RESEARCH REPORT

Addressing gambling harm to affected others: a scoping review

May 2021

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Conflict of interest declaration

The authors declare no conflict of interest in relation to this report or project.

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Our vision: A Victoria free from gambling-related harm

Victorian Responsible Gambling Foundation

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Addressing gambling harm to affected others: a scoping review

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May 2021

Victorian Responsible Gambling Foundation

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Executive summary

The Victorian Responsible Gambling Foundation (the Foundation) contracted Deakin University to conduct a scoping review with the broad aim of identifying recent research relating to addressing gambling harms to affected others. This review was designed with a view to mapping the available research literature to inform the development of interventions for adult affected others. For this review, the term 'affected others' is defined broadly including, but not limited to, family members (e.g., parents, adult siblings, adult children), partners (e.g., spouses, de-facto relationships, ex-partners), friends, and colleagues of individuals with gambling problems. The findings of this scoping review, which can readily be disseminated to gambling stakeholders, can be used to inform clinical, research, and policy decision-making in relation to affected others.

Scoping review

Research questions

From the perspective of affected others, the scoping review aims to explore the prevalence of affected others (Aim 1), socio-demographic characteristics of affected others (Aim 2), assessment of affected other status and their characteristics (Aim 3), harms experienced by affected others (Aim 4), coping strategies employed by affected others (Aim 5), and interventions for affected others (Aim 6).

Methods

We conducted this scoping review in accordance with an established methodological framework. Of the 3383 studies identified from the systematic search, 79 empirical studies and four systematic reviews met the inclusion criteria.

Key findings

Mapping the literature

Excluding the four identified systematic reviews, where k represents the number of studies, the majority of studies contributed data to the research questions relating to harms (k=56, 71 per cent) and interventions (k=36, 46 per cent), followed by coping strategies (k=22, 28 per cent), assessment (k=15, 19 per cent), prevalence (k=9, 11 per cent), and socio-demographic characteristics (k=4, 5 per cent). In relation to harms, research effort has overwhelmingly been directed towards the types and extent of gambling-related harm (k=48), with smaller proportions of studies exploring the concordance in harms (k=12) and the burden of harm (k=2). More specifically, in relation to the types and extent of gambling-related harm, research effort has been predominantly directed towards the identification of emotional harms (k=40) and relationship harms (k=36), with smaller proportions of studies examining financial harms (k=23), health harms (k=21), criminal harms (k=9), work or study harms (k=5), and cultural harms (k=1). In terms of coping strategies, research effort has predominantly been directed towards the identification of types of coping strategies (k=19), with smaller proportions of studies examining the helpfulness of coping strategies (k=9) and coping strategy motivations and barriers (k=8). In terms of interventions, the majority of research has been conducted to evaluate affected other treatments (k=10) or couple/family treatments (k=10), with smaller proportions examining professional help-seeking motivations and barriers (k=8), the impact of affected

other involvement in gambling treatment (k=7), professional help-seeking preferences (k=7), and the prevalence of professional help-seeking (k=6).

Prevalence of affected others

- Prevalence estimates of affected others range from 2–19 per cent, depending on the definition of affected others employed, the rigor of measurement, and the measurement timeframe.
- A similar lifetime prevalence estimate (11 per cent) has been identified in general practice.
- Affected other status appears relatively labile across time, with improvement across a range of domains.
- The gambling problem of one individual has direct negative effects on at least six others; and low-risk and moderate-risk gamblers affect one and three others, respectively.
- There is growing evidence that gambling harm is not limited to intimate partners.

Socio-demographic characteristics of affected others

- There are mixed findings in relation to the socio-demographic characteristics of affected others in general population surveys, including sex, age, marital status, and education.
- Single studies support the positive association between living in a city, being a male immigrant, and living on social welfare.

Assessment of affected others

- Twenty-two instruments have been specifically developed or recommended for the assessment of affected others, which measure affected other status, harms/impacts, coping, coping skill acquisition during treatment, self-efficacy, social support, and help-seeking behaviour.
- These instruments have generally not been subject to rigorous development procedures, have limited psychometric information available, and are not well validated.

Harms experienced by affected others

- Intimate partners report an initial lack of awareness about the gambling problems, whereby the problem might be quite severe before it is recognised as a problem and deceit, lying, and a lack of trust are common.
- Intimate partners consistently report a range of consequences, such as emotional distress, depression, mood disorders, anger, suicidality, physical health problems, excessive alcohol use, smoking, overeating, impulsive spending, financial loss, family relationships, parenting problems, and social isolation.
- Harms extend beyond partners with others such as adult children reporting they distanced themselves or perceived themselves as caregivers and parents reporting diminished life enjoyment, concerns about their grandchildren, physical and emotional stress, financial problems, conflict with their problem gambling adult children, conflict with their own partners, and feelings of responsibility and blame.
- Gambling-related harms also extend to couple and family functioning, with reports of poor family functioning, conflict, tension, communication problems, family disconnection, low family support, mental health problems, neglect of responsibilities, hypervigilance, alcohol use, intimacy problems, separation/divorce, intimate partner violence, and childhood maltreatment.
- Overall, the quality of life of people who report that they have been adversely affected by someone else's gambling is decreased by 10 per cent to 28 per cent.

- These decreases in quality of life appear to vary according to the severity of the gambling problem. The quality of life of affected others is decreased by 36 per cent when gamblers have problem gambling; by 33 per cent when gamblers have moderate-risk gambling problems; and by 17 per cent when gamblers have low-risk gambling problems.
- Studies exploring the concordance in harms between couples generally suggest that partners perceive the consequences arising from the gambling as more severe than gamblers.
- Studies comparing independent samples of gamblers and partners suggest that gamblers and partners report a similar number of harms across all domains, but the profile of harms is markedly different, with gamblers more likely to report immediate and direct harms and partners more likely to report harms that could be a secondary consequence of these direct harms.
- In contrast, studies comparing independent samples of gamblers and all types of affected others suggest that a high level of correspondence in harms, with the major differences appearing to be in terms of the quantity, rather than the quality, of harms.
- People with gambling problems across the continuum of risk also estimate that their gambling problems affect fewer people than affected others.
- The degree of agreement between gamblers and their affected others in relation to the extent of the gambling range from fair to excellent, with greater agreement for affected others who are more confident in their estimates.

Coping strategies employed by affected others

- The majority of affected others attempt a range of coping strategies before accessing other forms of support, most likely due to to the various barriers to seeking professional help.
- These strategies can be grouped into two main goals: to influence the gambling behaviour and increase the wellbeing of the partner, couple, and family. The most frequently employed strategies aim to reduce or completely stop the gambling behaviour, with strategies to increase affected other wellbeing occupying a slightly less prominent position.
- Common strategies include non-professional or informal support from partners, other family members and friends, financial strategies, support groups and online services.
- Affected others generally report low levels of social support.
- Compared to non-affected others, affected others report higher levels of problem solving (reducing the stress produced by specific situations by modifying them), emotional expression (releasing the emotions generated by stressful situations), wishful thinking (wanting to live in an alternative reality in which situations are not stressful), and social withdrawal (discontuing relationships with people associated with stressful situations); and lower levels of being able to regulate their emotions than non-affected others.
- Affected others report a range of motivations for using these strategies, such as concerns that the gambling may develop into a major problem, negative emotions, financial problems with spouse/intimate partner; but also indicate a diverse range of barriers to the use of these strategies.
- Few studies have examined whether these strategies are effective in protecting affected others from additional gambling-related harm.
- Affected others report a range of effective strategies.
- There are mixed findings, but better functioning is generally associated with higher levels of coping.
- There are mixed findings in relation to how helpful affected others find non-professional or informal support.

Interventions for affected others

- Affected others only make up approximately 15–26 per cent of people seeking support from gambling treatment services.
- There is a lack of awareness of sources of gambling help among affected others.
- Affected others are most aware of general practitioners as a source of help but many do not consider them to be appropriate help providers for gambling problems.
- Affected others indicate a preference for low-intensity interventions, such as telephone and online support, before seeking more formal treatment.
- The most common presenting issue for affected others is interpersonal, followed by intrapersonal, financial, family, and gambling.
- Affected others report a range of motivations for help-seeking, including concerns the gambling could become a major problem, negative emotions, problems maintaining normal daily activities, concerns about the welfare of dependents, and physical health concerns.
- Many also cite perceived barriers, such as a lack of awareness about available services or that they are free, shame, and concerns that they would be advised to confront the gambler.
- Facilitators of family involvement in treatment include communication, coping skills, and support; while barriers include conflict, isolation, and mental health/substance use.
- Affected others indicate a need for both gambler-focused strategies (those focused specifically on the gambler) and affected other-focused interventions (those focused on the family's needs).
- Treatment resources for affected others are limited.
- Lower-intensity interventions, such as gambling helplines, online services, and internet-delivered self-directed interventions, appear to be acceptable professional treatment options for affected others.
- The majority of family members report that family exclusion orders, which involve third party exclusion from gambling venues, are helpful, but generally do not result in complete abstinence.
- Community Reinforcement Approach and Training (CRAFT), particularly when delivered as an individual face-to-face intervention, appears to be a highly acceptable intervention with promising results regarding changes over time for most outcomes, but has failed to display many improvements compared to control conditions.
- Although only tested in single studies, the 5-Step Method and Coping Skills Training (CST) also appear to display promising results.
- Lower-intensity, self-directed internet-delivered interventions for affected others have displayed good feasibility and acceptability, as well as promising outcomes.
- Evaluations of couple therapy (including congruence couple therapy, behavioural couples therapy, integrative couple treatment, reflective-team couples therapy, and integrative systemic treatment), demonstrate positive effects on outcomes for both gamblers and affected others, as well as the couple relationship.
- The involvement of affected others, particularly intimate partners, has generally been associated with better treatment outcomes, satisfaction, adherence, and retention for gamblers.

Affected other interventions and treatment outcome measurement across the addictions

In addition to the scoping review, the VRGF requested information regarding interventions for affected others across the addictions, including what and how change is measured.

Research questions

The aims of this research activity were therefore to: describe the types of interventions employed in the treatment of affected others across addictions (Aim 1); evaluate the efficacy of these interventions (Aim 2); and identify the constructs measured and instruments employed to evaluate the outcomes of treatment for affected others across the addictions (Aim 3).

Methods

We narratively synthesised the findings from a separately funded systematic review and meta-analysis that aimed to examine the efficacy of psychosocial treatments for affected others across addictions (alcohol use, substance use, gambling and gaming).

Key findings

- Across the addictions, CRAFT is the most commonly employed intervention, with smaller numbers of studies examining the efficacy of CST, the 5-Step Method, and Pressures to Change.
- There are also a range of other affected other interventions for affected others (e.g., CBT, motivational interviewing, group counselling, and stress management).
- CRAFT displays the most consistent beneficial effects of intervention across affected other outcomes, followed by CST and the 5-Step Method.
- Pressures to Change, followed by CRAFT, produces the most consistent beneficial effects across addicted individual outcomes.
- CRAFT displays some beneficial effects of intervention across relationship functioning outcomes.
- When compared to control groups, face-to-face delivered affected other interventions show significantly lower post-treatment affected other depressive symptomatology and marital discord, as well as higher rates of addicted individual treatment entry and greater affected other coping skill acquisition.
- There is a paucity of studies evaluating the efficacy of self-directed interventions for affected others across the addictions, highlighting a clear gap in this literature.
- Twenty-five treatment outcomes have been evaluated across the addictions, predominantly affected other outcomes (98 per cent), but also addicted individual outcomes (63 per cent), and relationship or family functioning (45 per cent).
- There is, however, little consistency in the measurement instruments employed.

Chapter 1: Project background

1.1 Introduction

The Diagnostic and Statistical Manual of Mental Disorders (Fifth Edition) (DSM-5) has reclassified Gambling Disorder (formerly pathological gambling) as an addiction and related disorder, alongside alcohol and substance use disorders (American Psychiatric, 2013). Many jurisdictions, however, have adopted a public health perspective towards gambling. This perspective conceptualises gambling problems across a continuum of risk, ranging from non-problem gambling, where no health or social problems or harms have resulted from gambling behaviour, to problem gambling, where gambling behaviour has resulted in serious problems or harms (Shaffer and Korn, 2002). These jurisdictions therefore employ the term problem gambling to refer to gambling that creates negative consequences for gamblers, families and social networks, and communities (Ferris and Wynne, 2001). Standardised global prevalence estimates of past-year problem gambling in adults range from 0.5 per cent to 7.6 per cent, with an average of 2.3 per cent (Williams et al., 2012).

The public health perspective, which frames gambling within a whole of population approach that can inform policy for prevention and intervention practices, attempts to identify the determinants of problem gambling behaviour and subsequent harm (Korn and Shaffer, 1999). While there is no single internationally agreed-upon definition of gambling harm, there are consistent patterns of interpretation throughout the literature that suggest some degree of convergence in the understanding of gambling harm. Accordingly, it is generally agreed that gambling harms can be experienced by individual gamblers, their social network (family and friends), and the broader community; are diverse and can potentially affect multiple domains of life; are subjective; are complexly inter-related; can be distributed over time; and can be exacerbated, as well as generated, by gambling (Browne et al., 2016, Langham et al., 2016).

Grounded in a public health approach, Langham et al. (2016) developed a definition, conceptual framework, and a taxonomy of harms. They proposed a functional definition of gambling-related harm: *any initial or exacerbated adverse consequence due to an engagement with gambling that leads to a decrement to the health or wellbeing of an individual, family unit, community or population*. The conceptual framework organised harms to self and others within seven broad domains: financial harm; relationship disruption, conflict or breakdown; emotional or psychological distress; decrements to health; cultural harm; reduced performance at work or study; and criminal activity. These harms were separated into three temporal categories: general harms, crisis harms (harms that occur at a temporal point of significance), and legacy harms (harms that continue to occur, or emerge, even if engagement with gambling ceases). Subsequent research employing a burden of disease paradigm (Browne et al., 2017a) suggests that gambling problems across the risk continuum are associated with a high aggregate burden of population-level harm, of a level approximately two-thirds of that of alcohol use and dependence and major depressive disorder. Although people with problem gambling report the highest burden of harm individually, moderate- and low-risk gamblers account for the majority of population-level harm, due to their higher prevalence in the population.

The identification of gambling as a public health issue allows for the conceptualisation of problem gambling and gambling-related harm using broad definitions that address the risks not only to the gambler, but also to families and communities (Shaffer and Korn, 2002). Research aimed at understanding gambling harm has demonstrated its far-reaching consequences, which impact not only the person with the gambling problem, but also their family members and friends. In gambling research, others affected by gambling-related harms have generally been referred to as family members, significant others, concerned significant others (CSOs), or affected others. The term

affected other is employed in the current scoping review because it does not infer a close family member, family members living in the same household, or level of concern (Goodwin et al., 2017, Orford et al., 2005).

Understanding how affected others experience gambling-related harm and cope in such situations of adversity is clearly important in developing effective interventions, both at the primary level and specialist care. Two competing models of understanding affected others of people with addictions have emerged: co-dependency (e.g., Harkness and Cotrell, 1997, Harper and Capdevila, 1990, Whitfield, 1989) and stress-coping (Orford et al., 2005, Orford et al., 2010). Early views focused on personality deficit models involving co-dependency, which is generally conceptualised as an enduring dysfunctional relationship pattern characterised by the affected other (usually a female intimate partner) unconsciously requiring a weak dependent intimate partner in order to fulfil the need to take care of or dominate someone (Babcock and McKay, 1995, Gordon and Barrett, 1993, Prest et al., 1998). The co-dependency theory, which is influenced by family systems theory (Krestan and Bepko, 1992, Miller, 1994), construes family members as being responsible, or at least major influencing factors, in the development and maintenance of the gambling problem (Krishnan and Orford, 2002, Calderwood and Rajesparam, 2014, Orford et al., 2005).

The concept of co-dependence has been widely criticised, often from a feminist perspective, particularly with respect to over-emphasising individual vulnerabilities and family pathology, disregarding the probable dysfunctional consequences of living with a dependent family member, the stigmatisation and internalisation elicited by the label, a lack of consensus about a definition, and no reliable or valid identified criteria or assessment instruments, as well as relying on Anglo-centric and male values of individuality and autonomy, failing to consider changing gender roles in Western society, and weak empirical support (Hands and Dear, 1994, Savron et al., 2003, Mazzoleni et al., 2009, Calderwood and Rajesparam, 2014). It has been argued that the absence of a non-pathological family-focused model has contributed to the lack of service provision, policy and research in the addictions (Orford et al., 2010).

The Stress-Strain-Coping-Support (SSCS) model (Orford et al., 2005, 2010) was developed to fill this gap in addiction research. This model, which is designed to be non-pathological in its assumptions about affected others, has been increasingly applied to the family members of problem gamblers. This perspective argues that the chronic stress of having a gambling problem in the family (conceptualised as active disturbance and worrying behaviour) results in strain experienced by family members in the form of some departure from a state of health and wellbeing (psychological and physical health problems). It has been argued that this is appropriately construed as the ‘burden’ borne by affected others (Orford et al., 2013). Further, the model assumes that the ways family members cope with this stress (often conceptualised as engaged, tolerant, and withdrawal coping), as well as the professional and informal social support they receive, influence the severity of the resulting strain. Although small differences have been found in previous research, it is assumed that these core factors are largely independent of the addiction, affected other sex, and relationship type (Orford et al., 2017).

Like co-dependency and family systems theories, the SSCS model places great emphasis on the interactions between problem gamblers and their family members. It contrasts with these theories, however, in that it views family members as principally ordinary people exposed to a set of stressful circumstances or conditions of adversity rather than causative factors in the origin or maintenance of the gambling problem (Krishnan and Orford, 2002, Orford et al., 2017). The SSCS also focuses on the experiences and outcomes of affected others in their own right (Orford et al., 2017). Despite considerable empirical evidence for the SSCS model across the addictions, it has been suggested that embedding this model within a family systems framework may improve policy development, service provision, and research by acknowledging that family subsystems are necessarily interdependent and interactive, and that family interactions and communication in a family are circular and not linear (Kourgiantakis et al., 2013).

1.2 Project rationale

Although traditionally a relatively neglected research area, there has been growing interest in issues related to others affected by gambling problems, with the publication of several systematic reviews exploring the impact of problem gambling on affected others (Kourgiantakis et al., 2013, Riley et al., 2018); as well as one more focused systematic review exploring the association between problem gambling and intimate partner violence (Dowling et al., 2016a). The scope of the affected other literature, however, extends beyond harms, with research evidence highlighting the prevalence of affected others, the socio-demographic profiles of affected others, the development of instruments to measure affected other status and their characteristics, the coping strategies employed by affected others, and the development of interventions. While there are several systematic reviews that explore the efficacy of interventions for affected others (Kourgiantakis et al., 2013, 2016, Archer et al., 2019), several are limited by their focus on specific topics, such as the exploration of factors associated with identified patient treatment entry following an affected other intervention (Archer et al., 2019) or the efficacy of prevention programs for children with problem gambling parents (Kourgiantakis et al., 2016). In contrast, the review conducted by Kourgiantakis et al. (2013) examined the efficacy of affected other treatments, couples therapy, and family involvement in gambling treatment, but is now somewhat outdated in the face of this rapidly emerging area of research. Moreover, there have been important advances in our understanding of problem gambling, increased availability of gambling products, the emergence of new gambling products, and changing profiles of people with gambling problems, such as the emergence of women with gambling problems (Kourgiantakis et al., 2013, Patford, 2007a). It is therefore critical to document areas across all contemporary affected other research to determine in which areas research effort has occurred and identify gaps to inform future research.

We therefore conducted a scoping review with the broad aim of identifying the recent research relating to addressing gambling harms to affected others, with a view to mapping the available research literature. We aimed to provide the formative work necessary to inform the development of interventions for adult affected others by examining the extent, range, and nature of literature on adult affected others, describing in detail the findings of this research, highlighting major research gaps, and providing clinical, research, and policy implications. The benefit of a scoping review is that it can address multiple broad exploratory research questions in a single document and provide a snapshot of the current literature. The findings of this scoping review, which can readily be disseminated to gambling stakeholders, can be used to inform clinical, research, and policy decision-making in relation to affected others.

1.3 Research questions

From the perspective of affected others, the scoping review aims to explore the key research themes relating to prevalence, socio-demographic profiles, harms, coping, assessment, and treatment. Specifically, this review aimed to explore the:

1. Prevalence of affected others
2. Socio-demographic characteristics of affected others
3. Assessment of affected other status and their characteristics
4. Harms experienced by affected others
    a. Types and extent of gambling-related harm experienced by affected others
    b. Burden of harm to affected others
    c. Concordance in harms reported by gamblers and affected others
5. Coping strategies employed by affected others
    a. Types of coping strategies employed by affected others
    b. Coping strategy motivations and barriers for affected others
    c. Helpfulness of coping strategies employed by affected others
6. Interventions for affected others
    a. Prevalence of professional help-seeking among affected others
    b. Professional help-seeking preferences of affected others
    c. Professional help-seeking motivations and barriers for affected others
    d. Evaluation of treatments for affected others
    e. Evaluation of couple and family gambling treatments
    f. Impact of affected other involvement in gambling treatment

In addition to the scoping review, the Foundation requested information regarding interventions for affected others across the addictions, including what and how change is measured. The aims of this research activity are therefore to: (a) describe the types of interventions employed in the treatment of affected others across addictions; (b) evaluate the efficacy of these interventions; and (c) identify the constructs measured and instruments employed to evaluate the outcomes of treatment for affected others across the addictions (see Chapter 4).

Chapter 2: Scoping review methods

This scoping review was conducted in accordance with Arksey and O'Malley's (2005) methodological framework, enhanced by Levac et al. (2010), which comprises five stages: (1) identifying the research questions; (2) identifying relevant studies; (3) study selection; (4) charting the data; and (5) collating, summarising, and reporting the results. The methodology employed in this review is compliant with the Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for scoping reviews (PRISMA-ScR) (Tricco et al., 2018) and the review protocol was registered with Open Science Framework (osf.io/xd2ya), an open source platform.

2.1 Stage 1: Identifying the research question

The research questions were iteratively developed through consultation among the research team. For this review, the term 'affected others' is defined broadly including, but not limited to, family members (e.g., parents, adult siblings, adult children), partners (e.g., spouses, de-facto relationships, ex-partners), friends, and colleagues of an individual with gambling problems. Evidence of a clinical diagnosis was not required to confirm an individual's problem gambling status. The term 'treatment' was also defined broadly to include any formal help services for affected others that help them to manage the impacts of problem gambling and/or services for people with gambling problems that involve, and to some degree target, affected others (e.g., couple or family therapy).

