 202 people with a gambling disorder (mean age = 48.6, <i>SD</i> = 11.98) through the Michigan Problem Gambling Help-line.	<ol style="list-style-type: none"> 1. Gamblers reported conflicts with spouses or family (neglect of family related to gambling).
Review articles Kalischuk et al.	(2006)	1. 81 family-focused and/or gambling-related articles, books, reports, and government documents were included in this review from six databases	<ol style="list-style-type: none"> 1. The most common problems reported by family members of problem gamblers are arguments, lies and deception, negatively affected relationships, and poor communication. 2. The most common problems reported by spouses/significant others of problem gamblers are decreased interactions, threats of separation or divorce, and unsatisfactory sexual relations.
McComb et al.	(2009)	1. A review of the literature and clinicians’ experiences regarding the impact of pathological gambling on couple and family relationships	<ol style="list-style-type: none"> 1. Gamblers are in danger of losing their partner’s trust, have impairment in roles and responsibilities, lack satisfaction in sexual relationships, face the possibility of separation or divorce, and have low quality marital relationships.

Woolrych, 2010; Gerdner & Svensson, 2003; Goldstein et al., 2013; Kumagami, 2014), but the percentage was as high as 77.3% among those who scored 5 or more on the South Oaks Gambling Screen (SOGS; Lesieur & Blume, 1987), a measure of the severity of gambling disorders (Dickerson et al., 1996). In other words, the severity of the gambling problem is a contributing factor to increased arguments between gamblers and their families/partners. Furthermore, in the survey of 96 outpatients at a clinic in Connecticut, USA, conducted by Pietrzak et al. (2005) between 2000 and 2002, 14.6% of people with gambling disorders reported having serious conflicts with family members in the past month. Earlier studies also indicated that decreased communication with gamblers is another form of intra-family conflict. In an interview study conducted in clinics or self-help groups between 2005 and 2010 by Black et al. (2012), 51% of 95 pathological gamblers reported that they did not communicate with their families. In addition, Dowling et al. (2014) conducted a questionnaire survey of 212 individuals facing gambling problems: 25.4% of respondents had not communicated with their families at all in the past three months.

Furthermore, gamblers lying to or deceiving family members is a frequent gambling symptom, as stated in the diagnostic criteria for gambling disorder, and at the same time is a problem faced by family members and partners around them. Martinotti et al. (2006) conducted a questionnaire survey of 27 pathological gamblers (SOGS score of 5 or more) and 38 individuals who were non-problem gamblers (SOGS score of 0) and calculated the coefficient of association of the SOGS items. The results showed that hiding signs of gambling (mean square agreement coefficient = .73) and lying about gambling (mean square agreement coefficient = .54) were items that were more strongly differentiated between the two groups.

As mentioned above, the present review suggests that a variety of inter-family conflicts are likely to arise between gamblers and their families and partners, although this relationship has not been demonstrated using large-scale data.

Violence and Abuse Inflicted Upon and Perpetrated by Family Members or Relationship Partners

In this domain, we reviewed two review articles (Dowling et al., 2014; Lane et al., 2016) and 24 observational studies. The details of these studies' results are summarized in Table 3. Violence and abuse related to family members or partners, especially intimate partners, were mainly analyzed as victimization of them and perpetration by them. Infliction of violence and abuse on them mainly included physical (e.g., Afifi et al., 2010; Bland et al., 1993; Carr et al., 2018; Echeburúa et al., 2013; Lee, 2014; Lesieur & Rothschild, 1989; Lorenz & Shuttlesworth, 1983; Carr et al., 2018; Mullean et al., 2002) and sexual violence (Brasfield et al., 2012; Izmirli et al., 2014; Korman et al., 2008), but in the worst case it also included murder (Anderson et al., 2011).