2.2 Stage 2: Identifying relevant studies

A systematic search was conducted to identify relevant research from: (1) an electronic search of five databases (Medline, CINAHL, Scopus, PsycINFO, and Social Science Abstracts) using keywords relating to gambling (gambl*) and affected others (e.g., famil*, relatives, partner, friend, "affected other", "concerned other", spous*, parent etc.); and (2) a manual search of references lists of included studies and other available systematic or narrative reviews. The full electronic search strategy is provided in Appendix A. A grey literature search was not conducted given the broad scope of this review and evidence that unpublished grey literature represents a very small proportion of included studies and does not have a considerable impact on review conclusions (Hartling et al., 2017). The search terms were iteratively developed by the lead researchers (ND, SM) and research assistant (CH) and they were deliberately broad given the breadth of the research questions. The search was restricted to research published since 2000 (January 2000 – April 2020) to reflect contemporary evaluations of affected others.

2.3 Stage 3: Study selection

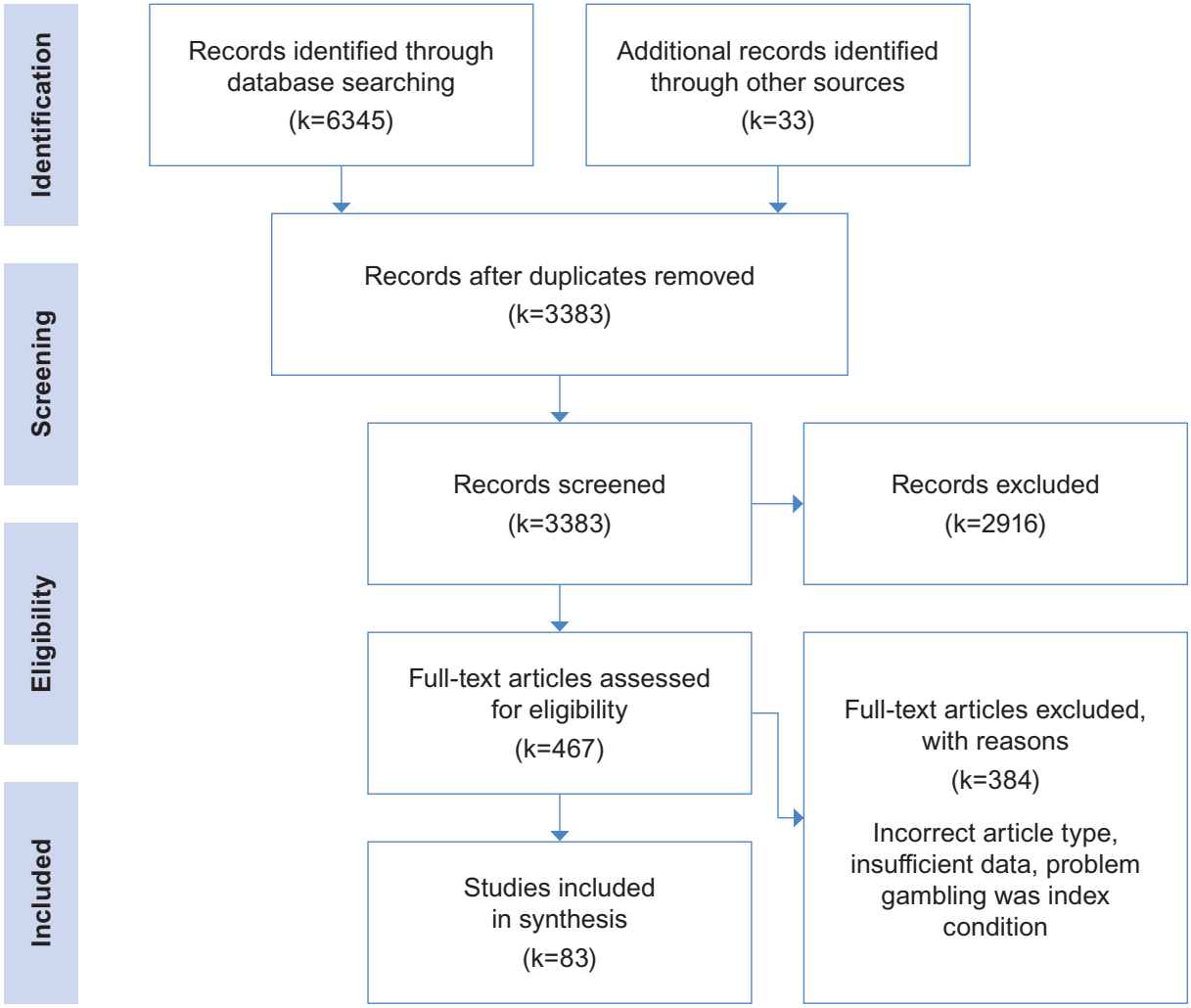
Consistent with methodological recommendations, a transparent and iterative team approach was used to refine the inclusion and exclusion criteria for screening relevant research (Levac et al., 2010). The screening process consisted of two stages. Firstly, two research assistants independently screened titles and abstracts (i.e., all studies were screened twice) to determine preliminary inclusion status. Secondly, a small team of three research assistants screened the full text of any studies with 'included' or 'unsure' status to confirm inclusion status. The full text of any studies with a remaining 'unsure' status were re-screened by the lead researchers and research assistant, with any disagreements resolved through discussion.

The final inclusion criteria for studies in the current review were: (1) original research presented in a peer-reviewed journal in English; (2) published research using quantitative, qualitative, or mixed methods, including systematic reviews and meta-analyses, from 2000 onwards; (3) the majority of affected others sampled were adults (i.e., 18 years old or more) given the focus on adult affected others; (4) affected others were a focus of the study, such that 'gambling' and 'affected others' or related terms (e.g., family, partner) were used in the study title, abstract, or study aims (unless identified via manual search of reference lists); (5) study outcomes were reported by affected others (i.e., gambler-reported outcomes were excluded from this review) as available literature suggests that there is a divergence in perspectives between people with gambling problems and affected others (Ferland et al., 2008, Goodwin et al., 2017, Jeffrey et al., 2019, Li et al., 2017, Cunha et al., 2015, Cunha and Relvas, 2015); (6) composite addiction samples (e.g., affected others of problem alcohol use and problem gambling) and/or composite addiction outcomes (e.g., measuring "alcohol and gambling" together) were only included where data was analysed and presented separately in relation to gambling affected others; and (7) composite stakeholder samples (e.g., gamblers, affected others, service providers) were only included where data was analysed and presented separately in relation to affected others. The exception to these inclusion criteria was for Aim 3, in which any measure that has been specifically developed or recommended for the assessment of affected others was described.

Studies were excluded if they: (1) were any form of review other than a systematic review (e.g., narrative review), a letter, a thesis, a commentary, conference presentation material, report to a funding body, or book chapter/ section; (2) were published in a language other than English; (3) included a sample in which the majority of affected others were children (i.e., less than 18 years old); (4) employed composite addiction samples and/or composite addiction outcomes, in which data was not analysed and presented separately for problem gambling; (5) employed composite stakeholder outcomes, in which data was not analysed and presented separately for affected others; (6) examined transmission of gambling or gambling problems (e.g., intergenerational transmission); or (7) failed to provide sufficient methodological and affected other sample data (e.g., study design, sample size, recruitment information, sample description, measures employed).

A PRISMA-ScR flow diagram of search results is displayed in Figure 1 (where k represents the number of studies). The initial search yielded 3,383 studies after duplicates were removed. The title and abstracts of these records were reviewed for inclusion, following which the full-texts of the 467 articles that were deemed potentially eligible were retrieved. Of these, 83 studies met the inclusion criteria and were included in the final synthesis and evaluation.

Figure 1. PRISMA-ScR flow diagram of search results



2.4 Stage 4: Charting the data

The data was charted and sorted according to the six research questions, which reflect the key research themes of prevalence, socio-demographic characteristics, assessment, harms, coping, and treatment of affected others. Charting was conducted by a small team of research assistants and reviewed periodically by the lead researcher. Discrepancies were resolved through group discussion with the lead investigator as arbiter. A standardised, pilot-tested data extraction sheet was employed to extract basic descriptive study information, including study ID (first author, publication year), study aims, country, participant recruitment source, type of affected others sampled (e.g., family members, partners only), affected other sample size, affected other age (mean, standard deviation, range), affected other sex (% male), and research design, as well as any relevant data pertaining to the research questions.

2.5 Stage 5: Collating, summarising, and reporting the results

Consistent with Levac et al.'s (2010) recommendations, this stage involved three steps: (1) analysing the data using a numerical summary analysis and qualitative thematic analysis; (2) disseminating the results; and (3) discussing implications for future research, policy, and practice.

Each included study was included in this process, with the exception of the identified studies exploring the gambling-related harms and impacts experienced by adult affected others (Aim 4a). In our systematic search, we identified three systematic reviews (Dowling et al., 2016a, Kourgiantakis et al., 2013, Riley et al., 2018). The approach taken by the most recent of these reviews (Riley et al., 2018) was well-aligned with the search strategy and inclusion criteria of our scoping review, whereby both reviews restricted the included articles to empirical quantitative and qualitative studies published in peer-reviewed journals in English which contained data concerning the impact on, or experience of, problem gambling on affected others from the perspective of affected others, rather than their problem gambling family members. Of the 47 original peer-reviewed articles identified in this section of our scoping review relating to the types and extent of gambling-related harm experienced by affected others, 30 (64 per cent) were identified in Riley et al.'s (2018) systematic review.

Given the overlap in studies with the systematic review conducted by Riley et al. (2018), which collected data up until July 2018, we decided to provide comprehensive summaries of each of the available systematic reviews for the purpose of answering the research question relating to Aim 4a. To date, however, none of the available reviews have organised their findings according to the comprehensive taxonomy of gambling-related harm proposed by Langham et al. (2016). Moreover, none have delineated between gambling-related harms identified in qualitative research measuring harm with direct reference to gambling (e.g., How often have you experienced feelings of sadness or anxiety due to someone else's gambling?), quantitative research measuring harm without direct reference to gambling (e.g., How often have you experienced feelings of sadness or anxiety?), or qualitative research measuring harm via direct methods such as interviews and focus groups. Qualitative and quantitative assessment methods that directly reference gambling may impede accurate and valid assessments of gambling-related harm as they require insight, awareness, and a willingness to concede the impact of the gambling behaviour of the family member on the affected other; conversely, quantitative assessment measures without direct reference to gambling may assess difficulties arising from a variety of sources in addition to or instead of gambling, unless efforts are made to account for these other sources (Quilty et al., 2015).

We therefore made the decision to supplement the description of the available systematic reviews with a mapping exercise, in which Langham et al.'s (2016) taxonomy of gambling-related harm was employed as an organising structure for the included studies investigating the gambling-related harms reported by affected others. This section is further organised with reference to the study designs that characterise this literature: quantitative research measuring harm with direct reference to gambling, quantitative research measuring harm without direct reference to gambling, and qualitative research. Mapping the available research with reference to harm domain and study design will allow for the accurate identification of gaps in this research area.

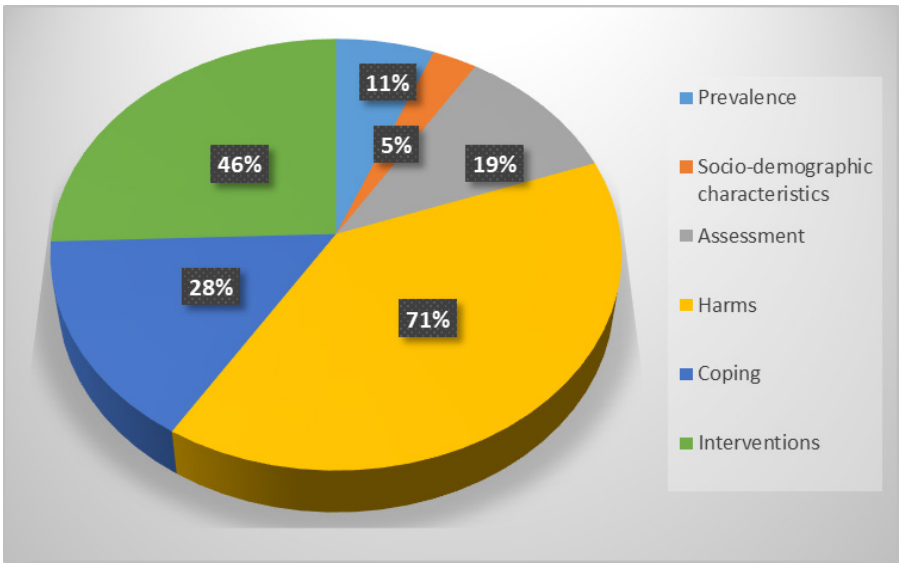
Chapter 3: Scoping review results

3.1 Characteristics of included studies

The characteristics of the included studies are presented in Appendix B. Excluding the four systematic reviews, the studies were conducted predominantly in Australia (k=19) and Canada (k=17), with smaller proportions conducted in the United Kingdom (K=6), the USA (k=6), Sweden (k=5), New Zealand (k=4), and Spain (k=4). The studies mostly employed convenience sampling of affected others (k=23), or employed samples of treatment-seeking affected others (k=16) or affected others of treatment-seeking gamblers (k=13). Smaller proportions of studies used representative samples recruited from the general population (k=7), samples recruited from commercial online panels (k=4), or couples or families seeking treatment (k=4). The majority of studies employed samples that were comprised of all types of affected others (k=31) or partners (k=27), with smaller proportions of studies employing samples comprising any family members (k=10). The sample sizes of affected others in the empirical studies ranged from to 1 to 2648 and the mean age of participants ranged from 23 to 68 years, with the variability in these estimates due to the range of study designs and samples employed. Unless male affected others were a specific focus of the study, the majority of studies included very small numbers of male affected others, ranging from 0 to 66 per cent. The majority of studies employed quantative cross-sectional designs (k=34), followed by qualitative designs (k=16), randomised or randomised controlled trials (RCTs) (k=12), mixed-method designs (k=7), or non-randomised or single-arm trials (k=5), with very few longitudinal or cohort studies (k=2).

An overview of the relevant data extracted from the studies according to each research question is provided in Figure 2. Figure 2 indicates that, excluding the four identified systematic reviews, where k represents the number of studies, the majority of included studies contributed data to the research questions relating to harms (k=56, 71 per cent) and interventions (k=36, 46 per cent), followed by coping strategies (k=22, 28 per cent), assessment (k=15, 19 per cent), prevalence (k=9, 11 per cent), and socio-demographic characteristics (k=4, 5 per cent). In relation to harms, research effort has overwhelmingly been directed towards the types and extent of gambling-related harm (k=48), with smaller proportions of studies exploring the concordance in harms (k=12) and the burden of harm (k=2). More specifically, in relation to the types and extent of gambling-related harm, research effort has been predominantly directed towards the identification of emotional harms (k=40) and relationship harms (k=36), with smaller proportions of studies examining financial harms (k=23), health harms (k=21), criminal harms (k=9), work or study harms (k=5), and cultural harms (k=1). In terms of coping strategies, research effort has predominantly been directed towards identification of types of coping strategies (k=19), with smaller proportions of studies examining the helpfulness of coping strategies (k=9) and coping strategy motivations and barriers (k=8). In terms of interventions, the majority of research has been conducted to evaluate affected other treatments (k=10) or couple/family treatments (k=10), with smaller proportions examining professional help-seeking motivations and barriers (k=8), the impact of affected other involvement in gambling treatment (k=7), professional help-seeking preferences (k=7), and the prevalence of professional help-seeking (k=6). A summary of the research questions to which each included article contributed data is displayed in Appendix C.

Figure 2. Overview of the included studies according to each research question



3.2 Research question 1: Prevalence of affected others

We identified nine empirical studies that contributed data to the first research question, which related to the prevalence of affected others: seven studies estimated the prevalence of affected others at the population level using an epidemiological perspective, one study estimated the prevalence of affected others in general practice populations, and one estimated the number of people affected by each individual with a gambling problem.

Key findings

- **Prevalence estimates of affected others range from 2 per cent to 19 per cent, depending on the definition of affected others employed, the rigor of measurement, and the measurement timeframe.**
- **A similar lifetime prevalence estimate (11 per cent) has been identified in general practice.**
- **Affected other status appears relatively labile across time, with improvement across a range of domains.**
- **The gambling problem of one individual has direct negative effects on at least six others; and low-risk and moderate-risk gamblers affect one and three others, respectively.**
- **There is growing evidence that gambling harm is not limited to intimate partners.**

3.2.1 Prevalence of affected others in general population surveys

Seven studies attempted to estimate the proportion of affected others at the population level, most of which were conducted in Nordic countries (Rockloff et al., 2019, Salonen et al., 2014, 2015, 2016, Shiue, 2015, Svensson et al., 2013, Wenzel et al., 2008). These studies estimate that that a considerable proportion of the general adult population is affected by another person's gambling. Studies that defined affected others broadly ("any significant others", "someone close to them") identified lifetime rates of 19.0 per cent to 19.3 per cent in Finland (Salonen et al., 2014, 2015, 2016) and 18.2 per cent in Sweden (Svensson et al., 2013). In contrast, studies that applied more narrow definitions of affected other status (e.g., "family members", "close relatives") identified lower lifetime rates: 2.0 per cent in Norway (Wenzel et al., 2008) and 6.7 per cent to 9.3 per cent in Finland (Salonen et al., 2014, 2015). Measurement differences may account for the lower estimate of affected family members in Norway, whereby affected other status was measured using an adapted version of the lifetime Lie/Bet Questionnaire, in which both items had to be positively endorsed to be classified as an affected other (Wenzel et al., 2008). Studies that restricted their definition to close friends revealed lifetime estimates of 12.4 per cent to 13.4 per cent in Finland (Salonen et al., 2014, 2015). In Finland, Salonen et al. (2014, 2016) also found that when narrow definitions relating to specific family members were applied, gamblers were most likely to be a sibling or father, followed by a partner, own child, grandparent, and mother of the affected other. Current affected other estimates have also been identified: 4.5 per cent in Australia using a broad definition ("another person's gambling") (Rockloff et al., 2019) and 4.3 per cent in Japan using a narrow definition ("anyone who lives with them") (Shiue, 2015).

Salonen et al. (2015) compared estimates of affected others between 2007 and 2011 in Finland. The findings revealed that the overall proportion of affected others did not change over this period of time, but the proportion of affected others with a problem gambling *family member* increased. Subsequent analysis revealed a significant increase in the overall proportion of affected others and the proportion of problem gambling family members was seen only among 50-64 year old respondents; and even more specifically, among the fathers of the affected others in this age group. The authors explain this finding in terms of specific motivational factors for older adults such as relaxation, social stimulation, boredom relief, and enjoyment, as well as the wide availability and accessibility of gambling venues. There was also a significant decrease in the overall proportion of affected others among the 18–24 year age group.

In the only population-representative longitudinal study of affected others, Svensson et al. (2013) found that almost half of affected others (47.4 per cent) were no longer classified as affected others one year later, with no significant sex or age differences. There were no significant differences between affected others and ex-affected others in relation to problem/moderate-risk gambling, self-reported health, risky alcohol behaviour, divorce or separation, or problems at work for either sex. However, both men and women who were no longer defined as affected others reported improved mental health problems and fewer arguments with people close to them. Compared with women who remained affected, female ex-affected others had fewer difficulties paying bills and experienced fewer deaths among those close to them. In contrast, male ex-affected others had fewer legal problems during the previous 12 months than men still defined as affected others. Controlling for age and problem gambling severity did not generally influence these findings. These findings are, however, confounded by the apparent use of a lifetime measure to classify affected others in both waves.

3.2.2 Prevalence of affected others in general practice

Using the Concerned Significant Other Screen in a sample of 1580 patients from general practices in New Zealand, Sullivan et al. (2007) found that 18 per cent reported being an affected other, which included 8 per cent reporting affected other status in the past, 3 per cent reporting current affected other status, and 7 per cent reporting they were unsure.

3.2.3 Number of affected others per gambler

In an online Australian panel of 2129 affected others, Goodwin et al. (2017) estimated that the gambling problem of one individual has direct negative effects on at least six others; and that low-risk and moderate-risk gamblers affect one and three others, respectively. Affected others were most likely to be a spouse or intimate partner (38.0 per cent), child (19.2 per cent), close friend (14.8 per cent), or other family member (12.4 per cent), with smaller proportions for siblings (6.7 per cent), co-workers (3.4 per cent), and parents (2.7 per cent). Almost half of affected others were affected by someone gambling on electronic gaming machines (EGMs) (47.6 per cent), followed by race betting (23.5 per cent), casino table games (6.9 per cent), sports betting (6.3 per cent), poker (5.8 per cent) lottery (3.0 per cent) and keno (0.9 per cent). Affected others who were older and female tended to report that more people were affected.

3.2.4 Discussion

The findings suggest that only 11 per cent of the included studies contributed data relating to the prevalence of affected others. These studies suggest that a considerable proportion of the general adult population is affected by other person's gambling. These estimates are predominantly derived from Nordic countries, with further estimates of the prevalence of harms within the population who are exposed to someone else's gambling behaviour required for other countries. A similar prevalence rate of affected others (11 per cent) has been identified in general practice,

suggesting that general practitioners are in a good position to identify affected others and their needs for support and assistance, advise them about available services, and encourage them to access these services (Hing et al., 2013, Orford et al., 2017, Salonen et al., 2016). Affected other status appears relatively labile across time, which may be a result of improvements in gambling-related harm or a result of separation or divorce. Given the absence of longitudinal research conducted over longer periods of time, it is also unclear whether these reported positive improvements in affected other status are sustained over time or whether affected others re-engage in help if the gambler is unable to remain abstinent. Further longitudinal research determining incidence and patterns associated with change to affected other status is therefore required (Langham et al., 2016).

The relatively high prevalence of affected others that extend beyond intimate partners suggests that research is conducted to specifically explore the experiences of these subgroups of affected others or that sufficiently large samples are employed to examine differences and similarities between different subgroups of affected others. Recent evidence also suggests that the gambling problem of one individual has direct negative effects on at least six others; and that low- and moderate-risk gambling also appear to confer harms on others. These findings highlight the importance of future research examining whether the needs of affected others of those with lower-risk gambling problems are quantitatively or qualitatively different to those with more severe gambling problems (Rodda et al., 2019). Such estimates can be weighted according to the specific population prevalence statistics for low-, moderate-, and problem gambling to produce estimates of the number of affected others in a given population (Goodwin et al., 2017).

3.3 Research question 2: Socio-demographic characteristics of affected others

We identified four empirical studies employing population-level data that contributed data to the second research question, which related to the socio-demographic characteristics of affected others.