Dowling et al. (2014) conducted a systematic review of the relationship between gambling disorder and family violence. They reviewed 14 articles and showed that

Table 3
Characteristics of Included Studies About Violence and Abuse Inflicted Upon and Perpetrated by Family Members or Relationship Partners

Studies	Year	Demographics, sample	Main findings
Original studies Lorenz & Shuttlesworth	(1983)	1. 144 GamAnon members (age range = 23–70) in Chicago, Illinois	<ol style="list-style-type: none"> 43% of 144 GamAnon members reported being emotionally, verbally, and physically abused. 10% of 144 GamAnon members' children reported being physically abused.
Lesieur & Rothschild	(1989)	1. 105 children (mean age = 17.0, range = 12–60) of Gamblers Anonymous members from the United States and Canada	<ol style="list-style-type: none"> The majority of children of Gamblers Anonymous members reported being physically abused.
Bland et al.	(1993)	1. 30 pathological gamblers (age range = 18–64) who met the diagnosis of DSM-III	<ol style="list-style-type: none"> 23.3% of 30 pathological gamblers reported incidence of hitting or throwing things at their spouse or partner more than once and 16.7% reported hitting their children. Regarding child neglect, 10.0% reported leaving their child alone, 13.3% reported their child being fed or taken in by a neighbor, and 10.0% reported running out of money or food.
Mullean et al.	(2002)	1. 286 females (age ranging from 19–65) presented to the emergency department for treatment.	<ol style="list-style-type: none"> 25.7% of the participants reported physical injury inflicted purposely by the partner or excessive stress or fear related to threats or violent behavior of the intimate partner.
Korman et al.	(2008)	1. 205 male and 43 female problem gamblers (mean age = 41, <i>SD</i> = 11.34, range = 18–69) who scored ≥ 6 on CPGI, recruited from advertisements in newspapers and gambling treatment service agencies	<ol style="list-style-type: none"> 62.9% of participants (53.7% of men and 65.1% of women) reported incidents of intimate partner violence in the past year (either perpetrator or victim of physical assault, injury, and/or sexual coercion).
Liao	(2008)	<ol style="list-style-type: none"> 31 Chinese community members (median = 57) in San Francisco and the greater Bay Area 42% were classified as probable pathological gamblers (SOGS ≥ 10) and 58% as problem gamblers (SOGS = 5–9) 	<ol style="list-style-type: none"> Partner's pathological gambling was found to be a predictor of the incidence of intimate partner violence (logistic regression analysis).

(Continued)

Table 3 Continued.

Studies	Year	Demographics, sample	Main findings
Schluter et al.	(2008)	1. 682 mothers and 695 fathers from the Pacific Islands Families study in South Auckland, New Zealand 2. 15 of 695 fathers were classified as probable problem gamblers (SOGS-R \geq 3), 157 as non-problem gamblers (SOGS-R \leq 2), and 514 as non-gamblers	1. 7% of fathers and 28% of mothers reported incidents of physical intimate partner violence in the past year (either perpetrator or victim). 2. Paternal and maternal problem or non-problem gambling had an effect on being a victim of any physical intimate partner violence but these results were not significant (generalized estimating equation).
Afifi et al.	(2010)	1. 3,334 respondents aged 18 years and older, from the US National Comorbidity Survey Replication 2. 33 respondents were classified as pathological gamblers (DSM-III \geq 5), 87 as problem gamblers (DSM-III = 1-4), 2,572 as non-problem gamblers, and 642 as non-gamblers	1. Non-problem gambling was associated with increased odds of perpetrating minor child physical assault. 2. Pathological gambling was associated with increased odds of minor and severe dating violence and severe child abuse perpetration (multinomial logistic regression).
Anderson et al.	(2011)	1. In this case, a 33-year-old ex-army officer killed his wife and two daughters, who were 7 years and 7 months old, at their home in Estonia 2. He had been suffering from pathological gambling (ICD-10 criteria)	1. He used his mobile phone neck strap to strangle his wife and children.
Iusitini et al.	(2011)	1. 823 fathers who followed a cohort of the Pacific Islands Families study in New Zealand	1. Fathers who gambled were significantly more likely to use harsh discipline compared to non-gamblers (odds ratio = 3.41, 95%CI = 2.41-4.83) (logistic regression analysis).
Brasfield et al.	(2012)	1. 341 men who were arrested for domestic violence and ordered to attend a court-mandated intervention program in Rhode Island 2. 30 of 341 men were classified as pathological gamblers (SOGS \geq 5), 58 as problem gamblers (SOGS = 3-4)	1. The relationships between SOGS score and scores for the physical and sexual aggression factors of the Revised Conflict Tactics Scale to assess perpetration of intimate partner violence were positive (physical: $r = .22$, sexual: $r = .23$; correlation analysis). 2. SOGS score increased sexually aggressive behavior (multiple regression analysis).
Stevens & Bailie	(2012)	1. Data from ten remote Indigenous communities in Australia 2. There was large variation in reported gambling problems, which ranged from 10% to 74%.	1. Reported gambling problems at home were associated with an increased risk of scabies (odds ratio = 1.81; 95%CI = 1.07-3.05) and with an increased risk of ear infections (odds ratio = 1.68; 95%CI = 1.09-2.58) in children (logistic regression analysis).

(Continued)

Table 3 Continued.

Studies	Year	Demographics, sample	Main findings
Echeburúa et al.	(2013)	1. 206 participants (103 pathological gamblers and 103 non-psychiatric subjects from the general population; mean age = 43.25, <i>SD</i> = 13.6) in Spain 2. 103 gamblers met the inclusion criteria of the DSM-IV-TR	1. Among female participants, pathological gamblers were more likely to be victims of intimate partner violence than control group women (68.6% vs. 9.8%; chi-square statistics).
Dowling et al.	(2014)	1. 463 clients (mean age = 40.8, <i>SD</i> = 12.6, range = 18–79) from gambling services across Australian agencies	1. 11.0% of 463 clients reported being only victims of family violence during past year, 6.9% were only perpetrators of family violence, and 16.0% experienced both victimization and perpetration.
Hing et al.	(2014a)	1. 489 men (age range = 18–34) at Indigenous festivals, online and in several communities 2. 29.1% of 406 respondents were classified as problem gamblers (PGSI ≥ 8), 24.1% as moderate-risk gamblers (PGSI = 3 to 7), and 15.0% as low-risk gamblers (PGSI = 1 to 2)	1. 26.5% of 120 problem gamblers reported incidence of violence with family, friends, and others.
Hing et al.	(2014b)	1. 1,259 Indigenous Australian adults 2. 19.5% of 1,259 respondents were classified as problem gamblers (PGSI ≥ 8), 16.6% as moderate-risk gamblers (PGSI = 3–7), 12.5% as low-risk gamblers (PGSI = 1–2), and 28.0% as non-problem gamblers.	1. 22.5% of 228 problem gamblers, 3.7% of 190 moderate-risk gamblers, and 1.4% of low-risk gamblers reported incidence of violence with family, friends, and others.
Izmirli et al.	(2014)	1. 260 married women of reproductive age (mean age = 35.9, <i>SD</i> = 8.1, range = 19–49) in southwestern Turkey	1. Problem gambling by the husband was found to be a predictor of sexual violence (logistic regression analysis).
Lee	(2014)	1. 8 couples (one partner meeting pathological gambling criteria based on DSM-IV-TR) at a gambling treatment program in Canada	1. Half of the couples reported episodes of intimate partner violence and at times prolonged emotional and physical abuse by their partners.
Lavis et al.	(2015)	1. 81 problem gamblers (mean age = 45.86, <i>SD</i> = 13.44) from the Statewide Gambling Therapy Service	1. 16% reported that they had perpetrated violence against a family member, 20% reported they have been the victim of violence by a family member, and 33% reported both victimization and perpetration.
Roberts et al.	(2016)	1. 6.5% of 3,025 respondents were classified as pathological gamblers (SOGS ≥ 5), 4.8% as problem gamblers (SOGS = 3–4), and 68.7% as non-problem gamblers in England.	1. Problem and pathological gambling was found to be a predictor of violence against children and intimate partners (logistic regression analysis).

(Continued)

Table 3 Continued.