Key findings

- **There are mixed findings in relation to the socio-demographic characteristics of affected others in general population surveys, including sex, age, marital status, and education.**
- **Single studies support the positive association between living in a city, being a male immigrant, and living on social welfare.**

3.3.1 Sex

In relation to the sex of affected others, female gender was positively associated with affected other status in Norway (Wenzel et al., 2008); but men (19.5 per cent) were more likely to be classified as affected others than women (17.5 per cent) in Sweden (Svensson et al., 2013). In contrast, in a detailed gender analyses of the Finnish data, Salonen et al. (2014), (2016) both found that there were no gender differences in the overall proportion of affected others (19.3–19.8 per cent males, 18.7–19.3 per cent females). There were, however, sex differences in the relationships between affected others and their problem gambling loved ones. Female affected others (10.4–11.7 per cent) were significantly more likely than male affected others (6.8–7.0 per cent) to have a problem gambling family member, while male affected others (14.4–15.0 per cent) were significantly more likely than female affected others (10.3 per cent) to have a problem gambling close friend. In their 2011 survey, Salonen et al. (2014) also

found that female affected others were more likely than male affected others to report that the person with the gambling problem was their sibling or their partner; while in their 2015 survey, they found that female affected others were more likely to report that the person with the gambling problem was their partner, child, grandparent, and mother (Salonen et al., 2016).

3.3.2 Age

Similarly, there are mixed results in relation to affected other age. Younger age was positively associated with affected other status in both Norway (Wenzel et al., 2008) and Sweden (for both sexes in Sweden) (Svensson et al., 2013), but age was not associated with affected other status for either sex in Finland (Salonen et al., 2014).

3.3.3 Marital status

In terms of marital status, being divorced was positively associated with being an affected other in Norway (Wenzel et al., 2008). Similarly, divorce or separation was positively associated with affected other status, but only for women after controlling for age and problem gambling severity in Sweden (Svensson et al., 2013). However, in Sweden, being married or living with partner and children was positively associated with affected other status for men, but being single with children was positively associated with affected other status for women (Svensson et al., 2013). In contrast, being married or in a registered relationship was associated with affected other status for women, but not for men, in Finland (Salonen et al., 2016).

3.3.4 Education

Findings in relation to education suggest that education was not associated with being classified as an affected other for either sex in Finland (Salonen et al., 2014), but that mid-level education was positively associated with affected other status for both sexes in Sweden (Svensson et al., 2013).

3.3.5 Other socio-demographic characteristics

Living in a city (Wenzel et al., 2008), being a male immigrant (Svensson et al., 2013), and living on social welfare (Svensson et al., 2013) also appear to be positively associated with affected others in the general population. Interestingly, demographic characteristics dropped out of multivariate models once gambling-related and health and wellbeing-related constructs were included (Salonen et al., 2014).

3.3.6 Discussion

At present, we know very little about the socio-demographic characteristics of affected others, particularly in relation to extended family members, with only five per cent of the included studies contributing data to this area of research. These studies report mixed findings in relation to affected other socio-demographic characteristics such as sex, age, marital status, and education, which is likely explained by the different definitions and measurement of affected other status employed in these studies. Single studies support the positive association between other socio-demographic characteristics, such as living in a city, being a male immigrant, and living on social welfare. Further research examining the socio-demographic characteristics associated with affected other status using population-level data with more consistent measurement of affected other status is clearly required.

3.4 Research question 3: Assessment of affected others

We identified 15 empirical studies that contributed data to third research question, which related to instruments specifically developed to measure affected other status and their characteristics: seven unvalidated instruments measuring affected other status, seven instruments measuring harms and impacts, three single items or instruments measuring coping, one instrument measuring social support, one multi-dimensional instrument measuring harms, coping, and social support, one single item measuring self-efficacy, and two instruments measuring help-seeking behaviour.

Key findings

- **Twenty-two instruments have been specifically developed or recommended for the assessment of affected others, which measure affected other status, harms/impacts, coping, coping skill acquisition during treatment, self-efficacy, social support, and help-seeking behaviour**
- **These instruments have generally not been subject to rigorous development procedures, have limited psychometric information available, and are not well validated.**

3.4.1 Assessment of affected other status

Single items

Two single items using a lifetime timeframe have been employed to identify affected others in general population surveys (Salonen et al., 2014, Svensson et al., 2013). Both of these items have employed a broad definition of affected other status. In Sweden, Svensson et al. (2013) employed an item assessing if someone close to them, as far as they knew, had or previously had problems with gambling. In Finland, Salonen et al. (2014) employed an item inquiring as to whether any of the following significant others had problems with gambling, with seven response options for significant others (father, mother, sister/brother, grandparent, spouse or partner, own child/children, and close friend). This item has also been employed in subsequent general population surveys (Salonen et al., 2016, Salonen et al., 2015). Because respondents could identify their relationships to gambling relative/s, these studies were also able to adopt more narrow definitions of affected others.

Two single items using a current timeframe have also been employed to identify affected others in general population surveys (Rockloff et al., 2019, Shiue, 2015). In Australia, Rockloff et al. (2019) employed a broad definition of affected other status by asking if respondents had been personally affected by another person's gambling in the previous 12 months. In contrast, in Japan, Shiue (2015) adopted a narrow definition by asking if anyone who lives with the respondent gambles excessively.

Adapted Lie/Bet Questionnaire

Given the lack of validated criteria, affected other status has also been measured using an adapted version of the lifetime Lie/Bet Questionnaire (Wenzel et al., 2008), which comprised two items: Have you ever noticed that a close relative spent more and more money on gambling? and Have you ever experienced that a close relative lied to you about how much he/she gambles? Employing a narrow definition of affected other status, respondents positively endorsing both items were classified as affected others.

Concerned Others Gambling Screen

Sullivan et al. (2007) described the use of the Concerned Others Gambling Screen (COGS) to identify those affected by another person's gambling. This screen is a three-item awareness-raising instrument employing a broad definition of affected other status that allows an affected other to indicate what assistance they require. The first item investigates whether a person thinks they have ever been affected by someone else's gambling. Only respondents indicating past or current impacts or provide an unsure response continue to the second item, which provides them with an opportunity to identify any effect that the gambling currently has on them, and the third item, which screens for the desired intervention.

Concerned Significant Others of Gambling DSM-IV Screening Questionnaire

The Concerned Significant Others of Gamblers DSM-IV Screening Questionnaire (Makarchuk et al., 2002) has been employed to diagnostically calculate the number of symptoms exhibited by gamblers, as reported by affected others. "Probable pathological gambling" is indicated by scores of four or more. This questionnaire has been employed in treatment outcome studies to ensure that gamblers are experiencing gambling problems to a significant degree (Hodgins et al., 2007b, Nayoski and Hodgins, 2016, Makarchuk et al., 2002).

3.4.2 Assessment of harms and impacts

Problem Gambling Significant Other Impact Scale

The six-item Problem Gambling Significant Other Impact Scale (PG-SOIS) (Dowling et al., 2014) is a brief tool that was specifically developed for use by the Australian national gambling online service to screen affected others for impacts across six broad domains of functioning in the previous three months: financial, emotional distress, interpersonal relationship with the gambler, social life, employment, and physical health. Items have direct reference to gambling and are measured using a four-point scale from (0) Not at all to (3) Often, with higher scores indicating higher negative impact. Because the purpose of the study was to examine harms in affected others accessing online counselling, little data on the psychometric properties of this instrument are provided.

Problem Gambling Family Impact Measure

The 14-item Problem Gambling Family Impact Measure (PG-FIM) (Dowling et al., 2016b) measures impacts with direct reference to gambling in the previous three months. Each item is measured using a four-point scale from (0) Not at all to (3) Often. The scale was generated from a pool of 87 items generated from previous research and expert review. Following initial testing with 53 problem gamblers and 40 family members in Australia and North America, two 44-item measures (gambler version, family member version) were subjected to an exploration of means, variance, inter-item correlations, factor loadings, internal reliability analyses and corrected item-total correlations. The resulting instruments resulted in two 14-item scales: the PG-FIM (Problem Gambler version) and the PG-FIM (Family Member version). An exploratory factor analysis using Principal Axis Factoring and Promax rotation showed evidence of a three factor structure: financial impacts (three items; reduced money for the family; α=.87), increased responsibility (three items; taking over decision-making and responsibility in the family home; α=.85), and psychosocial impacts (eight items; relationship and emotional difficulties; α=.92). The total summed score also yielded high internal reliability (α=.94), with higher subscale scores indicating higher impacts.

Inventory of Consequences Scale for the Gambler and the Concerned Significant Other

The 43-item Inventory of Consequences Scale for the Gambler and the Concerned Significant Other (Makarchuk et al., 2002) has been employed in the affected other treatment outcome literature (Hodgins et al., 2007a, Hodgins et al., 2007b, Makarchuk et al., 2002). This scale was derived from a focus group and the Drinker Inventory of Consequences (Miller, 1994) and comprises three subscales measuring gambling consequences with direct reference to gambling over the previous three months: Gambler Consequences (22 items), CSO Emotional Consequences (12 items), and CSO Behavioural Consequences (nine items). Each subscale has displayed good internal consistencies and test-retest reliabilities: Gambler Consequences (α=0.89, ICC=0.93), CSO Emotional Consequences (α=0.87, ICC=0.93), and CSO Behavioural Consequences (α=0.86, ICC = 0.93).

Family Member Impact

Orford et al. (2005) described a set of standard questionnaires for the assessment of the needs of family members of relatives with alcohol, drug, or gambling problems derived from the SSCS model. In this description, they recommended adapting the 16-item Family Member Impact (FMI) from the impacts of alcohol and drug use issues to gambling problems. The FMI, which is assumed to correspond to the stress component of the model, is designed to both directly and indirectly measure the extent and type of harmful impacts of gambling problems on family members or on the family as a whole in the previous three months. Items are scored on a four-point scale from (0) Not at all to (3) Often. The FMI is comprised of two subscales: Worrying Behaviour (10 items; the level of worry about the effects of gambling problems on the family) and Active Disturbance (six items; difficulties and disturbances due to the gambling problems such as threats and quarrels). These subscales are usually positively but only moderately correlated (Orford et al., 2005, 2017). Total impact scores can be derived by combining the two subscale scores. Orford et al. (2005) presents evidence that the FMI is reliable and valid in the family members of relatives with alcohol or drug problems. The FMI subscales have also demonstrated moderate to good internal consistency in samples of family members affected by people with gambling problems: Worrying Behaviour (α=0.82) and Active Disturbance (α=0.85) (Chan et al., 2016). Further evidence of the validity of the FMI is offered by findings suggesting that both subscales are sensitive to change over time (Orford et al., 2005).

Symptom Rating Test

In their recommended set of standard questionnaires derived from the SSCS model, Orford et al. (2005) proposed that the Symptom Rating Test (SRT) (Kellner and Sheffield, 1967) corresponds to the strain component of the model. The SRT is a 30-item questionnaire that measures the extent of mild to moderate physical and psychological ill health in the general population over the previous three months but has frequently been employed in research investigating the ill-health of family members affected by alcohol and drug use problems. Items are scored on a three-point scale from (0) Never to (2) Sometimes. The SRT comprises two subscales: Psychological Symptoms (18 items: e.g., feeling nervous, feeling that there was no hope, and worrying) and Physical Symptoms (12 items: e.g., feeling dizzy or faint, feeling pressure or tightness in the head, and poor appetite). These subscales are usually positively and substantially correlated and a summed total symptoms score can be derived (Orford et al., 2005, 2017). Orford et al. (2005) presents evidence from a number of studies supporting the internal reliability, discriminant and construct validity, and sensitivity of change of the SRT total score and its two constituent subscales. Orford et al. (2005) argues that this scale is appropriate for use in affected others because they may not necessarily suffer from a psychological and physical disorder, but may experience symptoms of these disorders in response to chronic stressful circumstances.

Hopefulness-Hopelessness Scale

Orford et al. (2005) also initially described the use of the Hopefulness-Hopelessness Scale (HOPE) to correspond to specialised facet of the strain component of the SSCS model. The evidence they presented, however, suggested that HOPE is more likely to be a measure of an independent construct, rather than an alternative measure of strain. HOPE is a 10-item scale designed to assess how hopeful a family member currently feels about the future of the family alcohol or drug problem. The items are measured on a five-point scale from (1) Strongly Agree to (5) Strongly Disagree. In family members affected by alcohol or drug problems, HOPE has demonstrated a unidimensional structure with good internal consistency (α=0.86) or the possibility of two interpretable factors: one focused on the family member's own feelings (e.g., I feel more positive about things; things are beginning to pick up) and one focused on perceptions of the relative (e.g., I worry that s/he will use till the end; I'm fearful about how s/he will get on). Orford et al. (2005) concluded that HOPE showed promising reliability, validity, and sensitivity to change in the family members of relatives with alcohol or drug problems but that further research was required to clarify its exact role in the SSCS model.

Gambling Harms Checklist

Li et al. (2017) developed the gambling-related harms identified in the Langham et al. (2016) taxonomy into a set of personal statements, with a view to providing coverage of the harms identified in the taxonomy. These statements were written in plain language, used examples where appropriate, avoided content overlap between items, and made each item unitary in scope. This process resulted in a set of 73 specific potential harms arising from gambling organised across the six domains of gambling harm in the taxonomy: financial, relationship, emotional/psychological, health, work/study, and other harms (cultural and criminal activity harms). Two versions of the survey (gamblers, affected others) have been developed. Some versions of the checklist employ similar phrasing regardless of whether the source of harms was one's own gambling or someone else's to facilitate comparisons between gamblers and affected others (Li et al., 2017), while other versions have generally consistent content but slightly different phrasing (Jeffrey et al., 2019).

3.4.3 Assessment of coping

Coping Questionnaire

In Orford et al.'s (2005) set of recommended measures for the assessment of affected others, the 30-item Coping Questionnaire (CQ) was posited to correspond to the coping component of the SSCS model. The CQ was originally designed to measure how family members coped with drinking problems in the family but both the longer 68-item version (Krishnan and Orford, 2002) and the shorter 30-item version (Chan et al., 2016) have been employed in samples of others affected by gambling. Each item measures the frequency of coping actions in the previous three-months using a four-point response option from (0) No to (3) Often. The scale comprises three subscales: (1) Engaged Coping (engaging in trying to change a family member's excessive gambling in a variety of ways that may be emotional, assertive, controlling and/or supportive); (2) Tolerant-inactive Coping (putting up with a relative's gambling, involving accepting it, making sacrifices in the face of it or encouraging it); and (3) Withdrawal Coping (withdrawing from the relative or engaging in activities independently of the relative). These subscales usually display small to moderate positive correlations (Orford et al., 2005, 2017). In family members affected by drinking and drug use problems, internal consistencies are generally good for the Engaged Coping and Tolerant-Inactive Coping subscales, but are lower for the Withdrawal Coping subscale. This finding has been replicated in samples of others affected by gambling, whereby the Engaged Coping (α=0.83-0.91) and Tolerant-Inactive Coping (α=0.75-0.87) subscales have displayed good internal consistency, while the Withdrawal Coping subscale has demonstrated lower internal reliability (α=0.59-0.68) (Chan et al., 2016, Rychtarik and McGillicuddy, 2006). Further evidence of the validity of the Engaged Coping and Tolerant-Inactive Coping subscales is offered

by findings suggesting that they are both sensitive to change over time (Orford et al., 2005). In contrast, scores on the Withdrawal Coping subscale behave very differently, with near-zero correlations with strain (Orford et al., 2005, Chan et al., 2016) and little or no change following treatment (Orford et al., 2005). Orford et al. (2005) concludes that although the CQ displays satisfactory reliability and some evidence of discriminant validity, the Withdrawal Coping subscale may be less satisfactory than the other subscales.

Gambler Situation Inventory

Rychtarik and McGillicuddy (2006) describe the use of the Gambler Situation Inventory (GSI) for assessing coping skill acquisition during the treatment of affected others. The GSI was developed according to a behaviour analytic model of scale development and includes an alternative form so that affected others can be reassessed with a form to which they have not previously been exposed. Each GSI form comprises 32 representative gambling-related, problem-situation vignettes commonly experienced by intimate partners (e.g., relationship conflict and arguments due to gambling; financial crisis due to partner's gambling; gambling causing emotional distress for the children). The administration of the GSI involves partners reading and imagining themselves in each situation then imagining the administrator is their partner and the situation is happening at the moment. Partners are asked a series of questions: What thoughts would be going through your mind? and What would you do and, if anything, what would you say? The role-played response is videotaped, after which cognitive and behavioural responses are independently scored for effectiveness on a six-point rating scale from (1) Not effective at all to (6) Extremely effective. The GSI has displayed good to excellent levels of alternate form reliability for cognitive responses (0.66) and behavioural responses (0.76), with little variance in scores accounted for by error terms, such as situation, rater, form, and their interactions. It has displayed good inter-rater intraclass correlation coefficients in a treatment outcome study of affected others: cognitive responses (pretreatment: 0.90, post-treatment: 0.84) and behavioural responses (pretreatment: 0.92, post-treatment: 0.93).

Visual analogue scale

A visual analogue scale (Hodgins et al., 2007a) has been employed to evaluate the coping of affected others. Using a scale from zero to 10, affected others are asked to rate their ability to cope with the problem if nothing changes. This scale displays adequate test-retest reliability (ICC = 0.76).

3.4.4 Assessment of social support

Social Support questionnaire

In their description of a set of standardised measures for family members affected by gambling problems derived from the SSCS model, Orford et al. (2005) argued that the support component of the SSCS model remained unmeasured as it was without a standardised questionnaire equivalent. In 2017, however, Orford and colleagues described the 25-item Social Support (SS) questionnaire (Toner and Velleman, 2014) as the corresponding standardised questionnaire to measure the social support component of the model. This scale is designed to assess support family members have received in dealing with the addiction of their family members in the previous three months. Items are scored on a 4-point response scale from (0) Never to (3) Often. The SS comprises three subscales: Helpful Informal Support (11 items; from friends or family members; e.g., Friends/relations have listened to me when I have talked about my feelings); Unhelpful Informal Support (8 items; e.g., Friends/relations have said that my relative does not deserve help); and Helpful Formal Support (6 items; e.g., Health/social care workers have given me helpful information about problem gambling). Internal consistency of these subscales was good (Helpful Informal Support: α=0.91; Unhelpful Informal Support: α=0.85; Helpful Formal Support: α=0.73), with item-total correlations ranging from 0.30 to 0.78 (Toner and Velleman, 2014).

3.4.5 Multidimensional assessment of harms, coping and social support

Short Questionnaire for Family Members Affected by Addiction

Orford et al. (2017) described the Short Questionnaire for Family Members Affected by Addiction (SQFM-AA), which is a 33-item questionnaire comprising items from the short versions of four longer questionnaires measuring the four key elements in the SSCS model: the Family Member Impact (FMI) to measure stress, Symptom Rating Test (SRT) to measure strain, Coping Questionnaire (CQ) to measure coping, and Social Support (SS) questionnaire to measure social support. The items were selected using factor loadings and sensitivity to change and the gambling version was constructed by substituting appropriate words. The scale comprises 11 subscales of three items each: two subscales corresponding to stress (Worrying Behaviour, Active Disturbance, or Total Impact), two subscales corresponding to strain (Psychological Symptoms, Physical Symptoms, or Total Symptoms), four subscales corresponding to coping (Engaged-Emotional Coping, Engaged-Assertive Coping, Tolerant-Inactive Coping, Withdrawal-Independent Coping), and three subscales relating to social support (Helpful Informal Support, Unhelpful Informal Support, Helpful Formal Support). All short versions represented their longer version counterparts, with the exception of coping. In the SQFM-AA, coping is represented by Engaged-Emotional Coping (responding emotionally; e.g., starting an argument), Engaged-Assertive Coping (standing up to the problem; e.g., sitting down together and talking frankly), Tolerant-Inactive Coping (putting up with it; e.g., made excuses, covered up, or taken the blame), and Withdrawal-Independent Coping (withdrawing and gaining independence; e.g., sometimes putting self first). A Total Family Burden (TFB) score is derived by aggregating Worrying Behaviour impact, Active Disturbance impact, Psychological Symptoms, Physical Symptoms, Engaged-Emotional Coping, and Tolerant-Inactive Coping scores. Internal reliability analyses revealed coefficients ranging from good (Helpful Informal Support, α=0.88; Total Symptoms, α=0.82) to modest but satisfactory (Worrying Behaviour impact, α=0.64; Withdrawal-Independent Coping, α=0.64). The internal consistency for the TFB was good (α=0.87), with item-total correlations ranging from 0.40 to 0.67, and no improvement in internal consistency when any item was removed. The TFB and each of its constituent sub-scales and the Helpful Informal Support subscale have all displayed sensitivity to change (Orford et al., 2017).

3.4.6. Assessment of self-efficacy

Visual analogue scale

A visual analogue scale (Hodgins et al., 2007a) has been employed to evaluate the self-efficacy of affected others. Using a scale from 0 to 10, affected others are asked to rate their ability to deal with their current situation. This scale displays adequate test-retest reliability (ICC = 0.74).

3.4.7 Assessment of help-seeking behaviour

Help-Seeking Questionnaire

Rodda et al. (2019) developed the Help-Seeking Questionnaire (HSQ-Fam), which they administered to affected others assessing internet counselling and support to determine the frequency and number of services ever accessed prior to accessing this treatment. This measure was adapted from the Help-seeking Questionnaire for gamblers (Rodda et al., 2018). It includes 11 items associated with distance-based help (professional support options that are frequently single session, usually anonymous, and accessed by telephone or internet, such as chat, email, or phone), face-to-face treatment (professional support options that are usually anonymous and

may involve one or more appointment-based sessions, such as counselling), and self-directed options (options accessed without professional oversight, such as trying a change strategy like budgeting). Each item is scored on a four-point response scale: Never, Once, 2-5 times, and More than 5 times. No psychometric information is yet available for this measure.

Reasons for Family Help-Seeking Checklist

Rodda et al. (2019) also developed the 13-item Reasons for Family Help-Seeking Checklist to rate the importance of various reasons for seeking help via Gambling Help Online. Informed by the research literature, this checklist includes five items that are gambler-focused (e.g. get my family member into treatment) and six items that are family member-focused (e.g. improve my skills in managing my emotions or feelings). Each of these items is rated on a four-point scale from (0) Not at all important to (3) Extremely important. No psychometric information is yet available for this measure.