Studies	Year	Demographics, sample	Main findings
Carr et al.	(2018)	1. 202 people with a gambling disorder (mean age = 48.6, <i>SD</i> = 11.98) through the Michigan Problem Gambling Help-line.	1. Gamblers reported physical abuse of family members or a spouse.
Dowling et al.	(2018)	1. 4,153 Australian adults aged 18 years and older (2,022 male).	1. Moderate-risk/problem gamblers had a 2.73-fold increase in the odds of experiencing family violence victimization (odds ratio = 21.3%; 95%CI = 13.1–29.4) relative to non-problem gamblers (9.4%; 95%CI = 8.5–10.4) (logistic regression analysis). 2. Moderate-risk/problem gamblers had a 2.56-fold increase in the odds of experiencing family violence perpetration (odds ratio = 19.7%; 95%CI = 11.8–27.7) relative to non-problem gamblers (9.0%; 95%CI = 8.0–10.0) (logistic regression analysis).
Roberts et al.	(2018)	1. 25,631 respondents aged 18 years and older, from a nationally representative survey of the United States.	1. Problem gambling was found to be a predictor of intimate partner violence perpetration for male and victimization for female (logistic regression analysis).
Dowling et al.	(2019)	1. 141 adults (100 male, 39 female, two unspecified gender, mean age = 39.63, <i>SD</i> = 11.33) who sought treatment at a problem gambling service in Australia.	1. About 18.4% of the participants reported being a victim of family violence. About 19.1 % admitted to acts of violence against their family members.
Review articles Dowling et al.	(2014)	1. 17 studies investigating the relationship between problem gambling and family violence were included in this review from four databases (Medline, PsycInfo, EMBASE, and CINAHL) and a number of specific journals (Gambling Research, International Gambling Studies, and Journal of Gambling Issues).	1. 38.1% and 36.5% of problem gamblers reported being victims and perpetrators of physical intimate partner violence, respectively, and the prevalence rate of problem gambling in intimate partner violence perpetrators was 11.3% (meta-analysis).
Lane et al.	(2016)	1. 12 studies investigated the relationship between problem gambling and childhood maltreatment exposure and were included in this review from six databases (PubMed, Embase, Scopus, PsycINFO, SocIndex, and CINAHL) and references from included studies	1. Three studies measured the risk of child abuse and neglect among current problem gamblers and indicated an increased risk for child physical abuse and medical conditions.

38.5% of family members or partners were victims of family violence, while 38.1% were also perpetrators. Thus, family members or partners may be either victims or perpetrators of violence (Dowling et al., 2018; Lavis et al., 2015; Roberts et al., 2018). In addition, Lane et al. (2016) indicated a positive relationship between disordered gambling, child physical abuse, and maltreatment through a systematic review of 12 studies. Current gambling problems could be associated with increased risk of child abuse.

In addition, Dowling et al. (2014) suggested that the probability of family violence could increase when the gambler is unemployed, or when the gambler or family members or partners have anger inhibition problems. Moreover, Korman et al. (2008) conducted a study on family violence among 248 problem gamblers aged 18 years and older: 53.7% of male and 65.1% of female gamblers reported committing family violence. In addition, gender differences on kinship violence were also examined, with a higher percentage of women reported to have caused injury to their partner than men (48.8% and 22.0%, respectively). The relationship between the severity of gambling symptoms and family violence was examined by Schluter et al. (2008) using data from a cohort study collected between March and December 2000 in Auckland, New Zealand. The results indicated that there was no statistically significant positive correlation between gambling symptoms and the number of incidents of family violence. On the other hand, Liao (2008) conducted a survey of 31 Chinese community members (family members and others around them) in the state of San Francisco and the surrounding Bay Area in the United States. The results showed that gamblers with a SOGS score of 10 or more had a 27.5 times higher risk of incidents of intimate violence compared to those with a score of 9 or less. Thus, it is currently impossible to conclude that the more severe the gambling, the more incidents of family violence occur, but it is possible that the risk of its occurrence may increase beyond a certain level of severity (Dowling et al., 2018). Furthermore, Anderson et al. (2011) described the case of a gambler killing his family in Estonia. The gambler was a 33-year-old man with a wife and two children. He was an avid sportsman in his school days and had performed well after joining the army. He began gambling in 2002, racked up debt from his parents and friends, and was so mentally and physically exhausted that he was diagnosed with major depressive disorder in 2005. Finally, in 2007, he murdered his entire family and committed suicide. The paper was based on police survey data and included several eyewitness accounts, psychiatric attendance records, and interviews with acquaintances, work colleagues, and clinical psychologists.

In summary, earlier studies indicated that the presence of gamblers in families increased the risk of violence and abuse for family members or partners. However, we found that family members were not only victims, but also became perpetrators and committed violence against the gamblers in their families. In any case, problem gambling holds the potential to cause physical harm to someone in the family.

Physical and Mental Health Problems

In this domain, we reviewed one review article (McComb et al., 2009) and 19 observational studies. The details of these studies' results are summarized in Table 4.

Table 4
Characteristics of Included Studies About Physical and Mental Health Problems

Studies	Year	Demographics, sample	Main findings
Original studies Lorenz & Shuttlesworth	(1983)	1. 144 GamAnon members (age range = 23–70) in Chicago, Illinois	<ol style="list-style-type: none"> 84% of 144 GamAnon members reported considering themselves emotionally ill as a result of their experiences. 20% of 144 GamAnon members' children reported that they had attempted suicide.
Lorenz & Yaffee	(1988)	1. 215 spouses (age range = 22–76) of pathological gamblers at the Gamblers Anonymous in Pittsburgh	<ol style="list-style-type: none"> The general illnesses suffered by spouses were: chronic headaches (41%); irritable bowels, constipation, and diarrhea (37%); and feeling faint, dizzy, and so on (27%). The most frequent feelings of spouses were: anger and/or resentment (74%), depression (47%), and isolation from the gambler and loneliness (44%).
Lesieur & Rothschild	(1989)	1. 105 children (mean age = 17.0, range = 12–60) of Gamblers Anonymous members from the United States and Canada	<ol style="list-style-type: none"> Most children of Gamblers Anonymous members had a variety of psychological problems, such as difficulties sleeping, unhappiness, suicide attempts, and so on.
Jacobs et al.	(1989)	<ol style="list-style-type: none"> 844 ninth- to twelfth-grade students in four Southern California public high schools 52 students characterized one or both of their parents as "problem gamblers" 	<ol style="list-style-type: none"> Children with gambler parents showed more insecurity (38% vs. 20%), poor mental states (21% vs. 13%), and felt more emotionally down and unhappy with life and themselves (25% vs. 11%) than their peers.
Lorenz & Yaffee	(1989)	1. 151 couples (compulsive gamblers [mean age = 48, range = 25–77] and their spouses [mean age = 45, range = 18 to 75]) from Gamblers Anonymous in Pittsburgh	<ol style="list-style-type: none"> Fewer children of gambler parents reported good school performance (11% vs. 13%) and successful employment (21% vs. 27%) than their peers.
Crisp et al.	(2001)	1. 440 partners of problem gamblers, who sought help from publicly funded counselling services in the state of Victoria, Australia	<ol style="list-style-type: none"> The general illnesses most suffered by spouses were: frequent headaches (40%), irritable bowels, stomach butterflies, and other stomach problems (31%), and feeling faint, dizzy, and perspiring excessively (23%). The most frequent persistent feelings experienced by spouses were: anger (70%), depression (42%), and isolation from the gambler (38%).
			<ol style="list-style-type: none"> 3.9% of men and 5.5% of women reported physical health problems.

(Continued)

Table 4 Continued.

Studies	Year	Demographics, sample	Main findings
Dickson-Swift et al.	(2005)	1. 5 women and 2 men (age range = 35–65) who are partners or spouses of a problem gambler	1. Participants reported suffering from various physical (insomnia, headache, and stomachache) and emotional (stress, financial worries, depression, feelings of loss and paranoia, and guilt) health problems.
Vitaro et al.	(2008)	1. 142 adolescents and families from a community sample in the province of Quebec, Canada 2. 42 groups of participants where one or both parents were at-risk gamblers (SOGS \geq 3)	1. Relationships between parental gambling problems and adolescents' depressive symptoms were positive (mid-adolescence: $r = .23$, young adulthood: $r = .32$; correlation analysis).
Wenzel et al.	(2008)	1. 3,483 individuals (age range = 16–74) from part of the Norwegian national postal gambling survey	1. 70 concerned significant others (whose close relatives had lied about the amount they gambled and who spent increasing sums on gambling) had more physical health problems (17.8% vs. 0.3%) and mental health problems (16.6% vs. 0.3%) than non-concerned significant others (chi-square statistics).
Patford	(2009)	1. 23 women (age range = 22–62) who had concerns about a current or previous partner's gambling in Australia	1. 18 women reported suffering from physical health problems (excessive eating and smoking, headaches, insomnia, high blood pressure, menstrual irregularities, panic attacks and feelings of tiredness or exhaustion). 2. 6 children suffered the same emotions as their mothers: shock, hurt, anger, and/or being scorned.
Kalischuk	(2010)	1. 37 individuals (14 gamblers, 12 spouses of gamblers, 3 siblings of gamblers, and 8 children of gamblers)	1. Family members remained emotionally shut down and physically isolated from each other.
Mathews & Volberg	(2013)	1. 50 family members of gamblers from three social service agencies in Singapore	1. 20 family members had experienced high levels of emotional distress ("losing hope," "feeling very depressed," "very emotionally drained," and "traumatized"). 2. 23 family members were concerned about harassment from illegal moneylenders.
Svensson et al.	(2013)	1. 1,472 concerned significant others (age range = 16–84) from the Swedish Total Population Register	1. Concerned significant others had more mental health problems than non-concerned significant others (men: 47.4% vs. 37.5%, women: 66.4% vs. 54.6%; chi-square statistics).
Dowling et al.	(2014)	1. 366 concerned significant others in Australia	1. 97.5% of concerned significant others experienced emotional distress, and 77.3% experienced physical health problems.
Lee	(2014)	1. 8 couples (one partner meeting pathological gambling criteria based on DSM-IV-TR) at a gambling treatment program in Canada	1. The couples presented significant distress.