3.4.8 Discussion

Assessment tools are important within both clinical and research settings, as they allow clinicians and researchers to identify affected others, estimate the prevalence of affected others in specific populations, examine the exact nature of gambling-related harms and responses to gambling-related harm, inform theoretical development, illustrate discrepancies between gamblers and their affected others, and evaluate the effectiveness of interventions for affected others. In this review, 19 per cent of the included articles contributed data to the assessment of affected others, which identified 22 instruments that have been specifically developed or recommended for the assessment of affected others. While there is a growing number of available instruments, it is evident that the screening, assessment, and outcome measurement instruments used with affected others have generally not been subject to rigorous development procedures, have limited available psychometric information, and are not well validated. As previously indicated, instruments to identify affected others vary considerably and all rely on the perceptions of affected others, which reflects the potential existence of gambling problems in their family members or friends, without any evaluation of the amount or type of concern (Salonen et al., 2014). Population-representative studies also examined the associations between current correlates and lifetime affected other status in longitudinal studies. This highlights the need for a standardised measure of current affected other status so that population estimates of affected other prevalence can be reliably determined, compared across jurisdictions and over time, and associated with current gambling-related harm. Measures of harms, coping, and social support tend to comprise too many items to be usefully employed in screening or epidemiological research. Moreover, there have been many issues raised regarding the measurement of gambling harms more generally (Delfabbro and King, 2019), many of which apply to these assessment measures for affected others.

3.5 Research question 4: Harms experienced by affected others

We identified 56 empirical studies and three systematic reviews (Dowling et al., 2016a, Kourgiatakis et al., 2013, Riley et al., 2018) that contributed data to fourth research question, which related to the harms experienced by affected others: 48 empirical studies and three systematic reviews (Dowling et al., 2016a, Kourgiatakis et al., 2013, Riley et al., 2018) exploring the types and extent of gambling-related harm experienced by affected others, two empirical studies exploring the burden of harm to affected others, and 12 empirical studies exploring the concordance in harms reported by gamblers and affected others.

3.5.1 Types and extent of gambling-related harm experienced by affected others

Key findings

- Intimate partners report an initial lack of awareness about the gambling problems, whereby the problem might be quite severe before it is recognised as a problem and deceit, lying, and a lack of trust are common.
- Intimate partners consistently report a range of consequences, such as emotional distress, depression, mood disorders, anger, suicidality, physical health problems, excessive alcohol use, smoking, overeating, impulsive spending, financial loss, family relationships, parenting problems, and social isolation.
- Harms extend beyond partners with others such as adult children reporting they distanced themselves or perceived themselves as caregivers and parents reporting diminished life enjoyment, concerns about their grandchildren, physical and emotional stress, financial problems, conflict with their problem gambling adult children, conflict with their own partners, and feelings of responsibility and blame.
- Gambling-related harms also extend to couple and family functioning, with reports of poor family functioning, conflict, tension, communication problems, family disconnection, low family support, mental health problems, neglect of responsibilities, hypervigilance, alcohol use, intimacy problems, separation/divorce, intimate partner violence, and childhood maltreatment.

In our systematic search, we identified 48 empirical studies and three systematic reviews (Dowling et al., 2016a, Kourgiantakis et al., 2013, Riley et al., 2018) that contributed data to the research question relating to the gambling-related harms and impacts experienced by affected others. Given the overlap in studies with the systematic review conducted by Riley et al. (2018), which collected data up until July 2018, we will provide comprehensive summaries of each of the available systematic reviews for the purpose of answering this research question. We will subsequently supplement this description with a mapping exercise, in which the Langham et al. (2016) taxonomy of gambling-related harm will be employed as an organising structure for the included studies. This section is further organised with reference to the study designs that characterise this literature: quantitative research measuring harm with direct reference to gambling, quantitative research measuring harm without direct reference to gambling, and qualitative research.

Systematic reviews

Three systematic reviews exploring the types and extent of gambling-related harms experienced by affected others were identified (Dowling et al., 2016a, Kourgiantakis et al., 2013, Riley et al., 2018): two aiming to describe the impact of problem gambling on affected others (Kourgiantakis et al., 2013, Riley et al., 2018), and one investigating the specific relationship between problem gambling and intimate partner violence (Dowling et al., 2016a).

In the first systematic review, Kourgiantakis et al. (2013) examined the impact of problem gambling on families, with included studies published from 1998 to 2013 that employed either gambling or affected other samples. The review identified 29 peer-reviewed or grey research studies examining adverse effects or consequences of adult problem gambling on spouses or partners (k=22), young children (k=4), adult children (k=2), parents (k=1), and overall family and couple functioning (k=14). These studies were predominantly cross-sectional (73 per cent), employed a range of research methodologies (50 per cent quantitative, 30 per cent qualitative, 20 per cent mixed methods),

and rarely included both gamblers and affected others (33 per cent). The majority were conducted in Canada (43.3 per cent), with smaller proportions conducted in Australia (20.0 per cent), the United States (13.3 per cent), and the United Kingdom (10.0 per cent). The identified two key findings relating to gambling-related harms for parnters: a lack of awareness or understanding about problem gambling, whereby the problem might be quite severe before it is recognised as a problem and deceit, lying, and a lack of trust are common; and individual, family, and social consequences (such as distress, physical health problems, financial loss, family relationships, parenting problems, social isolation). This review also documented the effects on young children, which is outside the scope of our scoping review, but also noted several studies in which it was found that adult children also experience negative impacts of parent problem gambling and that there might be similarities with the consequences experienced by younger children. One study examining the impact of adult child problem gambling on parents (Patford, 2007b) identified a range of adverse effects, including feelings of responsibility and blame for the gambling. Finally, the review identified a range of harmful effects on overall couple and family functioning, including poor family functioning, conflict, tension, communication problems, family disconnection, low family support, mental health problems, alcohol use, intimacy problems, separation/divorce, intimate partner violence, and childhood maltreatment. The review authors concluded that there was consensus across the studies that problem gambling has several adverse effects on individuals, families, and family functioning.

Riley et al. (2018) conducted a systematic review up to July 2018 aiming to describe the impact of problem gambling on affected others and how affected others respond to gambling-related harm up to July 2018. This systematic review restricted their included studies to published peer-reviewed articles of any study design published in English that employed samples of affected others. The review identified 53 studies for inclusion, the majority of which were conducted in Australia (30 per cent), the USA (17 per cent), and Canada (13 per cent). The studies were generally evenly split between qualitative (49 per cent) and quantitative (40 per cent) study designs, with a small proportion (11 per cent) employing a mixed methods design. The review concluded that the included studies were generally methodologically rigorous, but identified several key areas for improvement in reporting for the quantitative studies (study dropouts, study sample description), qualitative studies (theoretical perspective, informed consent, participant selection, potential influences), and mixed methods studies (potential influences, challenges integrative qualitative and quantitative data). Based on review team consensus, the findings were synthesised into three themes relating to gambling-related harms: impact on the health of a partner; impact on the marital/couple dyad; and impact on affected others other than partners.

Impact on the health of a partner

The review revealed that studies consistently found that intimate partners were negatively affected. Although there were some inconsistent findings in terms of negative affectivity, several studies found high rates of mood disorders, emotional distress, anger, depression, and suicidality. Intimate partners also reported high rates of behavioural problems, such as excessive alcohol use, smoking, overeating and impulsive spending, as well as physical health problems, such as headaches, stomach problems, feeling faint or dizzy, breathing irregularities, backaches, high blood pressure, and poor sleep.

Impact on the marital/couple dyad

The review revealed that studies generally revealed that problem gambling had a considerable negative impact on relationship functioning, including interpersonal conflict (including familiar violence), neglect of responsibilities, and threats of separation or divorce. Hypervigilance involving a chronic state of anxiety about gambling was common, resulting in continuous monitoring and seeking evidence of gambling. Hypervigilance was also related to worry about creditors, unemployment, the gambler's health, the gambler resorting to criminal behaviour, the police, and increased uncertainty. Partners often reported financial problems, which could continue even after the gambling had ceased.

Impact on affected others other than partners

The majority of research on affected others was conducted with the children of problem gambling parents, which is beyond the scope of our scoping review. Several studies, however, reported that adult children were less affected than younger children because they were financially dependent. Adult children, however, indicated they distanced themselves due to fear of being harassed for money and perceived themselves as caregivers because they had taken control of their parents' finances. Gambling-related harms in parents and parents-in-law included diminished life enjoyment and concerns about their grandchildren, as well as increased physical and emotional stress, financial problems, conflict with their problem gambling adult children, and conflict with their own partners.

Finally, Dowling et al. (2016a) identified 14 qualitative studies specifically exploring the association between problem gambling and intimate partner violence (eight for victimisation only, four for perpetration only and two for both victimisation and perpetration). This systematic review included studies in which any sample type reported on the problem gambling and/or family violence of themselves or their partners. Although there were some equivocal findings, this review found that problem gambling was consistently associated with both the victimization and perpetration of IPV. Meta-analyses revealed that over one third of problem gamblers report being victims of physical intimate partner violence (38.1 per cent) or perpetrators of physical intimate partner violence (36.5 per cent) and that the prevalence of problem gambling in intimate partner violence perpetrators is 11.3 per cent. Moreover, factors implicated in the relationship between problem gambling and victimisation included less than full employment and clinical anger problems and factors implicated in the relationship between problem gambling and perpetration included younger age, less than full employment, clinical anger problems, impulsivity, and alcohol and substance use.

Mapping harms literature to harms framework

Using four separate methodologies (literature review, focus groups with 35 professionals involved in the support and treatment of gambling problems, interviews with 25 gamblers and their affected others, and an analysis of 469 public forum posts for problem gamblers and their affected others), Langham et al. (2016) developed a taxonomy of gambling-related harm for affected others. This taxonomy identifies and organises the diverse impacts on health and wellbeing that can occur to affected others as a result of gambling across the seven thematic classifications of harm: financial harms; relationship disruption, conflict or breakdown; emotional or psychological distress; decrements to health; cultural harm; reduced performance at work or study; and criminal activity (see Table 1 for a summary of general harms, crisis harms, and legacy harms within each harm domain).

Table 1. Summary of Langham et al.'s (2016) taxonomy of gambling-related harm for affected others

Harm domain	Type of harm	Summary of harms
Financial harms	General harms	Costs due to lack of financial capacity, reduced capacity to purchase luxury items, reduced discretionary spending, erosion of savings, activities to manage short term cash-flow issues (e.g., additional employment, accessing additional credit, pawning, pay day loans), cost of replacing sold or pawned items, and reduced expenditure on items of non-immediate (e.g., insurance, repairs, health promotion) and immediate (e.g., education, medical care, clothing, food, housing, bill assistance, transport) consequences.
	Crisis harms	Loss of capacity to meet requirements of essential needs, loss of normal accommodation, loss of major assets (e.g., car, home, business), and bankruptcy.
	Legacy harms	Eeliance on welfare, bankruptcy or credit rating restrictions, ongoing financial hardship, "forced" cohabitation in unhealthy relationship due to financial constraint, financial harm from attempts to manage debt, financial disadvantage, and higher costs from poor credit ratings.
Relationship disruption, conflict, or breakdown	General harms	dishonest communication, unreliable and unavailable gambler, reduced time and quality time with gambler, unequal relationship contribution, gambler withdrawing from relationship responsibilities, relationship neglect by gambler, reduced engagement in family or social events by gambler, relationship tension, tension in other relationships, conflict, loss of trust, relationship role distortion, and family or intimate partner violence.
	Crisis harms	Contemplation or actual separation, loss of other relationships, social isolation due to shame and stigma, relationship role distortions, and family or intimate partner violence.
	Legacy harms	Guilt over ending relationship, social isolation, vulnerability to ongoing unhealthy relationship, reduced participation in social events, ongoing resentment and shame, relationship rebuilding or reconciliation, ongoing involvement of family court, estrangement from gambler and related others, ongoing distortion of relationship roles, inability to form trusting relationships, and family or intimate partner violence.
Emotional or psychological distress	General harms	Frustration, anxiety due to communication problems, distress caused by difference to own value system, feelings of suspicion or being lied to, reduced self-worth, shame or guilt, reduced safety and security, feelings of inadequacy, feeling manipulated or threatened, perceptions of stigmatisation, anxiety when gambler disappears, being blamed for gambling, distress at people arguing, increased insecurity and vulnerability, loss of "face" or reputation, loss of sense of future, powerlessness, guilt over harms to others, anger and frustration, and fear of creditors. The framework developers argue that although mental health disorders and symptomatology (e.g., depression, anxiety) can conceptually fit into both emotional and health categories, they are more logically grouped into this category as the severe end of the continuum of emotional impacts (Browne, personal communication, May 6, 2020).
	Crisis harms	Extreme emotional or psychological distress (due to other harms, harms to others, constant feelings of insecurity and vulnerability, dealing with gamblers distress, supporting gambler to seek treatment), loss of self-worth and pride, shame, hopelessness and powerlessness, stigma, fear or creditors, grief or resentment, and feelings of rejection.
	Legacy harms	Stigma, ongoing guilt and shame, emotional impacts of supporting recovery, ongoing feelings of insecurity and vulnerability, ongoing emotional distress (due to other harms, harm to others, vigilance to mental health status of gambler), and ongoing feelings of grief, resentment, and anger.

Harm domain	Type of harm	Summary of harms
Decrements to health	General harms	Physical impacts of other harms, biological manifestation of emotional and physical distress (e.g., tiredness, increased blood pressure, sleep problems, migraine, nausea, diarrhoea), reduced levels of self-care (e.g., nutrition, hygiene, sleep, medical compliance, physical activity, reduced living circumstance quality), incidence of disease or injury due to reduced levels of self-care, interaction with other health risk factors (e.g., drinking, smoking, illegal substance use), interaction with other morbidities (depression, anxiety, biophysical chronic disease), family violence, and self-harm. There were links to other behavioural health risk factors, such as smoking, alcohol consumption, and poor nutrition.
	Crisis harms	Exacerbation of risk factors or continued stress from other harms, physical impacts of homelessness, experience of violence, medical emergency, serious self-harm, and attempted or completed suicide.
	Legacy harms	Ongoing disability, disease or decrement to health due to attempted suicide and self-harm, risk factors or poor self-care, and exacerbation of other medical conditions.
Reduced performance at work or study	General harms	Reduced performance due to tiredness or distraction, increased absenteeism, and reduced availability to volunteer.
	Crisis harms	Theft or fraud from employment/educational institution, loss of job or suspension/exclusion from educational institution, exacerbation of other harms due to job loss, and impact on others by loss of job or education.
	Legacy harms	Reduced opportunity for employment or enrolment, transgenerational impact of loss of income and future ability to participate in employment, and ongoing reduced volunteer work.
Cultural harms	General harms	Reduced engagement in cultural rituals, culturally based shame in relation to cultural roles and expectations, reduced contribution to community and cultural practices, reduced cultural practices, reduced connection to cultural community, and increased social exclusion or isolation.
	Crisis harms	Cultural shame, and loss of contribution or damaged connections to community and culture.
	Legacy harms	Ongoing cultural shame, reduced contribution to community, reduced cultural practices, and reduced connection to community.
Criminal activity	General harms	Being a victim of crime from gambler (e.g., petty theft of items or cash), vulnerability to illegal activities, engagement in crimes of opportunity (e.g., petty theft from family members, property crimes, illicit lending), and engagement in crimes of duress (e.g., drug trafficking, prostitution).
	Crisis harms	Being victim of crime from gambler (fraud, significant theft of money or items, illegal activities) and arrest and/or conviction (of criminal activity of opportunity, duress, and negligence).
	Legacy harms	Ongoing impacts from being a victim of crime, impact of criminal record, disruption to relationships of custodial sentence, ongoing impact on others due to criminal record or custodial sentence, transgenerational impact of criminal record or custodial sentence, and shame and stigma of criminal activity involvement.

Financial harms

In Langham et al.'s (2016) taxonomy, financial harms were a dominant harm, likely because they are a trigger for a temporal point of significance such as behaviour change of help-seeking, are easily identified, and often have an immediate and significant impact that result in further harms across other life domains. The mapping exercise revealed that 23 studies contributed data to the identification of financial harms for affected others: ten quantitative studies measuring harm with direct reference to gambling, two quantitative studies measuring harm without direct reference to gambling, and 12 qualitative studies .

Relationship disruption, conflict, or breakdown

In the taxonomy, harms relating to the relationships between gamblers and their affected others were a key threshold harm that triggered help-seeking. These were often a second order harm due to the consequences of financial harms, but also a primary harm due to the reduced available time of the gambler, differences in levels of engagement, breaches in trust, and distortion of relationship roles. The mapping exercise revealed that 36 studies contributed data to the identification of relationship disruption, conflict, or breakdown for affected others: eight quantitative studies measuring harm with direct reference to gambling, 17 quantitative studies measuring harms without direct reference to gambling, and 12 qualitative studies.

Emotional or psychological distress

In the taxonomy, harms relating to emotional and psychological distress were consistently reported, occurred as both primary and secondary or further order harms, and were often exacerbated by the impact of harm in other domains. Three subthemes relating to the sources of emotional and psychological distress were identified: lack of control, feelings of insecurity or lack of safety, and feelings of shame and stigma. The mapping exercise revealed that 40 studies contributed data to the identification of emotional or psychological distress for affected others: 11 quantitative studies measuring harm with direct reference to gambling, 21 quantitative studies measuring harm without direct reference to gambling, and 12 qualitative studies.

Decrements to health

The taxonomy suggests that the health of affected others were impacted, often through a lack of available funds impacting on health determinants. The mapping exercise revealed that 21 studies contributed data to the identification of decrements to health for affected others: seven quantitative studies measuring harm with direct reference to gambling, seven quantitative studies measuring harm without direct reference to gambling, and seven qualitative studies.

Reduced performance at work or study

In the taxonomy, reduced performance at work or study was generally experienced as a second order harm. The mapping exercise revealed that only five included studies contributed data to the identification of reduced performance at work or study for affected others: four quantitative studies measuring harm with direct reference to gambling and one quantitative study measuring harm without direct reference to gambling, but no qualitative studies.

Cultural harms

The harms taxonomy added cultural harms as a separate theme to relationship harms despite the fact that they tended to co-occur due to the link between family and culture. While this category was not strongly represented in the data due to the homogeneity of participants, it was argued that they were sufficiently reported to include as a classification and that this category of harm was sometimes felt by affected others before gamblers. The mapping exercise revealed that only one study contributed data to the identification of cultural harms for affected others, which was a quantitative study measuring harm with direct reference to gambling. There were no quantitative studies measuring harm without direct reference to gambling or qualitative studies.

Criminal activity

Involvement in criminal activity was reported as a second order harm for affected others in the taxonomy, most commonly to address deficits of funds available to continue engaging in gambling. The mapping exercise revealed that only nine studies contributed data to the identification of criminal activity for affected others: three quantitative studies measuring harm with direct reference to gambling, one quantitative study measuring harm without direct reference to gambling, and five qualitative studies.

3.5.2 Burden of harm to affected others

Key findings

- **Overall, the quality of life of people who report that they have been adversely affected by someone else's gambling is decreased by 10 per cent to 28 per cent.**
- **These decreases in quality of life appear to vary according to the severity of the gambling problem. The quality of life of affected others is decreased by 36 per cent when gamblers have problem gambling; by 33 per cent when gamblers have moderate-risk gambling problems; and by 17 per cent when gamblers have low-risk gambling problems.**

Only two empirical studies contributed data to the research question relating to the burden of harm to affected others. In an Australian general population survey, Rockloff et al. (2019) aimed to calculate a population aggregate impact of gambling involvement in terms of either quality of life improvement or reduction using two elicitation approaches typical of burden of disease methods: a direct elicitation method (in which net benefits/harms were derived by asking affected others directly if gambling increased or decreased their quality of life and subsequently by how much) and a time trade-off task. Using the direct elicitation method, this study reported that 53.1 per cent of affected others reported that their lives had been made worse due to gambling, 5.5 per cent reported that their lives were better, and 38.0 per cent reported that their lives were neither better nor worse. Among those who indicated that their quality of life had been made worse by someone else's gambling, the largest number (15.1 per cent of affected others) nominated losses of 50 per cent or more for their quality of life. The weighted average loss in quality of life using a direct elicitation method was 10.3 per cent per affected other. Using the time trade-off task, 69.0 per cent of affected others were found to be negatively affected and the largest number of affected others (49.0 per cent) nominated losses of 50 per cent or more for their quality of life. Using this method, the weighted average loss was 28.4 per cent per affected other. The authors therefore argued that the direct elicitation method may undercount the quality of life impacts on harm.

These decreases in quality of life appear to vary according to the severity of the gambling problem. In an Australian online panel survey, Browne et al. (2017) aimed to establish the relationship between problem gambling severity

categories and the health-related quality of life decrements using a population health method. The method involved 786 participants (252 gamblers, 238 affected others, 245 general population, 51 experts) rating the impact of vignette descriptions using two equally weighted direct elicitation methods: time trade-off (duration of time participants would give up in order to avoid the harms described in the vignettes) and visual analogue scale (respondents indicate where on the scale from 0 [least harmful] to 100 [most harmful] they would place the health state). Disability weights for different levels of problem gambling severity were then estimated. Disability weights are health-related quality of life weights that typically measure the decrement to quality of life a condition has on an individual living one year with that condition. A harm-to-others disability weight of 0.36 was estimated for problem gambling, suggesting that the quality of life of people affected by someone else's gambling is decreased by 36 per cent. In other words, most affected others would prefer to live only 6.5 years being free of gambling problems, rather than ten years with them. Lower, but non-negligible, disability weights of .17 and .33 were determined for low- and moderate-risk gambling, respectively.

3.5.3 Concordance in harms reported by gamblers and affected others

Key findings

- **Studies exploring the concordance in harms between couples generally suggest that partners perceive the consequences arising from the gambling as more severe than gamblers.**
- **Studies comparing independent samples of gamblers and partners suggest that gamblers and partners report a similar number of harms across all domains, but the profile of harms is markedly different, with gamblers more likely to report immediate and direct harms and partners more likely to report harms that could be a secondary consequence of these direct harms.**
- **In contrast, studies comparing independent samples of gamblers and all types of affected others suggest that a high level of correspondence in harms, with the major differences appearing to be in terms of the quantity, rather than the quality, of harms.**
- **People with gambling problems across the continuum of risk also estimate that their gambling problems affect fewer people than affected others.**
- **The degree of agreement between gamblers and their affected others in relation to the extent of the gambling range from fair to excellent, with greater agreement for affected others who are more confident in their estimates.**

We found 12 empirical studies that contributed data to the differences in harms reported by gamblers and affected others: four studies exploring the concordance in harms reported by couples (gamblers and intimate partners), two studies comparing gambling-related harms reported by independent samples of gamblers and partners, two studies taking a broader approach by exploring the differences in harms reported by independent samples gamblers and all types of affected others, and four studies specifically focused on comparing the differences in the reporting of various gambling behaviour indices by gamblers and their affected others.