(Continued)

Table 4 Continued.

Studies	Year	Demographics, sample	Main findings
Salonen et al.	(2014)	<ol style="list-style-type: none"> 4,484 participants (mean age = 48.2, SD = 16.8, range = 15–74) from the Finnish Population Information System 2.7% of 4484 respondents were classified as problem gamblers (SOGS \geq 3) 	<ol style="list-style-type: none"> For men, concerned significant others reported worse general health (5.0% vs. 2.9%), more mental health problems (5.9% vs. 2.7%), and more loneliness (21.5% vs. 15.9%) than non-concerned significant others (chi-square statistics). For women, concerned significant others had more mental health problems (6.0% vs. 2.6%), and more loneliness (23.9% vs. 18.4%) than non-concerned significant others (chi-square statistics).
Suomi et al.	(2014)	<ol style="list-style-type: none"> 212 people in gambling programs in Australia 	<ol style="list-style-type: none"> Hierarchical cluster analysis found four clusters of gamblers. All groups' family members experienced mental health problems (psychological distress = 69.1%, low comorbidity = 34.3%, alcohol abuse = 49.0%, and multimorbidity = 53.8%).
Wong et al.	(2014)	<ol style="list-style-type: none"> 3,686 gamblers who used four gambling treatment centers in Hong Kong between 2003 and 2012 on their and their family's suicidal ideation. 	<ol style="list-style-type: none"> 720 (20.0%) gamblers with suicidal thoughts reported suicidal ideation, and 22 (0.6%) family members also reported familicidal-suicidal ideation due to gambling-related problems.
Tulloch et al.	(2020)	<ol style="list-style-type: none"> 15,475 participants (18 years over, 53.2% female) from the National Health Survey in Australia 	<ol style="list-style-type: none"> People whose family members had gambling problems had higher psychological distress and an increased risk of having a mental health disorder than those whose family did not have gambling problems.
Review articles McComb et al.	(2009)	<ol style="list-style-type: none"> A review of the literature and clinicians' experiences regarding the impact of pathological gambling on couple and family relationships. 	<ol style="list-style-type: none"> The most commonly reported physical health problems include chronic and severe headaches, breathing difficulties, backaches, and stomach problems. Spousal emotional health problems include feelings of depression, anxiety, anger, isolation, and suicide.

Nine studies examined the physical health of gamblers and other family members or partners (e.g., Crisp et al., 2001; Lorenz & Yaffee, 1988, 1989) and 15 studies examined their mental health (e.g., Kalischuk, 2010; Lee, 2014; Lesieur & Rothschild, 1989; Mathews & Volberg, 2013; Suomi et al., 2014; Svensson et al., 2013; Tulloch et al., 2020; Vitaro et al., 2008).