Studies exploring the concordance in harms between couples suggest that partners perceive the consequences arising from the gambling as more severe than gamblers, particularly in relation to the impact on the partners' psychological wellbeing, increase in personal debts, decrease in time dedicated to leisure issues, family functioning, and relationship adjustment and satisfaction (Cunha et al., 2015, Ferland et al., 2008, Tremblay et al., 2018). There are, however, conflicting findings, with Lee and Awosoga (2015) finding that partners reported higher systemic functioning (individual problems and strengths, family of origin, and relationship with partner). Moreover,

evaluations of individual functioning have revealed that gamblers report higher levels of psychological distress than their partners (Lee and Awosoga, 2015, Tremblay et al., 2018).

Similarly, studies have reported considerable differences in gambling-related harms reported by independent samples of gamblers and partners. Cunha and Relvas (2015) found that 13 partners reported lower levels of quality of life, dyadic adjustment, and marital satisfaction than an independent sample of 19 people with gambling problems. A large study of 5036 participants (4027 gamblers and 1009 partners) from Australian and New Zealand online panels conducted by Jeffrey et al. (2019) found that gamblers and partners reported a similar count of total harms across all domains, for a given degree of gambling problems, after controlling for gender and problem gambling severity. The profile of harms, however, were markedly different. Compared to partners, gamblers reported a higher number of harms in all domains of harm except the emotional and relationship domains. Gamblers were more likely to report immediate and direct harms while partners were more likely to report harms that could be a secondary consequence of these direct effects. Specifically, partners were much more likely to report increased conflict, increased tension, relationship termination, feeling belittled in the relationship, threat of relationship separation, and distress about the gambling than gamblers. In contrast, gamblers were much more likely to report feeling like a failure, feeling compelled or forced to commit a crime, using work or study time, neglecting hygiene or self-care, and being excluded from study. Moreover, gamblers were more likely to report severe health-related harms, such as increased alcohol consumption and suicide attempts.

These findings, however, do not seem to apply when examining the differences in harms reported by independent samples of gamblers and all types of affected others. In a sample of 5205 participants (independent samples of 3076 gamblers and 2129 affected others) from Australian online panels, Li et al. (2017) found a high level of correspondence in the harms reported by gamblers and affected others, with the major differences appearing to be in terms of the quantity, rather than the quality, of experienced harms (Li et al., 2017). Harms in all domains tended to accumulate more quickly to gamblers than affected others as gambling problems increased, with gamblers appearing to 'export' about half of the harms they experienced to their affected others. Using the same sample, Goodwin et al. (2017) reported that people with gambling problems across the continuum of risk estimate that their gambling problems affect fewer people than affected others: problem gambling (four people cf. six people), moderate-risk gambling (one person cf. three people), and low-risk gambling (zero people cf. one person).

Finally, using Cicchetti's (1994) guidelines for interpreting intra-class correlations (ICCs), studies suggest that the agreement between gamblers and their affected others in relation to the extent of the gambling range from fair to excellent: poor to fair agreement on money spent gambling (ICC=0.32-0.58, r=0.68) (Diskin and Hodgins, 2009, Hodgins and Makarchuk, 2003, Magnusson et al., 2019b, Petry et al., 2006), fair agreement on amount of gambling debt (ICC=0.57) (Magnusson et al., 2019b), fair to good agreement on number of days gambled (ICC=0.46-0.65, r=0.62) (Diskin and Hodgins, 2009, Hodgins and Makarchuk, 2003, Petry et al., 2006), good to excellent agreement on length of gambling (ICC=0.73-0.79) (Hodgins and Makarchuk, 2003, Magnusson et al., 2019b), and excellent agreement on length of problem gambling (ICC=0.93) (Hodgins and Makarchuk, 2003), These studies have found that the level of agreement was equivalent across partners and parents for length of gambling (Magnusson et al., 2019b), but the level of agreement was highest for parents for money spent gambling (Hodgins and Makarchuk, 2003) and the amount of gambling debt (Magnusson et al., 2019b) but lowest for parents for days gambled (Hodgins and Marchuk, 2003). Interestingly, Diskin and Hodgins (2009) found that when the analysis was limited to affected others who were 'extremely confident' in their estimates, the level of agreement increased for money spent gambling and the number of days gambled.

3.5.4 Discussion

This scoping review contributes to the growing literature on the negative impacts of gambling problems on others by providing further insight into the harms affected others may experience. The investigation of gambling harms has attracted the most research effort in the last 20 years, with 71 per cent of the included empirical articles contributing information on this topic, particularly in relation to spouses or intimate partners. Systematic review evidence suggests that partners report an initial lack of awareness about the gambling problems, which is unsurprising given the secrecy which often surrounds gambling, making it difficult to detect (Sullivan et al., 2007, Orford et al., 2017). Research aimed at understanding gambling harm has demonstrated its far-reaching consequences on affected others, with affected others reporting considerable harms across multiple domains. Systematic review evidence suggests that partners consistently report a range of consequences, but that harms extend beyond partners, including to adult children and parents. Gambling-related harms also extend to couple and family functioning. Recent findings suggest that the quality of life of people affected by someone else's gambling is decreased by 10 to 36 per cent. Affected others have also reported slightly lower, but non-negligible, estimates when the gamblers had lower risk problems. It would be of interest for future research to explore which characteristics of gamblers and affected others influence the net benefits or harms they experience (Rockloff et al., 2019) and calculate the cost of affected others to the health system (Dickson-Swift et al., 2005).

There is evidence to suggest that there are a similar number of harms across all domains experienced by people with gambling problems and their affected others, but the nature of the experience and types of harm reported are different. The types of harm reported by affected others in this scoping review are largely consistent with Langham et al. (2016) framework. Interestingly, educational and cultural harms were proposed as domains of harm in this framework, yet have received very little research attention in relation to affected others. Interestingly, cultural harms were not initially included as a domain in Langham et al. (2016) framework, but were included following further analysis of the data relating to people with strong religious beliefs, culturally and linguistically diverse groups and indigenous populations. Langham et al. (2016) notes that these harms emerged as a separate domain, although note that relationship and cultural harms tend to occur together due to the strong associations to culture through family and other relationships. Educational and cultural harms also did not arise as gambling harm sub-themes in Riley et al. (2018) recent systematic review. Langham et al. (2016) argues that each domain should be investigated to ascertain its relative contribution to the experience of harm, highlighting the need for additional research into the degree to which affected others report reduced performance at work or study and cultural harms as a result of exposure to gambling by others.

Findings from this review consolidate the evidence relating to the harms imposed by gambling problems and highlight the need for governments, industry, researchers, and service providers to take steps to protect affected others from these harms. These findings suggest opportunities may exist to minimise these gambling-related harms on affected others. Effective screening and referral protocols, including accessible and available services (Landon et al., 2018), are required for affected others. Interventions that assist affected others to address their own wellbeing, particularly in relation to financial management, coping skills training, legal options, and crisis management, are warranted (Dowling et al., 2009, 2014, Hing et al., 2013, Hodgins et al., 2007a, Holdsworth et al., 2013, Kourgiantakis et al., 2018, Rodda et al., 2019, Wenzel et al., 2008). Evidence regarding family and relationship dysfunction also highlights the need for relationship- and family-oriented interventions that address practical, daily life issues and relational aspects (Klevan et al., 2019); (Rodda et al., 2019, Suomi et al., 2013). Other opportunities may include the allocation of resources towards public health initiatives to raise awareness of the possible impacts of problem gambling on affected others and service availability, with a view to early detection of harms and prevention of further deleterious consequences (Dickson-Swift et al., 2005, Hing et al., 2013); (Holdsworth et al., 2013, Jeffrey et al., 2019, Landon et al., 2018, Patford, 2009, 2007b, 2007a). As previously suggested, other service providers, who may be the first point of contact for affected others, could be trained to raise their awareness of gambling-related harms, screen for problem gambling and affected other status, and

provide harm minimisation strategies or appropriate referrals (Dickson-Swift et al., 2005, Jeffrey et al., 2019, Li et al., 2017, Patford, 2007b, Sullivan et al., 2007).

It has been estimated that gamblers appear to 'export' about half of the harms they experienced to their affected others. The potential lack of concordance in reports of gambling-related harm between gamblers and affected others calls into question the findings from previous literature employing gambling samples (Cunha and Relvas, 2015). These findings suggest that the experience and interpretation of the experience is not the same for each individual in the family (Kourgiantakis et al., 2013). Several explanations put forward to explain the potential for gamblers to minimise or underestimate the impact of their gambling on others include reduced awareness resulting from a focus on gambling and obtaining means to gamble, self-presentation bias, denial, relief of guilt or remorse combined with idealization of the other members of the family, attribution of negative outcomes to external forces, and positive memory biases (Cunha et al., 2015, Goodwin et al., 2017, Jeffrey et al., 2019). Alternatively, it has been suggested that affected others may over-exaggerate the harmful impacts because they feel like victims of the gambler's irresponsibility (i.e., the disillusion or retaliation effect) (Cunha et al., 2015). The explanation for the differences in self-report notwithstanding, the identification of discrepancies in the self-report of gamblers and their affected others highlight the importance of assessing gambling-related harm from both perspectives (Côté et al., 2018, Cunha and Relvas, 2015, Cunha et al., 2015, Li et al., 2017, Kalischuk, 2010, Kourgiantakis et al., 2013). These conclusions, however, are based on a limited literature characterised by small samples and inconsistent results, suggesting that additional research employing a matched-pairs design of gamblers and their affected others to compare their experiences is required (Jeffrey et al., 2019, Li et al., 2017). An enhanced understanding of the divergences in their perceptions can inform the development of more effective public-health initiatives and interventions for affected others, family support, couples, and families (Cunha et al., 2015, Ferland et al., 2008). The differences in perspectives between gamblers and others highlight the challenges that clinicians face when working with couples, dyads, or families in which there is a gambling problem or gambling-related harm (Côté et al., 2018). Implications for clinical practice in which affected others are involved in treatment include the need to set shared therapeutic goals, maintain neutrality, and create a secure and non-defensive context (Cunha et al., 2015).

While the bulk of the available literature focuses on the gambling-related harms reported by affected others, there are considerable discrepancies in study methodologies and important gaps in some areas. The identification of gambling-related harms to affected others is generally derived from studies employing relatively small treatment-seeking samples, which may not be generalizable to affected others in the general population, highlighting the need for further systematic research employing larger samples of affected others from the general population or non-clinical sources to gain a full appreciation of the nature of the impact of gambling problems (Côté et al., 2018, Dowling et al., 2009, Estevez et al., 2020, Hodgins et al., 2007a, Wenzel et al., 2008, Salonen et al., 2014). There is consistent evidence of gambling-related harm from both qualitative literature and quantitative literature that measures harm with and without direct reference to gambling. The quantitative literature, however, is almost entirely cross-sectional in nature, which does not allow for causal statements concerning the direction of the relationship between problem gambling and some "harms" that are measured using non-attributional measures, such as emotional or relationship dysfunction. Moreover, it is likely that gambling harms change over time, whereby affected others are first unaware of the gambling problem then become aware of the gambling problem as a result of a crisis harm or disclosure of the gambling problem (Valentine and Hughes, 2012, 2010). There is some evidence that some harms resulting from gambling, such as financial issues, occur early on, while others are second-order harms or the result of longer-term exposure to gambling problems (Kalischuk, 2010, Langham et al., 2016). Limited information relating to the dynamic adaptation by affected others has been documented in qualitative literature (e.g., Kalischuk, 2010), but there is a need further quantitative longitudinal family-focused research examining how gambling-related harm changes over time (Bertrand et al., 2008, Dowling et al., 2009, Kalischuk, 2010, Langham et al., 2016, Mazzoleni et al., 2009, Salonen et al., 2014, Svensson et al., 2013).

As previously noted, the majority of the available literature focuses on intimate partners, with further research needed to explore how potential harm is experienced by different groups of affected others. The conclusions drawn from the current literature about gambling-harms experienced by affected others are also based almost

exclusively on male gamblers and their female partners, which may not be generalizable to the male partners of female gamblers or same-sex partners. This gender bias has emerged within the context of prevailing cultural views of gambling as a stereotypically masculine activity, despite an increased prevalence of gambling problems in women due to the feminisation of gambling activities. It has been suggested that the harmful impacts of female problem gambling on the family, particularly in relation to children, may be exacerbated given women's traditional familial roles and caregiver and nurturer (Darbyshire et al., 2001, Kalischuk et al., 2006). It is evident that direct gender comparisons are warranted in this area of research (Côté et al., 2018, Dowling et al., 2009, Mazzoleni et al., 2009, Patford, 2007b, Svensson et al., 2013). Similarly, much of the available research has been conducted using English-speaking affected others from Western countries. However, the strong emphasis on family in Asian contexts, for example, may exacerbate gambling-related harms on families (Mathews and Volberg, 2013). Understanding the impacts of problem gambling on affected others from different cultural backgrounds will enhance the development of culturally appropriate theoretical models, societal education, and family sensitive treatment programs (Chan et al., 2016, Bond et al., 2016, Mathews and Volberg, 2013).

Despite the consistency in the findings, it is likely that affected others are not a homogenous group (Crisp et al., 2001), with harms varying by a range of factors, including their relationship to the gambler, their cohabiting status, the severity and chronicity of the gambling problem, the motivation of the gambler to change, and their pre-existing psychological difficulties. Not all affected others experience the same degree of gambling-related harm, suggesting that there are factors that protect them, such as their coping strategies and resources. Further research to understand the risk and protective factors that determine the extent of gambling-related harm (Dowling et al., 2014, Kourgiantakis et al., 2013, Langham et al., 2016, Rodda et al., 2019, Vitaro et al., 2008) is therefore required to inform the development of public health initiatives and interventions.

3.6 Research question 5: Coping strategies employed by affected others

We identified 22 empirical studies and two systematic reviews (Kourgiantakis et al., 2013, Riley et al., 2018) that contributed data to the fifth research question, which related to the coping strategies employed by affected others, which are those that are accessed without professional oversight: 19 empirical studies and one systematic review (Riley et al., 2018) examining the types of coping strategies employed by affected others, eight empirical studies and one systematic review (Riley et al., 2018) examining coping strategy motivations and barriers for affected others, and nine empirical studies and one systematic review (Kourgiantakis et al., 2013) examining the helpfulness of coping strategies employed by affected others.

3.6.1 Types of coping strategies employed by affected others

We identified 19 empirical studies and one systematic review (Riley et al., 2018) that contributed data to the research question relating to the types of coping strategies employed by affected others. The majority of affected others (83-88 per cent) attempt a range of gambling-related coping strategies before accessing other forms of support (Hing et al., 2013, Rodda et al., 2019, Riley et al., 2018), most likely to due to the various barriers to seeking professional help. These strategies can be grouped into two main goals: to influence the gambling behaviour and increase the wellbeing of the partner, couple, and family (Côté et al., 2018). One study examined these strategies in the context of these goals, three studies examined these strategies in the context of the coping component of the SSCS model, and 14 studies examined specific gambling-related coping strategies by affected others, including

non-professional or informal support, financial strategies, and support or online services. Four studies also examined the use of general coping strategies by affected others without direct reference to gambling.

Key findings

- **The majority of affected others attempt a range of coping strategies before accessing other forms of support, most likely to due to the various barriers to seeking professional help.**
- **These strategies can be grouped into two main goals: to influence the gambling behaviour and increase the wellbeing of the partner, couple, and family. The most frequently employed strategies aim to reduce or completely stop the gambling behaviour, with strategies to increase affected other wellbeing occupying a slightly less prominent position.**
- **Common strategies include non-professional or informal support from partners, other family members and friends, financial strategies, support groups and online services.**
- **Affected others generally report low levels of social support.**
- **Compared to non-affected others, affected others report higher levels of problem solving (reducing the stress produced by specific situations by modifying them), emotional expression (releasing the emotions generated by stressful situations), wishful thinking (wanting to live in an alternative reality in which situations are not stressful), and social withdrawal (discontuing relationships with people associated with stressful situations); and lower levels of being able to regulate their emotions than non-affected others.**

Gambling-related coping strategies classified by affected other goals

An exhaustive list of adaptation strategies employed by intimate partners was created by Côté et al. (2018). In this study, the use of adaptation strategies is considered to be a dynamic process that changes over time. In 19 semi-structured interviews with predominantly male treatment-seeking gamblers and their partners, the findings of this study revealed that partners used 30 strategies, which were grouped into two main goals: (1) influence the gambling behaviour; and (2) increase the wellbeing of the partner, couple, and family. The most frequently employed strategies aimed to reduce or completely stop the gambling behaviour, usually in reaction to a gambling-related event. Partners pursued eight specific objectives subsuming 18 adaptive strategies to achieve this goal: (1) increase gambler awareness of the negative consequences and reasons for abstinence (remind gambler of negative gambling-related consequences, make sarcastic or hurtful remarks about gambling, emphasise positive family and couple dynamics); (2) convince the gambler to reduce or stop gambling (express disagreement and ask gambler to stop, remind gambler of possible future negative consequences, communicate distress); (3) understand the full extent of the gambling behaviour (investigate recent gambling behaviour); (4) prevent or stop a gambling episode (attempt to convince gambler to not gamble, attempt to stop a gambling episode); (5) avoid reinforcing gambling behaviour (disapprove of gambling winnings, use gambling winnings); (6) help the gambler avoid high-risk situations (control access to money, provide safe contexts with no temptations, reduce sources of stress); (7) assist with treatment (help gambler begin treatment, participate in gambler's treatment, acknowledge progress); and (8) assist in the development of gambling-incompatible behaviour (suggest activities other than gambling).

The second main goal was also important, although it occupied a slightly less prominent position. These strategies were generally employed in response to an accumulation of the negative consequences of gambling. This goal was achieved through seven specific objectives subsuming 12 adaptive strategies: (1) protect gambler's, partner's or couple's reputation, avoid worrying family and friends, and avoid managing their lack of understanding (conceal extent of gambling from others aware of the problem, conceal gambling problem from others unaware of the problem); (2) avoid couple conflicts (play down severity of problem); (3) reduce personal suffering (diminish

own understanding of severity, temporarily withdraw from relationship after gambling, threaten breakup, find professional help for self); (4) decrease family financial strain (support gambler financially, compensate for gambler's inability to financially support the family); (5) spend quality family/couple time (use gambling winnings to have fun); (6) genuinely try to understand the problem (question gambler); and (7) be loyal and helpful by caring for the gambler (allow gambler to express distress).

The number, diversity, and frequency of adaptation strategy use was greater in couples in which the gambling problem was more chronic and severe. Many situations prompted partners to employ a particular strategy, the same context could give rise to several strategies, partners employed several different means to put a given strategy into action, and both members of the couple similarly perceived the strategies employed by partners. Partners sometimes changed adaptation strategies when they were not successful in influencing the gambling behaviour. Treatment or a change in gambling behaviour, however, marked a significant moment in the evolution of strategies, whereby anger and bitterness declined and the partners began using less control, supervision, and money management strategies, and more strategies aiming to enhance recovery and renewal, such as praise and involvement in family activities.

Gambling-related coping strategies informed by the SSCS model

Several studies have examined gambling-related coping strategies employed by affected others in the context of the coping component of the SSCS model. Krishnan and Orford (2002) identified eight coping strategies employed by affected others: controlling, tolerant, supportive, punishing, talking, limiting, separating, and help-seeking. Examining the coping component of the SSCS model, these authors concluded that family members affected by gambling most often employ engaged coping strategies, sometimes employ tolerant-sacrificing coping strategies, but rarely employ tolerant-accepting or withdrawal coping strategies. Compared to family members affected by alcohol or drug use problems, family members affected by gambling report similar levels of engaged and withdrawal coping, but lower levels of tolerant coping (Krishnan and Orford, 2002, Orford et al., 2017). A subsequent item-analysis conducted by Orford et al. (2017) revealed that the rate of endorsement was lower for only one item in the tolerant coping subscale; gambling affected others were less likely to report that they had given their relatives money even when they thought it would be spent on the addictive behaviour. In the context of gambling-related financial harm, it appears that treatment-seeking affected others have already come to a decision to resist loaning gamblers money. Engaged-emotional coping scores appear to be higher for female intimate partners than sisters and for those living in the same household as the gambler (Orford et al., 2017), but there are no significant differences in terms of socio-demographic characteristics for tolerant or withdrawal coping (Chan et al., 2016, Orford et al., 2017).

Specific gambling-related coping strategies

The majority of studies in this area have examined specific gambling-related coping strategies by affected others**.** One of the most common strategies employed is non-professional or informal support, in which support is obtained from people who are not professionally trained. In samples of treatment-seeking affected others, Rodda et al. (2019) reported that talking to family members about the gambling the most common self-help strategy (78 per cent), while Hing et al. (2013) reported that 67 per cent were currently employing non-professional help, with this help coming equally coming from partners and other family members, followed by friends then work colleagues. Qualitative research supports these findings, with many family members seeking informal support in the form of emotional relief, advice, and practical help from other family members, friends, work colleagues, and/or church members (Klevan et al., 2019, Krishnan and Orford, 2002, Leung et al., 2010, Patford, 2007a, 2007b, 2007c, 2009).

Financial strategies designed to provide financial protection, limit financial losses and reduce the gambling behaviour also appear very common, with approximately one-third of treatment-seeking affected others reporting the use of these strategies (Hing et al., 2013). Financial strategies employed by affected others include organising

direct debits for household bills and mortgage repayments, budgeting, giving the gambler spending money, taking action to protect joint accounts or closing joint accounts, setting up separate bank accounts, limiting access to cash, monitoring cash withdrawals, demanding their partner meet household expenses, paying household bills promptly, and assuming control of some or all of the finances (Hing et al., 2013, Klevan et al., 2019, Leung et al., 2010, Patford, 2007a, 2007b, 2007c, 2009, Rodda et al., 2019, Suomi et al., 2013). Some financial strategies, such as offering loans and paying off debts, have been described as "enabling" (Patford, 2007a, 2009).

Support groups and online services, such as reading information on websites, reading or posting in online forums, and self-help on the internet, also appear to be popular with affected others (Buchner et al., 2019, Magnusson et al., 2019a, Rodda et al., 2019, Wood and Wood, 2009, Wood and Griffiths, 2007). For example, approximately 16 per cent of online forum members are affected others, with women more likely to be affected others than men (Wood and Wood, 2009).

Other gambling-related coping strategies employed by affected others include encouraging the gambler to seek help, talking to the gambler about how their gambling is affecting them, challenging the probability of winning, retrieving the gambler from gambling venues, encouraging new interests, directing attention to family responsibilities, negotiating gambling expenditure limits, separating the gambler from other gamblers, initiating shared leisure time activities, avoiding gambling venues on social occasions, and speaking emotionally to convey distress (Hing et al., 2013, Kleven et al., 2019, Leung et al., 2010, Patford, 2007a, 2007b, 2007c, 2009). Avoidance, distancing, and denial, particularly by adult children, have also been identified in the literature (Patford, 2007b, Rodda et al., 2019, Suomi et al., 2013).