McComb et al. (2009) reviewed clinicians' experiences and literature on the impact of disordered gambling on marital and family relationships. The results showed that most people reported physical health problems including chronic and severe headaches, breathing difficulties, backaches, and stomach problems. Additionally, they found that spousal mental health issues included feelings of depression, anxiety, anger, isolation, and suicide. In the observational studies we reviewed, physical health problems were found in 77.3% (Dowling et al., 2014) and mental health problems were found in 50.0–97.5% of family members and those around them (Dowling et al., 2014; Lorenz & Shuttlesworth, 1983; Mathews & Volberg, 2013; Suomi et al., 2014). Thus, earlier studies have reported that gambling problems enjoy a considerably wide range of effects on the physical and mental health of family members and partners.

Lorenz and Yaffee (1988) conducted a survey of 215 spouses participating in three U.S. self-help groups (in Chicago, New York, and Pittsburgh) between 1983 and 1984 to examine in detail the physical and psychological symptoms their spouses were experiencing. The results revealed that the most common physical symptoms were headaches and stomachaches, and the most common mental symptoms were irritability, depression, and loneliness. In addition, Wong et al. (2014) conducted a study of the suicidal ideation of 3,686 gamblers and their families who used four gambling treatment centers in Hong Kong between 2003 and 2012: 720 (20.0%) gamblers with suicidal thoughts reported suicidal ideation, and 22 (0.6%) family members also reported familicidal-suicidal ideation because of gambling-related problems.

To summarize, these previous studies suggest that gambling problems could generate a variety of physical and mental health problems in gamblers' families as well as among others in their proximity.

Discussion

This scoping review inclusively examines difficulties among families or partners. This review also aims to assess the relationships between current gambling problems and difficulties faced by family members or partners. After a comprehensive review of their difficulties, we found that family members and partners faced diverse difficulties and problems. This review found that the effects of gambling disorders on family members and partners included the promotion of gambling and other addictive behaviors and their associated problems, conflicts, family violence, and physical or mental health problems (Figure 2).

Figure 2
Summary of the Results.

Domain of problems	Sample characteristic	The impacts on families and significant others
Families' and significant others' gambling behaviors, other addictive behaviors, and related problems	<ul style="list-style-type: none"> -pre-adult children (N = 30) -adult children (N = 19) -families (N = 11) -significant others (N = 1) 	<ul style="list-style-type: none"> -gambling-related problems (N = 41) -substance abuse behaviors and related problems (N = 5)
Conflicts between a gambler and family members and/or significant others	<ul style="list-style-type: none"> -pre-adult children (N = 8) -adult children (N = 1) -families (N = 25) -significant others (N = 9) 	<ul style="list-style-type: none"> -worsening relationships (N = 15) -arguments (N = 11) -declining communication (N = 5) -lying and hiding (N = 3)
Violence and abuse inflicted upon and perpetrated by family members and/or significant others	<ul style="list-style-type: none"> -pre-adult children (N = 8) -adult children (N = 0) -families (N = 19) -significant others (N = 3) 	<ul style="list-style-type: none"> -physical abuse (N = 22) -neglect (N = 3) -sexual abuse (N = 2) -murder (N = 1) -harsh discipline (N = 1)
Physical and mental health problems	<ul style="list-style-type: none"> -pre-adult children (N = 6) -adult children (N = 0) -families (N = 9) -significant others (N = 8) 	<ul style="list-style-type: none"> -physical health problems (N = 9) -mental health problems (N = 15)

Note 1. Pre-adult children = under 18 years, Adult children = over 18 years, Families = family member not include children, Significant others = partners and lovers

Note 2. Duplicates are counted when multiple different populations are included in a single paper, or when multiple reports of impact are included.

Here, based on the results of this review, we have discussed directions for supporting gamblers, their families, and partners, as well as the interpersonal relationships between them from the clinical psychological perspective.