General coping strategies

Several studies examined the use of general coping strategies by affected others without direct reference to gambling-related coping. All of these studies examined levels of social support reported by affected others. Although Estevez et al. (2020) found no significant differences in emotional support between affected others and non-affected others, the remaining three studies suggest that affected others have low levels of social support (Orford et al., 2017, Rodda et al., 2019, Svensson et al., 2013). These studies indicate that two-thirds (66 per cent) of treatment-seeking affected others stated that it would be difficult or very difficult to get practical help from neighbours if needed (Rodda et al., 2019), that levels of helpful informal social support, unhelpful informal social support, and helpful formal social support for people affected by gambling problems are comparable to people affected by substance use problems (Orford et al., 2017), and that emotional/practical support is negatively associated with affected other status (Svensson et al., 2013). Levels of social support may be gendered, however, with Svensson et al. (2013) finding an association between emotional/practical support and affected other status for women, but not men; although Orford et al. (2017) found no sex differences in any form of social support (Orford et al., 2017). Orford et al. (2017) also found no differences in social support in terms of affected other ethnicity or gambler sex.

Estevez et al. (2020) also compared affected others and non-affected others on other general coping styles without direct reference to gambling-related coping. In this study, affected others reported higher levels of problem solving (reducing the stress produced by specific situations by modifying them), emotional expression (releasing the emotions generated by stressful situations), wishful thinking (wanting to live in an alternative reality in which situations are not stressful), and social withdrawal (discontinuing relationships with people associated with stressful situations). There were, however, no differences between affected others and non-affected others on self-blame (blaming oneself for the recurrence of the stressful situation and its inadequate management), cognitive restructuring (modifying the cognitive interpretation of stressful situations), or problem avoidance (denying and avoiding thoughts and behaviours associated with stressful situations). Affected others also reported higher levels of difficulties in some aspects of emotion regulation (non-acceptance of emotional responses, lack of emotional clarity, lack of emotional control, and total emotion regulation) than non-affected others. There were, however, no

differences between affected others and non-affected others on other aspects of emotion regulation, such as lack of emotional awareness or difficulties engaging in goal-directed behaviour.

3.6.2 Coping strategy motivations and barriers for affected others

Key findings

- **Affected others report a range of motivations for using these strategies, such as concerns that the gambling may develop into a major problem, negative emotions, financial problems with spouse/ intimate partner; but also indicate a diverse range of barriers to the use of these strategies.**

The systematic search identified eight empirical articles and one systematic review (Riley et al., 2018) that contributed data to the research question relating to the motivations and barriers to the use of gambling-related coping strategies by affected others. Hing et al. (2013) found that affected others calling a gambling helpline were most motivated to both use self-help strategies and seek non-professional help in response to concerns that the gambling may develop into a major problem, negative emotions, financial problems, and problems with spouse or intimate partner. Less commonly identified reasons included concerns about the welfare of dependents, problems in maintaining normal daily activities, and physical health concerns. Similarly, qualitative findings from Landon et al. (2018) suggested that affected others often cited children as their motivation for accessing support and internal resources to cope. Affected others have suggested that the use of self-help strategies could have been encouraged by more information that affected others could access and use and earlier awareness of the problem (Hing et al., 2013).

In Hing et al.'s (2013) study, affected others also reported a diverse range of barriers to the use of self-help strategies or to seek non-professional help, but the most commonly reported barriers were wanting to solve the problem on their own, not thinking they would be able to help, shame, confidentiality concerns, and concerns that they may treat the gambler like an addict or as mentally ill. This is supported by studies that have been qualitatively explored barriers to seeking informal support. In in-depth interviews with specific subgroups of affected others, Patford (2007a, 2007b, 2007c, 2009) found that family members selected their confidantes carefully and set limits on what they disclosed. For female partners, this was due to feelings of self-protectiveness and fear of losing friends; while for male intimate partners, this was due to fears about stigma, privacy, criticism, and damage to their partner's public reputation. Parents and parents-in-law identified several obstacles to seeking informal support, including stigma, family privacy, the value of self-reliance, and wanting to maintain their child's public reputation. Similarly, adult children were reluctant to disclose completely for reasons including personal embarrassment, concerns for family privacy and concerns for their parent's reputation and relationships. While adult children appreciated informal emotional and practical support from family members and friends, misunderstandings and tensions occurred when loyalty to the gambling parent was strong or others failed to understand the complexity and intensity of feelings towards their parent. Other qualitative studies have found that many intimate partners are reluctant to discuss their situation with friends and family, often due to shame and stigma (Klevan et al., 2019, Krishnan and Orford, 2002). Interestingly, Krishnan and Orford (2002) found that affected others frequently reported that they felt unable to approach family members and friends for help or support who had been supportive in the past because these people had eventually lost patience. Others reported not approaching others because they feared rejection, they believed others would not be able to provide adequate support, others disagreed as to how to deal with the problem, others were unbelieving with regard to the extent of the problem, or others were unsupportive towards the gambling family member. The reluctance of affected others to disclose information about the gambling problem to their friends was also noted in Riley et al.'s (2018) systematic review.

3.6.3 Helpfulness of coping strategies employed by affected others

Key findings

- **Few studies have examined whether these strategies are effective in protecting affected others from additional gambling-related harm.**
- **Affected others report a range of effective strategies.**
- **There are mixed findings, but better functioning is generally associated with higher levels of coping.**
- **There are mixed findings in relation to how helpful affected others find non-professional or informal support.**

In our systematic search, we identified nine empirical studies and one systematic review (Kourgiantakis et al., 2013) that contributed data to the research question relating to the helpfulness of coping strategies employed by affected others. The SSCS model posits that effective coping strategies may buffer the stress-strain relationship. In their systematic review, Kourgiantakis et al. (2013) suggested that coping skills play a mediating role, given previous findings that psychological distress in affected others decreased when coping skills were more effective. Few studies, however, have examined whether these strategies are effective in protecting affected others from additional gambling-related harm. Some studies have found that affected others report that helpful self-help strategies include encouraging the person to seek help for their gambling, taking action to protect joint accounts, talking to the person about how their gambling is affecting them, self-care strategies, peer support, energy and morale, and positive beliefs and attitudes (Hing et al., 2013, Kleven et al., 2019, Kourgiantakis et al., 2018, Leung et al., 2010). Moreover, there is evidence that coping with the problem, positive beliefs, and self-efficacy (confidence in handling the situation) are associated with better functioning (lower psychological distress, greater relationship satisfaction, and physical illness) (Hodgins et al., 2007a, Leung et al., 2010) and that difficulties in emotion regulation are positively associated with anxiety and depression in affected others (Estevez et al., 2020). There is, however, other evidence that some coping strategies (engaged, tolerant-inactive, social withdrawal, self-blame and wishful thinking) are positively associated with psychological distress, depression or anxiety; and that some strategies (engaged, tolerant-inactive, and withdrawal) are positively associated with family impacts (Chan et al., 2016, Estevez et al., 2020).

There are also mixed findings in relation to how helpful affected others find non-professional or informal support. Krishnan and Orford (2002) reported that emotional support, including listening and being supportive towards the gambler, was generally more helpful than practical support, such as child-minding or loaning money. In contrast, Landon et al. (2018) found that affected others sought practical and financial support to manage an immediate crisis, such as loans, childcare, meals, homewares, and accommodation, in preference to informal emotional support. Leung et al. (2010) found that moderate to high perceived benefits were generated from access to financial help and emotional support from maiden families but that the majority of participants did not report moderate to high perceived benefits from emotional support from friends.

3.6.4 Discussion

Given the harms reported by affected others, the coping strategies employed by affected other represent a relatively unexplored field of research, with only 28 per cent of the included studies contributing data to this topic. These studies suggest that affected others attempt a range of self-help, coping or adaptation strategies before accessing other forms of support, most likely to due to the various barriers to seeking professional help. These

strategies can be grouped into two main goals: to influence the gambling behaviour and increase the wellbeing of the partner, couple, and family. Affected others reported a range of motivations for using these strategies but also indicate they are often reluctant to disclose information about the gambling problem to other friends and family. Affected others most commonly employ engaging and tolerant coping strategies, which is of concern given these forms of coping (but not withdrawing) are associated with strain (Chan et al., 2016, Orford et al., 2005). These findings suggest that affected others who withdraw themselves emotionally from the stress of having a gambling problem in the family are not as affected (Orford et al., 2005). Moreover, the chronicity and severity of the gambling problem is significantly associated with the number, diversity, and frequency of family coping, suggesting that affected others who experience the most addiction-related stressors are most likely to employ addiction-related coping strategies (Chan et al., 2016, Orford et al., 2005). Social support, self-efficacy, and emotion regulation, however, appear protective in the face of exposure to someone else's gambling problem.

It therefore generally remains unclear as to whether these strategies are effective in protecting affected others from additional gambling-related harm (Côté et al., 2018, Hing et al., 2013). The SSCS model proposes that coping strategies buffer the impacts of the strain associated with having a family member with a gambling problem. Further research is therefore required to understand which strategies affected others find most helpful and how these strategies work to improve their health and wellbeing (Orford et al., 2017), the impact of these strategies on the gambling behaviour and wellbeing of affected others (Côté et al., 2018), and whether these strategies mediate or moderate the stress-strain relationship (Chan et al., 2016). An enhanced understanding of the effectiveness of specific coping strategies and resources has the potential to inform the development of effective prevention and treatment efforts for gamblers and their affected others (Chan et al., 2016, Côté et al., 2018, Kourgiantakis et al., 2018, Leung et al., 2010).

The literature examining the coping styles employed by affected others is also characterised by similar methodological limitations as the harms literature, including relatively small treatment-seeking samples that are comprised of intimate partners, particularly female partners of male gamblers, and English-speaking affected others from Western countries. There is also a reliance on cross-sectional designs, with no longitudinal studies examining the coping responses of affected others over time. This is important, because there is some limited evidence (Côté et al., 2018) that the strategies employed by affected others change over time, whereby controlling, supervising, and financial management strategies that are initially employed because of their perceived lack of control over the gambling behaviour evolve into strategies to enhance recovery at the start of treatment or in response to a change in gambling behaviour.

3.7 Research question 6: Interventions for affected others

We identified 36 empirical studies and two systematic reviews (Archer et al., 2019, Kourgiantakis et al., 2013) that contributed data to the final research question, which related to interventions for affected others: six empirical studies examining the prevalence of professional help-seeking, seven empirical studies examining the professional help-seeking preferences of affected others, eight empirical studies examining professional help-seeking motivations and barriers, 10 empirical studies and two systematic reviews (Archer et al., 2019, Kourgiantakis et al., 2013) evaluating treatments for affected others, 10 empirical studies and one systematic review (Kourgiantakis et al., 2013) evaluating couple and family gambling treatments, and seven empirical studies and one systematic review (Kourgiantakis et al., 2013) examining the impact of affected other involvement in gambling treatment. Professional help services have been described that those that provide support from people who are professionally trained (Hing et al., 2013). These can include distance-based help-seeking options, which are those that are frequently single session and usually anonymous options accessed by telephone or internet (i.e., chat and email)

and face-to-face services, which are those that may involve one or more appointment based sessions (e.g., counselling) (Rodda et al., 2013).

3.7.1 Prevalence of professional help-seeking among affected others

Key findings

- **Affected others only make up approximately 15 per cent to 26 per cent of people seeking support from gambling treatment services.**

The systematic search revealed six empirical studies that contributed data to the research question relating to the prevalence of professional help-seeking among affected others. Svensson et al. (2013) conducted the only population-representative study to explore the help-seeking of affected others. In a sample of 8165 adult respondents in Sweden, this study found that a low proportion of both male (8.5 per cent) and female (10.9 per cent) had sought help or information on someone else's behalf for problems with gambling, with no gender differences in these estimates. Other studies have reported that affected others comprise 15 per cent to 26 per cent of people contacting online gambling treatment and support services (Rodda and Lubman, 2014, Rodda et al., 2013, Wood and Griffiths, 2007) and 40 per cent to 42.5 per cent of people contacting gambling helplines (Bastiani et al., 2015, Potenza et al., 2001). Women appear more likely to seek help from online gambling support services than men (Wood and Griffiths, 2007).

3.7.2 Professional help-seeking preferences of affected others

Key findings

- **There is a lack of awareness of sources of gambling help among affected others.**
- **Affected others are most aware of general practitioners as a source of help but many do not consider them to be appropriate help providers for gambling problems.**
- **Affected others indicate a preference for low-intensity interventions, such as telephone and online support, before seeking more formal treatment.**

In our systematic search, seven empirical studies contributed data to the research question relating to the professional help-seeking preferences of affected others. There appears to be a low awareness of professional help service options in affected others, with findings (Hing et al., 2013) suggesting that only one-third (38 per cent) of affected others seeking support from the Australian gambling helpline were aware of sources of professional gambling help services, apart from helplines. In this study, the most commonly identified professional services included general practitioners (29 per cent), relationship counsellors (27 per cent), alcohol and drug services (21 per cent), financial counsellors (19 per cent), legal advisors (17 per cent), and face-to-face counselling (15 per cent). Although affected others are most aware that general practitioners can be a source of help, approximately one-third (33 per cent) of affected others identified in survey of general practice patients (Sullivan et al., 2007) do not perceive their general practitioner as a suitable help provider for gambling problems (caused by their own

gambling or the gambling of another). A further 52 per cent were uncertain and only 13 per cent considered their GP to be an appropriate help provider for problem gambling. Other evidence suggests that intimate partners believe that individual therapy (39 per cent), family therapy (21 per cent), and couples therapy (23 per cent) would be most useful to help with the gambling problems (Cunha and Relvas, 2015).

Limited available evidence suggests that affected others first access low-intensity distance-based interventions, with several studies finding that the majority (68-81 per cent) of affected others contacting online or helpline gambling services were speaking with a professional for the first time, with much smaller proportions previously (15-16 per cent) or currently (4-10 per cent) seeking other forms of counselling (Buchner et al., 2019, Dowling et al., 2014, Hing et al., 2013, Rodda et al., 2013). Affected others also seem to prefer low-intensity distance-based interventions, with findings suggesting that almost all (92 per cent) affected others seeking support from the Australian helpline wanted information or counselling via the telephone, but only 6 per cent wanted referral to a face-to-face counselling service (Hing et al., 2013). A subsequent study of affected others seeking support from an online gambling service (Rodda et al., 2019) found that prior to accessing e-therapy, 68 per cent had accessed another distance-based support option (e.g., online services or helplines), with a smaller proportion (42 per cent) accessing face-to-face support options (e.g., general practitioners, psychologists, psychiatrists, gambling counselling, gambling support groups). Lower intensity, self-directed interventions such as web-based counselling are attractive to affected others due to their ease of access, their privacy and anonymity, the characteristics inherent in the therapeutic medium, their access to the service system, and their helpfulness (Rodda et al., 2013).

3.7.3 Professional help-seeking motivations and barriers for affected others

Key findings

- **The most common presenting issue for affected others is interpersonal, followed by intrapersonal, financial, family, and gambling.**
- **Affected others report a range of motivations for help-seeking, including concerns the gambling could become a major problem, negative emotions, problems maintaining normal daily activities, concerns about the welfare of dependents, and physical health concerns.**
- **Many also cite perceived barriers, such as a lack of awareness about available services or that they are free, shame, and concerns that they would be advised to confront the gambler.**
- **Facilitators of family involvement in treatment include communication, coping skills, and support; while barriers include conflict, isolation, and mental health/substance use.**
- **Affected others indicate a need for both gambler-focused strategies (those focused specifically on the gambler) and affected other-focused interventions (those focused on the family's needs).**

We identified eight empirical studies that contributed data to the research question relating to the motivations and barriers for seeking professional help reported by affected others: one study exploring the most common presenting issues for treatment-seeking affected others, two studies identifying motivations and barriers for seeking professional help, one study examining facilitators and barriers of family involvement in treatment, and six studies exploring the treatment needs of affected others.

Presenting problems

Crisp et al. (2001) explored the most common presenting issues for intimate partners seeking face-to-face treatment in Australian gambling specialist services. The most common issues were interpersonal (76 per cent women, 71 per cent men), intrapersonal (51 per cent women, 46 per cent men), financial (42 per cent women, 30 per cent men), family (39 per cent women, 38 per cent men), and gambling behaviour (18 per cent men, 16 per cent men), with smaller proportions of partners reporting leisure use issues, employment and work-related issues, physical symptoms, or legal issues. With the exception of financial issues, which were more frequently reported by female partners, there were no significant differences in presenting problems for female and male partners.

Help-seeking motivations and barriers

Hing et al. (2013) identified that the most common motivations for affected others calling the Australian gambling helpline were concerns the gambling could become a major problem, negative emotions, problems maintaining normal daily activities, concerns about the welfare of dependents, and physical health concerns. Less common reasons were family impacts, concerns about the welfare of the gambler, denial or reticence to seek help by the gambler, and specific advice for themselves.

Hing et al. (2013) identified that the most common barriers reported by affected others calling the Australian gambling helpline included a lack of awareness about available services, shame, a lack of awareness that services were free, and concern that they would be advised to confront the gambler. Although the majority of affected others (71 per cent) reported that there was nothing that could have encouraged them to call the helpline sooner, suggestions from the remaining affected others included more information and/or advertisements targeting affected others and more information about the risks and impacts of problem gambling for families. Moreover, many female intimate partners in Klevan et al.'s (2019) qualitative study reported experiencing difficulties in obtaining professional help for their partner, the family, and individual family members due to a lack of knowledge about problem gambling and appropriate referrals among health professionals, as well as few available services.

Family involvement facilitators and barriers

One qualitative study of dyads (gamblers and affected others) specifically investigated the facilitators and barriers to family involvement in problem gambling treatment (Kourgiantakis et al., 2018). Facilitators included communication, coping skills, and support, while barriers included conflict, isolation, and mental health/substance use (which related to barriers such as stigma, misinformation about mental health, limited coping strategies, lack of professional treatment, lack of support, and untreated or misunderstood mental health issues). Although the weight of each theme was not investigated, the authors noted that there was mutual interaction and interdependence between themes and dyad members.

Treatment needs

There is some evidence that the majority of affected others (69 per cent in a general practice sample) indicate that they do not require professional support to manage gambling in the family (Sullivan et al., 2007). The findings of several studies, however, suggest that affected others require support for both the gamblers and for themselves (Hing et al., 2013, Kleven et al., 2019, Krishnan and Orford, 2002, Rodda et al., 2019, Makarchuk et al., 2002). Gambler-focused approaches, which have emerged because of the potential role in the gambler's recovery, are those that aim to educate, advise or counsel family members so that they are better able to support the gambler in recognising a problem, seeking help and thereby changing their gambling behaviours (Rodda et al., 2019). In contrast, consistent with the SSCS model, family-focused approaches are those that aim to support the family of problem gamblers to respond or recover with or without the involvement of the gambler (Rodda et al., 2019). For

example, Hing et al.'s (2013) study of affected others seeking support from the Australian helpline found that three-quarters (73 per cent) of affected others wanted information about getting help for their family member's gambling, with the remaining one-quarter (25 per cent) wanting counselling for their own gambling-related harm.

Rodda et al. (2019) expanded on these preliminary findings in a convergent mixed-method design with 62 affected others seeking treatment from the Australian online gambling service to determine their treatment preferences: strategies focused specifically on the gambler or those focused on the family's needs. In the quantitative component of this study, the most important reason for help-seeking was to get the gambling family member to reduce their time or money spent gambling (78 per cent), followed by getting help to better support the gambler (76 per cent), and to improve the quality of their relationship with the gambler (74 per cent). Over half thought it was extremely important to get the gambler into treatment (61 per cent), improve their assertiveness skills in order to approach the gambler (58 per cent), increase their knowledge of support and help options (58 per cent), understand more about problem gambling (54 per cent), and get help in managing a crisis situation related to the gambling (53 per cent). Smaller proportions of affected others endorsed the remaining three reasons for help-seeking: improving their skills in managing their emotions or feelings (49 per cent), having someone listen to their story and needs (49 per cent), and talking with a peer (i.e., someone in a similar situation) (32 per cent).

Using three open-ended items, Rodda et al. (2019) found that 50 per cent of affected others desire gambler-focused treatment approaches, 28 per cent desire family-focused approaches, and the remaining 22 per cent desire a blend of these two approaches. Unprompted gambler-focused reasons were related to getting help to better support the gambler (49 per cent) and getting the gambler into treatment (38 per cent), followed by seeking information to understand more about problem gambling (31 per cent), getting the gambler to reduce the money spent gambling (29 per cent), and improving assertiveness skills in order to approach the gambler (13 per cent). The most frequently reported unprompted family-focused reasons were to have someone to listen and support needs (42 per cent), followed by an increased knowledge of support and help options (33 per cent), with smaller proportions of responses relating to getting help in managing a crisis situation related to the gambling (20 per cent), improving the quality of their relationship (18 per cent), improving their skills in managing their emotions or feelings (16 per cent), and talking with a peer (2 per cent).

3.7.4 Evaluation of treatments for affected others

Key findings

- **Treatment resources for affected others are limited.**
- **Lower-intensity interventions, such as gambling helplines, online services, and internet-delivered self-directed interventions, appear to be acceptable professional treatment options for affected others.**
- **The majority of family members report that family exclusion orders, which involve third party exclusion from gambling venues, are helpful, but generally do not result in complete abstinence.**
- **Community Reinforcement Approach and Training (CRAFT), particularly when delivered as an individual face-to-face intervention, appears to be a highly acceptable intervention with promising results regarding changes over time for most outcomes, but has failed to display many improvements compared to control conditions.**
- **Although only tested in single studies, the 5-Step Method and Coping Skills Training (CST) also appear to display promising results.**
- **Lower-intensity, self-directed internet-delivered interventions for affected others have displayed good feasibility and acceptability, as well as promising outcomes.**

We identified 10 empirical studies and two systematic reviews (Archer et al., 2019, Kourgiantakis et al., 2013) that contributed data to the research question relating to the evaluation of treatments for affected others: two included studies evaluating gambling helplines and online services, one study evaluating family exclusion orders, three studies evaluating community reinforcement and family training, one study evaluating the 5-Step Method, one study evaluating coping skills training, and two studies evaluating internet-delivered interventions. One systematic review explored which CRAFT treatment components and participant characteristics contribute to the rates of success for identified patient treatment entry across the addictions (Archer et al., 2019) and one systematic review explored the effectiveness of affected other treatments and concluded that affected other treatments are linked with superior treatment outcomes and improved individual and family functioning (Kourgiantakis et al., 2013).

Gambling helplines and online services

Gambling helplines and online services appear to be acceptable professional treatment options for affected others. Hing et al. (2013) found that the majority of affected others seeking support from the Australian gambling helpline were either extremely satisfied (56 per cent) or satisfied (27 per cent) with the outcome of their call. Similarly, Rodda et al. (2013) found that the majority of affected others accessing the Australian national web-based counselling service (91 per cent) would recommend web-based counselling to others concerned about gambling-related harm. Affected others in this study viewed this modality of support as helpful because it provided an empathic non-judgemental approach in which they felt heard or understood, helpful and valuable expertise and support, access to knowledge and information in a timely manner, and assistance in identifying the next steps. Only a small proportion of participants (8 per cent) indicated that web-based counselling was not helpful, typically because they were provided with insufficient support, did not feel heard, or experienced language difficulties in their communication with counsellors.

Family exclusion orders

A harm minimisation model based on third party exclusion known as the Family Exclusion Order (FEO) prevents gamblers from entering casinos if family members report experiencing gambling-related harm. Goh et al. (2016) examined the family members' assessments of the effectiveness of this exclusion scheme as a harm-minimisation measure in Singapore, which was implemented in 2009. The majority (87.2 per cent) of 94 family members reported the FEO was very or somewhat helpful. Qualitative interview data revealed four common reasons cited for positive ratings: a sense of relief, positive actions demonstrated by respondents after FEO, improved family relationships, and improved financial state. Husbands, children, and siblings were most likely to report that the FEO was effective. Almost one-third of wives (32 per cent), however, expressed reservations about the effectiveness of the FEO for their husbands, possibly as a result of gendered power relations in which husbands have more economic and authoritative power in the household and the gendered stigma applied to women who neglect household duties and childcare. Only five of the initial sample of 105 applicants reported that gambling had ceased completely after the FEO was implemented. The authors suggested that family members did not expect abstinence following the FEO and viewed any reduction in gambling as positive.

Community Reinforcement and Family Training (CRAFT)

CRAFT, an intervention first developed for use with affected others of treatment-resistant alcoholics (Sisson and Azrin, 1986), is a cognitive-behavioural intervention that is derived from the principles of the Community Reinforcement Approach, which is grounded in the elements of family system and behaviour theories and views affected others as active and influential participants in recovery. CRAFT blends both gambler- and family-focused approaches as it aims to improve the personal and relationship functioning of family members, engage gamblers in treatment, and decrease their gambling. The comprehensive CRAFT self-help manual adapted by Makarchuk et al. (2002) for gambling affected others includes motivational techniques, realistic goal-setting, and enabling

support from family and friends. There is an emphasis on the personal wellbeing of affected others, including financial management strategies, minimising distress by improving effective coping mechanisms and positive reinforcement, and managing issues such as anger, depression, domestic violence, and emotional abuse. The manual includes topics on increasing awareness and understanding of gambling problems by exploring gambling definitions, cognitive distortions, reasons, signs, triggers and patterns, and consequences. Finally, affected others are encouraged to support the gambler by reinforcing gambling-free behaviours, withholding reinforcement for gambling behaviours, avoiding negative reinforcement such as avoiding enabling behaviour and letting natural consequences occur, improving communication skills, providing effective environmental contingencies for engaging the gambler into treatment, and preparing for relapse.

A pilot study of 31 affected others of treatment-resistant gamblers (97 per cent meeting diagnostic criteria) randomly assigned to receive the treatment group (CRAFT workbook plus standard practice treatment resource package) or a control group (standard practice treatment resource package only) with a three-month post-baseline evaluation (Makarchuk et al., 2002) and a trial of 186 affected others (96 per cent meeting diagnostic criteria) randomly allocated to a workbook only condition, a workbook plus telephone support condition, and a control condition with three- and six-month follow-up evaluations (Hodgins et al., 2007b) revealed similar findings. Specifically, Makarchuk et al. (2002) found no group differences but improvements over time for most outcomes (personal functioning, relationship functioning, gambling frequency, and negative gambling consequences), although affected others in the CRAFT group reported higher rates of decreased gambling than the control group. Similarly, Hodgins et al. (2007b) found no group differences but improvements over time for most outcomes (gambling expenditure, personal functioning, relationship functioning, negative gambling consequences, engagement into treatment), although affected others in the workbook condition reported significantly fewer gambling days. Neither study found any group differences regarding the number of gamblers who entered treatment. Hodgins et al. (2007b) also found that, at the six-month follow-up, urban and younger gamblers were more likely to enter treatment; and males with a shorter period of gambling problem who had an affected other with the goal of engaging them into treatment were more likely to decrease their gambling.

Given that many affected others reported a desire for additional support in implementing the strategies and procedures in their study, Nayoski and Hodgins (2016) conducted a subsequent trial of 31 affected others of treatment-resistant gamblers randomly assigned to the CRAFT intervention delivered via self-help workbook and individual face-to-face treatment in eight to 12 one-hour sessions (mean of 10.4 sessions). There were no statistically significant between-group differences on any outcome measure (gambler treatment entry, days gambled, dollars gambled, gambling consequences, affected other psychological functioning, relationship functioning) at the three- and six-month follow-up evaluations. Higher effects sizes, however, were achieved for the individual treatment group on several measures (decreased days gambled, decreased dollars gambled and improved affected other functioning), suggesting that participants in this condition seemed to have better outcomes than those who received the workbook.

Archer et al. (2019) conducted a systematic review to explore which CRAFT treatment components and participant characteristics contribute to the rates of success for identified patient treatment entry across the addictions. The review identified that three (with five CRAFT treatment conditions) of the 14 included studies evaluated CRAFT for problem gambling (Makarchuk et al., 2002, Hodgins et al., 2007b, Nayoski and Hodgins, 2016), all reported by the same research team in Canada. All five CRAFT treatment conditions had consistently low rates of treatment entry (12.5–23 per cent) compared to other addictions (40–86 per cent); and a meta-analysis revealed that CRAFT conditions for problem gambling were no more effective in facilitating treatment entry than control/comparison conditions. This is in contrast to alcohol/substance use, in which CRAFT treatment conditions were more than twice as effective as control/comparison conditions. Treatment components were implicated in these lower rates, including CRAFT treatment modality (predominantly workbook), therapist training, treatment fidelity and integrating treatment for the family member with gambling problems. Moreover, Archer et al. (2019) argues that country of origin and reduced service availability in Canada may have impacted the success rates of CRAFT or that

gambling behaviours and harms may be more difficult to detect than those associated with alcohol and substance use problems.

CRAFT appears to be a highly acceptable intervention to affected others, however, as it receives favourable evaluations from the majority of them. Compared to control groups, affected others in the CRAFT group generally report a higher likelihood of having their needs met, likelihood of recommending the program to a friend, and being satisfied with the amount of help they received (Makarchuk et al., 2002, Hodgins et al., 2007b). For example, Makarchuk et al. (2002) reported the treatment group reported higher rates of having their needs met (69 per cent cf. 13 per cent) and treatment satisfaction (100 per cent cf. 27 per cent). Moreover, Makarchuk et al. (2002) reported that 77 per cent of participants in the treatment group reported they had read the entire workbook, 58 per cent used the strategies regularly and 42 per cent used them occasionally, and 77 per cent were able to list specific strategies they were using. Similarly, Hodgins et al. (2007b) reported that by three months, 66 per cent of the CRAFT groups had read the entire workbook, 34 per cent some sections and 0 per cent not at all. The strategies were employed regularly by 22 per cent, occasionally by 63 per cent, and not at all by 15 per cent. At the six-month follow-up evaluation, 89 per cent had retained the workbook and 27 per cent had given it to someone else.

However, CRAFT delivered as an individual face-to-face intervention appears to display even higher levels of acceptability than when it is delivered as a workbook. Nayoski and Hodgins (2016) found that at the three-month follow-up, participants in the individual intervention group were more likely to indicate that their needs were met (91 per cent cf. 25 per cent) and that they would recommend the program to a friend (83 per cent cf. 75 per cent), as well as marginally more likely to rate that they were satisfied with the program (91 per cent cf. 42 per cent). At the six-month follow-up, there was a significant difference on all three measures: needs met (100 per cent cf. 27 per cent), recommend program (100 per cent cf. 73 per cent), and treatment satisfaction (100 per cent cf. 36 per cent). The affected others in the individual treatment condition often cited therapist contact as helpful as they provided validation, provided reassurance in using techniques, and were non-judgemental. In contrast, participants in the workbook group reported they did not have enough guidance to implement the techniques.

5-Step Method

The 5-Step Method workbook for family members affected by gambling problems (George and Bowden-Jones, 2015), which is based on the SSCS model, has been adapted from a workbook for family members affected by substance use problems (Copello et al., 2012). This is a brief psychological approach designed to support family members with a close problem gambling family member in their own right. Each of the major components in the SSCS model (stress, strain, coping, and social support) is incorporated into this approach in a stepwise manner. The approach aims to: (1) explore the stresses and strains associated with the gambling problem in the family; (2) increase knowledge and confidence by providing relevant information about gambling; (3) explore and discuss current and alternative coping strategies; (4) explore and improve social support; and (5) identify additional needs and resources. Consistent with the SSCS model, this approach views family members as ordinary people attempting to respond to highly stressful experiences.

Orford et al. (2017) evaluated change three to six months following the administration of this workbook for 96 of an initial 215 family members. In addition to the workbook, family members were offered monthly educational support groups, and some family members were offered further interventions such as advice on financial management, couples counselling and family therapy, if appropriate. There were significant reductions from baseline to follow-up for all measures of impact (worrying behaviour, active disturbance, total impact, total family burden), some measures of coping (engaged-emotional coping, tolerant-inactive coping) and total strain symptoms. Although helpful informal social support and unhelpful informal social support did not improve, helpful formal social support showed a significant increase. Some measures of coping (engaged-assertive coping and withdrawal-independent coping) did not improve. Moderate to large effect sizes were achieved for helpful formal support, total family burden, worrying behaviour, total impact, engaged-emotional coping and total strain symptoms. Regression

modelling indicated the importance of reduced levels of engaged-emotional coping for affected other strain, suggesting that coping change may be an important process of change.

Coping skills training

Coping skills training (CST) is a face-to-face family-focused intervention based on contemporary stress and coping perspectives, which is primarily aimed at increasing coping skills and decreasing the distress of affected others. Rychtarik and McGillicuddy (2006) conducted a preliminary evaluation of this empirically-derived intervention in a trial of 23 intimate partners in North America randomly assigned to CST or a delayed treatment control condition (DTC). In this study, CST comprised ten weekly individual face-to-face sessions designed to teach more effective coping skills. The initial sessions provided education on gambling problems, introduced the stress and coping model and thought-feeling-behaviour relationships, and taught problem solving and effective communication skills. The remaining sessions comprised a review of material covered in previous sessions, homework, and problems encountered in previous work as recorded in a diary, as well as discussion of new topical material and practice situations, coaching in skill hints, modelling and role-play of effective responses, feedback on practiced response and rehearsal, and assignment of homework. Intimate partners attended 8.25 of the ten scheduled sessions and 8 per cent also reported attending Gam-Anon, a formal treatment program, or private therapy at some point during the ten-week period. Intimate partners in the DTC began the CST program after ten weeks. At the end of the 10-week treatment/delay period, the CST condition participants, relative to those in the DTC, displayed improvements in both cognitive and behavioural coping skill acquisition, tolerant coping, depression, and anxiety. Moreover, consistent with contemporary stress and coping models, behavioural coping skill acquisition, but not cognitive coping skill acquisition, appeared to mediate the large corresponding reduction in depression and anxiety observed in the CST condition. There were, however, no between-group differences for engaged coping, withdrawal coping, anger, partner gambling (gambling days and loss per gambling day), or partner help-seeking.

Internet-delivered interventions

Magnusson et al. (2019a) compared the efficacy of an Internet-based CBT program for affected others of treatment-refusing problem gamblers with a waitlist control group in a parallel-group RCT with 100 affected others in Sweden. The internet-based treatment, which was “inspired by the CRAFT approach”, comprised nine modules (introduced weekly) with therapist support via telephone and email (15 minutes per week): psychoeducation about gambling problems, functional analysis and gambling free activities, rewards and behavioural activation for both the affected other and gambler, psychoeducation about motivation and protecting the affected other’s economy, common behaviours that inadvertently enable gambling, communication training and principles from motivational interviewing, problem solving, inviting the gambler into treatment, and repetition and evaluation. Compared to the waitlist group, the treatment group reported improvements in affected other emotional (but not behavioural) consequences, relationship satisfaction, anxiety, and depression at the 12-month follow-up evaluation. The effects on gambling outcomes (gambling losses and treatment-seeking) were small and inconclusive. For the treatment group, outcomes were relatively stable from post-treatment to the end of the follow-up period, with only depression showing a deterioration over this time period. The usage of the program was variable, with an average of 2.1 hours spent on the online program and an average of 13 homework assignments completed. Between 27 per cent to 73 per cent of the affected others visited each of the modules, with the psychoeducation and functional analysis modules visited by the largest proportion of affected others and the most time spent in the functional analysis and behavioural activation modules. Approximately one-third (32 per cent) of affected others dropped out of the study by the post-test evaluation. There was a beneficial dose-response effect, whereby great engagement with the program (measured by time spent on the program and number of worksheets completed) was associated with treatment outcomes. All affected others were satisfied (62 per cent) or pretty satisfied (38 per cent) with the program and would recommend it to other affected others.

Buchner et al. (2019) evaluated access and retention in a German e-mental health program called EfA using a sample of 126 affected family members recruited across a nine-month period. EfA (roughly translated to Don't gamble away my life: Support for affected others) is a free, publicly available program comprising six self-administered modules of 18 to 20 webpages each, starting with one information module with unrestricted access (comprising basic knowledge about gambling problems, prevalence, and comorbidity), followed by five consecutive training modules requiring registration: stress and coping (module 1), responsibility and accountability (module 2), communication (module 3), social support (module 4), and review and future planning (module 5). Most participants arrived at the website via direct access, using search terms employed in promotional materials and nearly all of the total variance in distinct visitor rates was attributed to the distribution of leaflets. Overall, 16.1 new potential participants per month registered, with 6357 visits logged and an average visit duration of 7.25 minutes. The majority of participants were female intimate partners who cohabitated with the gambler. They reported a mean age of 39 years, high daily internet usage and low use of prior professional support or self-help. Almost half reported that the gambler had received treatment or counselling, most often professional counselling and self-help groups. Approximately one-third participated in all modules (adherers), one-third did not finish the program (non-adherers), and approximately one-third completed the initial questionnaire but did not start or finish the first module (non-starters). These groups did not differ in terms of age, whether they cohabitated with the gambler, their use of prior support, whether the gamblers had received prior support, their level of trust in their relationship with the gambler, whether they quarrelled with the gambler, or their levels of perceived stress. However, adherers were less likely to use the internet daily, non-adherers reported higher distress, and adherers had a shorter latency between modules 1 and 2. Overall, it took participants a median of 31 days to complete the program, including training breaks between the modules. The authors concluded that online programs can reach affected others, particularly those who have not previously received any prior support.

3.7.5 Evaluation of couple and family gambling treatments

Key findings

- **Evaluations of couple therapy (including congruence couple therapy, behavioural couples therapy, integrative couple treatment, reflective-team couples therapy, and integrative systemic treatment), demonstrate positive effects on outcomes for both gamblers and affected others, as well as the couple relationship.**

In this scoping review, we identified 10 empirical studies and one systematic review (Kourgiantakis et al., 2013) that contributed data to the research question relating to the evaluation of couple and family gambling treatments: five studies evaluating congruence couple therapy, two studies evaluating behavioural couples therapy, one study evaluating integrative couple treatment, one study evaluating a reflective-team couples approach, and one study evaluating an integrative systemic treatment. The systematic review assessed the effects of couple therapy for problem gambling (Kourgiantakis et al., 2013). This review identified two peer-reviewed or grey research from 1998 to 2013 regarding the effects of congruence couple therapy (CCT) (Lee, 2002, Lee and Rovers, 2008). Despite positive findings in terms of improvement in the couple relationship, urges, and gambling behaviour, the review authors concluded that the findings of these studies could not be generalised because of a lack of comparison groups and a failure to control for confounding factors such as other help-seeking.

Congruence Couple Therapy

Congruence Couple Therapy (CCT) (Lee, 2002, Lee, 2009) is an integrative model of couple therapy is based on five philosophical streams (humanistic, existential, experiential, social constructionist, and systemic). It is centred

on the concept of congruence, which is operationalised as attending, awareness, acknowledge and alignment of four vital dimensions: the interpersonal, the intra-psychic, the spiritual-universal, and intergenerational. CCT aims to align or reconnect these dimensions through interventions in each dimension, which is expected to lead to increased awareness, expanded choice and flexibility, self-esteem, communication, and transcendence of adverse intergenerational family patterns. The aim of CCT is therefore much broader than abstinence or harm reduction from gambling as the desired outcome of treatment because it addresses the factors that contribute to quality of life. Although it is beyond the scope of this review, it is important to note that, in addition to several evaluations described in this section, Lee and colleagues also provide a positive evaluation of training in imparting key concepts, skills, and values of CCT to problem gambling counsellors (Lee et al., 2008, Lee and Rovers, 2008).

Lee and colleagues have published several case studies drawn from the original eight couples in Lee's (2002) initial evaluation of CCT to illustrate: phases in the CCT process (Lee, 2009), circuits of couple interactions (Lee, 2014), and congruence (Lee, 2015). Lee (2009) provides an illustrative composite case generated from three cases of gamblers and their intimate partners, which is structured to represent six phases in the CCT process: (1) engaging the present client; (2) aligning with the couple and assessing the couple communication and gambling; (3) facilitating congruence; (4) deepening experiencing; (5) linking the past to the present; and (6) consolidating changes. Lee (2014) explores the couple relationship patterns before and after problem gambling in the eight couples to illustrate a systematic relational framework that explicates four of five circuits of couple interactions, which are recursive self-perpetuating cycles of couple distress: (1) fault-lines prior to the development of problem gambling (e.g., limited range and depth of communication, over-functioning of one partner and under-functioning of the other partner, extrication from the couple system, and emotional and physical abuse); (2) pressure points that precipitated the onset and intensification of gambling problems (e.g., life transitions, losses and setbacks); (3) escalation of couple distress (after gamblers had stopped gambling, which was driven by reactivated wounds from previous primary relationships and an increased imbalance in the couple dyad); and (iv) relapse (rift between the partners persisted to cause conflict and distress even when the gambling had abated). Finally, Lee (2015) employs one of the couples as a case study to illustrate congruence as the fifth circuit in the relational framework to extricate the gambler and partner from problem gambling and its related harm. Findings revealed improved relationship quality, including less strain and stress and more open communication at two-months following treatment, a reduction of gambling urges at four-months following treatment, and maintained abstinence at two-years following treatment.

There are also several evaluations of CCT: an evaluation of CCT in a sample of 24 problem gamblers and their partners in Canadian treatment services (Lee and Rovers, 2008) and a multi-site pilot RCT of CCT with 15 couples (Lee and Awosoga, 2015). From pre-treatment to post-treatment, Lee and Rovers (2008) found statistically significant reductions in gambling symptom severity and improvements in dyadic adjustment (for both gamblers and affected others). Gamblers reported no significant change in life satisfaction, while partners reported a significant decrease in life satisfaction, specifically in the area of regrets. Clients indicated a high degree of satisfaction with CCT. Moreover, qualitative data from both clients and counsellors revealed clinical changes in the four key dimensions addressed by CCT. In their multi-site pilot RCT, Lee and Awosoga (2015) compared the outcome of CCT (n=8) and a control group (n=7: three brief check-ins over 12 weeks). Findings revealed improvements in gambling symptom severity, mental distress, and family systems function, but not dyadic adjustment, in the CCT group compared to the control group at the post-treatment and two-month follow-up evaluations. There were also within-group changes over time for the CCT couples on mental distress (pre- to post-treatment only), dyadic adjustment, and family systems function, but not gambling symptom severity, and there were no within-group changes for the control group. Moreover, the CCT couples (gamblers and partners) reported high client satisfaction and high retention (89 per cent at the two-month follow-up). Interestingly, comparisons of the outcomes for gamblers and their partners revealed that gamblers reported a higher level of mental distress at post-treatment, but not at follow-up; there were no differences in dyadic adjustment at post-treatment or follow-up; and partners reported higher systemic functioning at follow-up, but not at post-treatment.

Behavioural couples therapy

Behavioural Couples Therapy (BCT) is administered to dyads (gamblers and affected others) and aims to build support for abstinence and improve relationship functioning. From a mechanism of change perspective, it is assumed that improved functioning will promote relationship behaviours that that are conducive to abstinence. Nilsson and colleagues compared the effectiveness of internet-delivered BCT and internet-delivered individual CBT in RCTs conducted in Sweden with 18 dyads (gamblers and affected others) (Nilsson et al., 2018) and 136 dyads (gamblers and affected others) (Nilsson et al., 2019). Affected others and gamblers were each administered ten modules in the BCT conditions, while only gamblers were administered ten modules in the CBT condition. Gamblers were administered similar modules in both conditions, which included psychoeducation, behavioural analysis, economic recovery planning, motivation enhancement, behavioural activation, cognitive restructuring, values and goals, communication skills training, and relapse prevention. In the BCT condition, affected others were administered intervention content relating to psychoeducation, behavioural analysis, economic recovery planning, enabling behaviours, behavioural activation, shared activities, motivation enhancement, communication skills training, positive reinforcement, and relapse prevention. Modules were released one at a time and were an average of five to 10 pages long. Dyads also had access to therapist telephone and email support (maximum of 10 minutes per week).

Both studies found that gamblers in both groups improved on all outcomes (problem gambling severity, gambling expenditure, depression, anxiety, relationship satisfaction, hazardous drinking, and gambling consequences), with no differences between the groups at the six-month (Nilsson et al., 2018) or 12-month (Nilsson et al., 2019) follow-ups. Affected others in the BCT groups, however, reported greater improvement in anxiety and depression (Nilsson et al., 2018) and gambling consequences (Nilsson et al., 2019) than those in the CBT groups. Although this is reasonable since they did not receive any treatment in the CBT condition, it suggests that affected others do not necessarily benefit solely from improvements in the gambling behaviour of their family member. Gamblers in the BCT condition were more likely to commence treatment, but there were no significant differences between conditions on treatment adherence (mean number of modules completed) (Nilsson et al., 2019). Both gamblers and affected others indicated they would recommend the program to others and rated both interventions favourably, although affected others in the BCT group gave the intervention a higher ranking than those in the CBT group (Nilsson et al., 2018).