First, it was found that the presence of gamblers in families was related to increased gambling or other addictive behaviors among their family members. This finding can be explained through social networks, in which the presence of gamblers in the community influences the initiation of gambling (Reith & Dobbie, 2011). Therefore, irrespective of who the client is—a gambler, a family member, or a relationship partner—it is necessary to assess whether they have addictive behaviors that could

develop into secondary gambling problems, and if necessary, treat them. Although abundant evidence exists on the intergenerational transmission of disordered gambling in the earlier studies, this review nevertheless suggested that the presence of gamblers in families could lead to increased gambling or other addiction-related behaviors among family members. However, we thought that the relationship between parents' and children's gambling/addictive behaviors may be explained by considering the mediating variables. It has been shown that abusive experiences can lead to future gambling in children via mental illness among children whose parents have gambling problems (Lane et al., 2016). This review also found that the presence of gamblers in families was associated with the risk of violence and abuse towards family members or partners. Therefore, in clinical situations, especially when children are engaged in addictive behaviors, it is necessary to check for instances of domestic violence against them. The intergenerational transmission of addictive behaviors should be discussed carefully because at this stage, it is still in the realm of speculation. There are no longitudinal cohort studies in this area. To clarify this mechanism, clinical research that identifies the intergenerational transmission is necessary in the future. However, regardless of the occurrence of addictive behaviors, given that many families and partners would be facing violence and abuse, such assessments are also important for improving their prognosis.

Furthermore, we found that family members became perpetrators of violence against the gamblers. Therefore, when supporting gamblers and their families, it is necessary to consider not only the possibility of gamblers committing violence against their family members, but also of family members perpetrating violence against the gamblers. While counselling gamblers it is important to assess whether they have been subjected to violence or abuse by family members or partners, and if necessary, to protect their safety through public institutions. Perpetration of violence by family members could be a way of relieving family stress rather than a solution to the gambling problem. Therefore, a thorough assessment of the relationships between the family members and the gambler, as well as family counselling, can help in building insight and minimizing instances of violence against the gambler.

Finally, this review extracted studies in which families or partners faced mental and health problems. Our findings suggest that we should not only work to reduce future gambling problems by providing support to the gambling person through treatment, but also assess and support the challenges of mental health problems and conflicts among family members. Furthermore, this review indicated a deteriorating relationship between children and partners. In mental health treatment, the development of positive relationships with family members is more likely to support recovery (Tew et al., 2012). However, as indicated in this review, gamblers may not be trusted, loved, and cared for by their families or partners, and may not have adequate support because of their lies, aggressive language, and violent interactions. In the worst case, the gambler will end up being left or divorced.

Gamblers have a wide variety of inappropriate behaviors towards their families or partners, which leads them to face problems in various aspects. Therefore, it is

important to carefully listen to gamblers' relationship with their families or partners and support them in acquiring appropriate behaviors. Specifically, it is necessary to change the behavior of lying into telling the truth and that of avoiding relations with family members or partners into committing to their relations. Improving the quality of family or significant other's relationships is also what families or partners seek in the treatment of gamblers (Rodda et al., 2020). Community Reinforcement and Family Training, abbreviated as CRAFT, is one such systematic treatment system that has been established (Archer et al., 2020) and is used with gambling disorders (Nayoski & Hodgins, 2016).

Limitations

There were certain limitations to this literature review. First, this study was a descriptive review. There were few meta-analyses in the included articles, and the present study did not provide a numerical understanding of the relationship between disordered gambling and family difficulties. However, this study was nevertheless able to organize the problems faced by family members in several dimensions. It is important to quantify the strength of these relationships through meta-analyses and other methods in the future.

Second, the included articles used a number of different definitions of gambling disorder. DSM criteria should be used to measure gambling disorder accurately, but unfortunately, researchers often use other measures. Most of the identified articles in this review did use a validated gambling measure and many used DSM criteria to identify gambling disorders. Even when DSM criteria were used, changes in DSM definitions and terminology over time can make it difficult to compare studies directly.

Third, and finally, since most of the studies included in this review comprised cross-sectional design research, we could not assume the causality. There remains a need for longitudinal studies, through which it should prove possible to clarify the causal relationships between each of the variables.

Conclusion

This review suggests how assessing, understanding, and addressing the difficulties of family or partner can lead to the recovery of the gambler as well as the family or significant other. By these approaches, it is possible to reduce ongoing family difficulties (violence, abuse, neglect, and family members' mental or physical problems) and affect the development of future disordered gambling among children.

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Submitted December 18, 2020; accepted August 2, 2021. This article was peer reviewed. All URLs were available at the time of submission.

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Competing interests: None reported (all authors).

Ethics approval: Not required.

Acknowledgements: Tomonari Irie used a grant from the Council for Addiction Behavior Studies.