Integrative couple treatment

Integrative Couple Treatment for Pathological Gambling (ICT-PG: (Tremblay et al., 2018, Tremblay et al., 2015) aims to: (1) reduce or stop gambling behaviour; and (2) reduce the psychological distress of both partners, improve the wellbeing and relationship satisfaction of both partners, and increase their mutual support for each other. ICT-PG takes place across eight and twelve sessions (more if required) of 90 minutes each. The first part of each session comprises individual work with the gambler in the company of the partner, with the focus on the gambling behaviour (approximately 45 to 60 minutes but decreases as the gambler reduces the gambling behaviour). The second part of each session addresses relationship aspects (mutual reinforcement, communication skills, negotiation skills) and partner-related elements (behaviours that facilitate gambling and reinforce its cessation). Treatment strategies and elements of the clinical process includes: assessment (including ongoing feedback throughout the therapeutic process), initial commitment to the treatment and basic rules (avoiding threats of separation, putting aside verbal and physical violence, attending all meetings, actively participating, and completing homework), the therapeutic alliance, work with the gambler, work with the couple (mutual reinforcement, communication skills and structured dialogue practice), and work with the partner (reduce behaviour that inadvertently facilitated gambling and learn new behaviour that reinforced the cessation of gambling).

Tremblay et al. (2018) documented the experiences of 21 couples (predominantly male gamblers and their female partners) in interviews conducted nine months after their admission to either ICT-PG or individual treatment-as-

usual. Participants reported satisfaction with both treatments, but a more positive experience in couple treatment. Five major themes in the therapeutic process were identified: (1) gamblers were anxious about having to reveal their gambling problems in couple therapy; (2) the couples wanted to develop a mutually beneficial understanding of gambling and its effects on the partners in both treatments; (3) negative attributions were transformed through more effective intra-couple communication in couple therapy; (4) partners were more likely to contribute to changes in gambling behaviour and prevention of relapses in couple therapy than individual therapy; and (5) gambling was viewed as interpersonal in nature and connected with the couple relationship in couple treatment; but inversely, gamblers in individual therapy were more likely to suggest that their partners involvement was unnecessary. Conditions favouring individual treatment included situations in which gamblers had difficulty expressing themselves, the partners talked a lot or even too much, gamblers invested little in the couple relationship, gamblers needed to progress at their own rate, and gamblers had to explore elements of their childhood or adolescence. In contrast, conditions favouring couple treatment included situations in which there was a trusting relationship, a desire to create a strong couple relationship, the presence of the partner made it easier to open up to the therapist, or when the gamblers wanted to save their couple relationship.

Reflecting-team couples therapy

The use of reflecting-team couple therapy with couples in which the male partner had a gambling problem was evaluated by Garrido-Ferńandez et al. (2011). This approach is embedded in a family systems viewpoint, in which gambling is viewed as a symptom serving a homeostatic function in the gambler's social network. A reflecting-team approach is a social constructionism approach, whereby a group of professionals offer their thoughts and observations on a family therapy session in a non-pejorative, non-clinical, inclusive, speculative, open-ended and questioning manner. This is followed by the therapist and family having a conversation about the reflecting team's observations. This indirect conversational system attempts to co-create a different meaning or explanation of the problem and facilitate change by providing avenues for family members to act differently.

In Garrido-Ferńandez et al.'s (2011) study, ten couples without multiple psychiatric comorbidities were non-randomly allocated to a 32-week GA self-help group (gamblers attending bi-weekly 90-minute sessions and partners attending weekly 90-minute sessions) and ten couples were allocated to a the GA self-help group plus reflecting-team couples therapy (maximum of 10 90-minute sessions every two weeks). Comparisons of post-treatment self-constructionism profiles between the groups revealed the reflecting-team group showed a higher number of positivity profiles (positive review of reality) and a lower number of negativity (perception of self and others similarly negatively), isolation (perception of self negatively and separately from others), and resentment (construction of reality is completely negative) profiles than the self-help group. Between-group comparisons of post-treatment cognitive profiles revealed the reflecting-team participants displayed greater number of complexity profiles (high levels of integration and differentiation; and constructions with many interconnected dimensions) and a smaller number of simplicity profiles (low levels of differentiation and high levels of integration; and constructions with a few highly interconnected dimensions) than the self-help group. Within-group changes of self-constructionism and cognitive profiles were also found for the reflecting-team group, but not the self-help group.

Integrative systemic treatment

Mladenović et al. (2015) described the integrative systemic model in the treatment of problem gambling. This model is based on multi-systemic self-help manual and "represents an integration of family and cognitive-behavioural therapy, with traces of psychodynamic, existential and pharmacotherapy" (p. 107). The treatment comprises an intensive phase (10 weeks of four-hour group therapy) and an extended treatment or aftercare phase (twice-monthly group therapy for two years). The intensive phase comprises three components: (1) education (two weeks in which the entire family becomes familiar with topics such as structuring time, exposure to high-risk situations, and enhancing motivation for treatment and ends with an examination taken by all members of the family and psychoeducation); (2) insight with initial changes (the central phase of treatment that lasts six weeks and includes

activities to address resistance to further changes in the family, cognitive restructuring, relapse prevention, high-risk situations, social support, interpersonal relations, emotion recognition, assertive communication, restructuring the family system, philosophy of life, and value systems; and (3) analysis of the achieved changes and the definition of plans and areas that should be addressed in extended treatment (two weeks in which the objective is the analysis of the resistances during treatment, recognition of changes achieved in each individual and the family system, and the definition of areas that need to be addressed in the extended treatment, and the presentation of a rehabilitation plan). The extended treatment phase aims to maintain the achieved changes (stabilisation phase) and further growth and development of the family system (second order change). Although Mladenović et al. (2015) provide limited outcome information and no indication of the size of their sample, they report that "more than 90 per cent of the patients treated with Integrative-systemic model have maintained a one-year abstinence after the end of the intensive phase of treatment" (p. 110).

3.7.6 Impact of affected other involvement in gambling treatment

Key findings

- **The involvement of affected others, particularly intimate partners, has generally been associated with better treatment outcomes, satisfaction, adherence, and retention for gamblers.**

The systematic search identified seven empirical studies studies and one systematic review (Kourgiantakis et al., 2013) that contributed data to the research question relating to the impact of affected other involvement in treatment.

In an early study, Ingle et al. (2008) divided 4410 gamblers who had been discharged from a specialist gambling service into three groups based on intimate partner involvement in treatment: Group One were not married; Group Two were married or partnered but their partners were not involved in treatment; and Group Three were married or partnered and their partners had been involved in treatment. Having a partner participate in treatment improved the odds of a successful treatment outcome (defined as achievement of at least 75 per cent of treatment goals, completion of a relapse prevention plan, and abstinence in the month prior to discharge) and retention in treatment (30 per cent longer). Education levels influenced how partner involvement affected treatment outcomes, whereby gamblers with less than a high school diploma and partner involvement in treatment had a lower odds of successful treatment compared to gamblers with a high school diploma and no partner involvement, while gamblers with undergraduate or postgraduate education and partner involvement had a higher odds of successful treatment compared to gamblers at these education levels and no partner involvement. This study was identified in the systematic review conducted by Kourgiantakis et al. (2013), who concluded that although these findings might not be representative because the study examined secondary data and did not evaluate intervention types, the involvement of family members in treatment appars beneficial.

Subsequent studies by Jiménez-Murcia and colleagues investigated the impact of affected other involvement on the outcomes of 440 (Jiménez-Murcia et al., 2015) and 675 (Jiménez-Murcia et al., 2017) predominantly male gamblers from a manualised outpatient group CBT program. In Jiménez-Murcia et al. (2015), affected others (usually an intimate partner) attended seven weeks of the 16 week program to provide support, increase understanding, manage high-risk situations, enhance gambler confidence, and collaborate in some treatment techniques. The involvement of affected others predicted a higher risk of relapse during therapy, but did not influence other treatment outcomes (dropout, compliance, and attendance). In a subsequent study, Jiménez-Murcia et al. (2017) compared post-treatment outcomes from this CBT intervention (with affected others) to CBT treatment-

as-usual (without affected others). Gamblers in the affected other condition had significantly better treatment outcomes, but only for positive symptoms, as well as higher treatment adherence and lower dropout. Moreover, the inclusion of a partner increased treatment guideline compliance and reduced risk of relapse during treatment compared to when others acted as an affected others.

Similarly, several studies have compared two similar treatments, one with affected other involvement (couples therapy) and one without affected other involvement (CBT) (Nilsson et al., 2018, 2019; Tremblay et al., 2018). In comparisons of BCT and individual CBT, Nilsson and colleagues (2018, 2019) identified superior outcomes for BCT in terms of treatment commencement (Nilsson et al., 2019) but no significant differences between the conditions on treatment adherence and all other outcome measures for gamblers (problem gambling severity, gambling expenditure, depression, anxiety, relationship satisfaction, hazardous drinking, and gambling consequences) (Nilsson et al., 2018, 2019). Tremblay et al. (2018) also revealed higher treatment satisfaction for participants allocated to ICT-PG compared to those who received individual treatment-as-usual.

Taking a different approach, in which the family involvement of 11 treatment-seeking dyads (gamblers and family members) was characterised across a continuum, Kourgiantakis et al. (2018) identified that four dyads with a high level of family involvement described all facilitators (communication, coping skills, and support), reported no barriers, all completed treatment, were most likely to attend family professional support services, reported high treatment satisfaction, had superior treatment outcomes, and had the most positive individual and family functioning. Three dyads with a moderate level of family involvement reported some of the facilitators and barriers, mixed treatment completion rates, and ambiguous treatment outcomes in which treatment was described as more beneficial for the gamblers than the affected others. Four dyads with a low level of family involvement reported no facilitators, described all barriers (conflict, isolation, mental health/substance use), all dropped out of treatment, and reported low treatment satisfaction. Interestingly, all gamblers in this group were female, suggesting that the services were inadequate to meet their complex needs.

3.7.7 Discussion

Just under half (46 per cent) of the included articles contributed some kind of data relating to the professional help-seeking and treatment of affected others. These studies suggest that, despite the substantial harms experienced by affected others, access to help services by affected others is substantially lower than expected. Given that there are a higher number of affected others than people with gambling problems, more family members than gamblers should be presenting to services (Rodda et al., 2019). However, affected others only make up approximately 15 to 26 per cent of people seeking support from gambling treatment services. Although this suggests there is a demand for support among affected others, there appears to be a lack of awareness of sources of gambling help among affected others, implying that further promotion of services for affected others, particularly in the general media, is required (Hing et al., 2013, Landon et al., 2018, Svensson et al., 2013). Affected others are most aware of general practitioners as a source of help and, although many do not consider general practitioners as an appropriate help provider for gambling problems, they may be an important complementary resource for brief interventions, particularly for those who do not wish to attend specialist problem gambling treatment providers (Sullivan et al., 2007). Moreover, many affected others report that they are reluctant to seek formal help, citing perceived barriers such as shame and stigma. It may, of course, also be that affected others do not attend treatment in greater numbers because they do not perceive they themselves have a problem (Rodda et al., 2019). It does appear that the gambling problem has to typically become quite severe before affected others will seek assistance (Hodgins et al., 2007b), highlighting the importance of public health promotion efforts encouraging help-seeking by affected others as soon as possible (Chan et al., 2016).

Given the prevalence of family and friends affected by gambling harm and their considerable contribution to the total burden of gambling harm, it is reasonable for there to be parity in the interventions they are offered. However, little is known about their treatment preferences or needs, which is necessary to establish efficient and targeted

support and treatment services for this group (Salonen et al., 2014). The findings of this review do, however, suggested that affected others have indicated a preference for low-intensity interventions, such as self-help, telephone support, and online support, before seeking more formal treatment. Lower-intensity interventions appear to be attractive to affected others due to their potential anonymity, discretion and ease of access. Moreover, these interventions also provide a major pathway into other forms of professional support services (Rodda et al., 2019). Lower-intensity, self-directed interventions, which have been positively evaluated by affected others, have the potential to bridge the gap between the number of family and friends affected by gambling harms and those accessing evidence-based treatments. Moreover, the available internet-delivered interventions for affected others have displayed good feasibility and acceptability, as well as promising outcomes. Further development and evaluation of these interventions to facilitate the recovery of affected others from gambling harms without formal treatment therefore appears warranted. Affected others also indicate a need for both gambler-focused and affected other-focused interventions. This finding reflects the dual roles played by affected others, whereby they often support gambling family members to manage the gambling problem while also attempting to cope with the stressors and harms resulting from the gambling (Hing et al., 2013).

Other treatment resources for affected others are limited. CRAFT appears to be a highly acceptable intervention with promising results regarding changes over time for most outcomes, but has failed to display many improvements compared to control conditions. CRAFT delivered as an individual face-to-face intervention appears to display the highest effect sizes and acceptability. Although only tested in single studies, the 5-Step Method and CST also appear to display promising results. Taken together, these studies support the value of providing coping skills training for affected others (Makarchuk et al., 2002, Rychtarik and McGillicuddy, 2006). The influence of interventions aiming to reduce gambling behaviours and facilitate treatment-seeking, however, are small and may not be clinically meaningful. These results therefore raise questions regarding whether affected other interventions should primarily aim to engage gamblers into treatment and decrease gambling behaviours, given that affected others can only indirectly influence gamblers (Kalischuk et al., 2006, Makarchuk et al., 2002, Magnusson et al., 2019a). It has been suggested, however, that it may be premature to only focus on improve affected other coping and wellbeing (Magnusson et al., 2019a). There is evidence of much higher rates of treatment entry in affected other substance use interventions that employ multimodality offerings that align with the fundamentals of CRAFT (Archer et al., 2019), suggesting that gambling studies may need to adopt additional components, such as increased accessibility and availability of gambling treatment, an increased focus on reinforcement schedules for abstinence, and role-playing to prepare affected others for different scenarios that may arise (Archer et al., 2019, Magnusson et al., 2019a, Nayoski and Hodgins, 2016). Given that the family members and friends of people with gambling problems consider supporting changes in gambling behaviours and encouraging help-seeking to be important, further research exploring the key treatment characteristics associated with successful delivery of gambler-focused interventions is required (Archer et al., 2019).

Offering a broader range of evidence-based interventions for affected others is important to facilitate recovery from gambling harm. First, it is clear that affected others represent a heterogeneous population, in terms of harm, presenting issues, and treatment motivations, indicating that different intervention options are likely required to effectively address the needs of different affected other subgroups. Second, subgroups of affected others will likely be attracted to different treatment options as a result of their treatment preferences. Third, although the literature suggests some promising results for affected other interventions, they have not been superior to control groups across a number of outcome domains, suggesting the need for further intervention development. The need to expand access to evidence-based services for people affected by gambling has recently been identified internationally (Patterson et al., 2018) and reflects the state of evidence in the broader addictions field (Templeton et al., 2010).

Similarly, affected others endorse a broad range of needs but it is unlikely that they can all be concurrently addressed, highlighting that they may require assistance in prioritising their needs (Rodda et al., 2019). It is therefore important that treatment is flexible so that it meets the varying needs of affected others (Crisp et al., 2001, Kalischuk, 2010, Kourgiantakis et al., 2018, Rodda et al., 2019, Salonen et al., 2016). A tailored approach focusing

on core skills that are relevant to individual affected others could improve treatment motivation, outcomes, and adherence (Rodda et al., 2019). The delivery of tailored interventions, however, requires a better understanding of the fit between service and client characteristics, as well as the development of advanced assessment procedures or navigation tools to assist affected others and their clinicians in determining the most appropriate treatment options (Rodda et al., 2013, 2019). It may also be that a more sophisticated range of interventions are required, in which interventions target different types of harm or involve moving beyond a psychotherapeutic approach, such as working with banking providers to develop options for affected others (Rodda et al., 2019).

The treatment of problem gambling continues to have an individual focus (Bertrand et al., 2008, Dowling et al., 2009, Kalischuk, 2010, Klevan et al., 2019, Kourgiantakis et al., 2013, Kourgiantakis et al., 2018, Tremblay et al., 2018). The results of this scoping review, however, highlight the value of integrating affected others into interventions and the importance of addressing issues at the couple level (Hodgins et al., 2007b, Ingle et al., 2008, Jiménez-Murcia et al., 2017). The involvement of affected others, particularly intimate partners, has been associated with better treatment outcomes, adherence, and retention for gamblers. In this context, affected others may act as motivational and social supports for gamblers seeking treatment, as well as be in a position to take control of issues that enhance outcomes, such as limiting access to money and reducing the likelihood of relationship conflict as a relapse trigger (Ingle et al., 2008, Jiménez-Murcia et al., 2017). Moreover, evaluations of couple therapy demonstrate positive effects on outcomes for both gamblers and affected others, as well as the couple relationship. Taken together, these findings suggest that routine screening and in-depth assessment of the couple relationship, followed by couples therapy, if necessary, is required (Lee, 2014). Further research, however, designed to establish criteria for directing gamblers into individual, couple, or combined treatment is required (Tremblay et al., 2018). Moreover, because relationship issues may not be adequately addressed in many current interventions, incorporating affected others into gambling treatment may require new treatment models, funding, training, and evidence-based procedures (Chan et al., 2016, Ingle et al., 2008, Kalischuk, 2010, Kourgiantakis et al., 2018).

Help-seeking and treatment approaches for people affected by someone else's gambling problem have clearly been understudied. Further research is required to quantify the numbers of affected others accessing community support services, such as emergency relief, financial support services, gambling services, and other counselling services, such as mental health and alcohol and other drug services (Dickson-Swift et al., 2005, Salonen et al., 2014), as well as the rates of different types of help-seeking reported by affected others in the general population (Svensson et al., 2013). A greater understanding of the facilitators and barriers to accessing these services, as well as the treatment needs of affected others presenting to these services, is required. Further research examining the efficacy of different types of treatments for affected others and different types of family involvement on both gamblers and their affected others is also needed (Kourgiantakis et al., 2013, Hodgins et al., 2007a). Moreover, the treatment outcome literature for affected others and couples (gamblers and intimate partners) is limited and characterised by small samples, short or variable follow-up periods, an absence of control or comparison conditions, and confounding with other forms of help-seeking. Further research with larger samples is therefore required to determine the stability of therapeutic changes over longer periods of time (Lee, 2002, Orford et al., 2017, Rychtarik and McGillicuddy, 2006), as well as to examine the efficacy of these treatments compared to control or comparison conditions, such as individual gambling treatments, Gam-Anon, or combined individual and couple treatment (Jiménez-Murcia et al., 2017, Rychtarik and McGillicuddy, 2006, Tremblay et al., 2015, 2018), after controlling for other forms of help-seeking (Orford et al., 2017). It will also be important for future research to determine the mechanisms of change underpinning these interventions (Bertrand et al., 2008, Dowling et al., 2009, Ingle et al., 2008, Rychtarik and McGillicuddy, 2006), which interventions work best with partner involvement (Bertrand et al., 2008, Ingle et al., 2008), the factors that predict positive outcomes (Ingle et al., 2008), which treatment components are most effective (Rychtarik and McGillicuddy, 2006, Tremblay et al., 2015), and when and under what conditions affected others benefit most from affected other involvement (Bertrand et al., 2008). It has also been recommended that culturally sensitive treatment programs and service models for affected others and couples be developed and trialled to determine their efficacy (Chan et al., 2016).

Chapter 4: Affected other interventions and treatment outcome measurement across the addictions

In addition to the scoping review, the Foundation requested information regarding interventions for affected others across the addictions, including what and how change is measured. The aims of this research activity are therefore to: (a) describe the types of interventions employed in the treatment of affected others across addictions; (b) evaluate the efficacy of these interventions; and (c) identify the constructs measured and instruments employed to evaluate the outcomes of treatment for affected others across the addictions.

4.1 Methods

We narratively synthesised the findings from a separately funded systematic review and meta-analysis that aimed to examine the efficacy of psychosocial treatments for affected others across addictions (alcohol use, substance use, gambling and gaming) (Merkouris et al., 2020). The focus of this review was to explore the efficacy of interventions that are directed at affected others, including those that aim to equip them to support the addicted individual into treatment or to reduce their addictive behaviour (addicted individual-focused interventions) and those that aim to help the affected other manage the impacts of the addictive behaviour (affected other-focused interventions). From our previous systematic review (Merkouris et al., 2020), we therefore: (a) briefly narratively synthesised the types of interventions employed in the treatment of affected others across the addictions; (b) briefly narratively synthesised the efficacy of these interventions; and (c) identified the most commonly employed treatment outcome measurement instruments. To explore the degree to which these instruments can successfully identify changes in outcomes following an intervention, we reviewed the psychometric properties of each instrument using information sourced from original development articles and included articles, as well as other sources, when required.

4.2 Results

4.2.1 Affected other interventions employed across the addictions

Key findings

- **Across the addictions, CRAFT is the most commonly employed intervention, with smaller numbers of studies examining the efficacy of CST, the 5-Step Method, and Pressures to Change.**
- **There are also a range of other affected other interventions for affected others (e.g., CBT, motivational interviewing, group counselling, and stress management).**

In this section, we will provide a brief narrative synthesis of the interventions employed to treat affected others across the addictions (alcohol use, substance use, gambling and gaming), as described by Merkouris et al. (2020).

Merkouris et al. (2020) identified 46 articles based on 40 studies for inclusion in the systematic review and meta-analysis. The most commonly evaluated interventions were based on the Community Reinforcement Approach and Family Training (CRAFT) (32.5 per cent; k=13), followed by coping-skills training (CST) (12.5 per cent; k=5), the 5-step approach (12.5 per cent; k=5), and Pressures to Change (7.5 per cent; k=3). The remaining studies (40.0 per cent; k=16) evaluated a range of other addicted individual- and family member-focused interventions (e.g., cognitive-behavioural therapy, motivational interviewing, group counselling and stress management). Further detail about the aims and content of these interventions have been provided below.

Community Reinforcement Approach and Training (CRAFT)

CRAFT is a cognitive behavioural program that aims to help affected others: (1) engage treatment-refusing addicted individuals into treatment (i.e., addicted individual-focused); and (2) improve their own quality of life (i.e., affected other-focused) (Meyers and Wolfe, 1998). The CRAFT-based interventions evaluated in the systematic review varied slightly, however, common activities/strategies employed by CRAFT-based interventions include: (1) awareness training; (2) contingency management training; (3) communication skills training; (4) increasing social support; (5) teaching affected others how and when to engage addicted individuals in discourse regarding treatment entry; and/or (6) functional analysis.

Coping Skills Training (CST)

CST is a family member-focused intervention that aims to assist affected others cope with the distress resulting from the addicted individual's addiction (Rychtarik and McGillicuddy, 2005). CST is based on the family stress and coping model (Hobfoll and Spielberger, 1992, Moos et al., 1990, Rychtarik and McGillicuddy, 1997), which states that the distress experienced by affected others is caused by the addicted individual's behaviour and the affected others inability to cope with this behaviour (2006, Rychtarik and McGillicuddy, 2005). While the CST interventions evaluated in this systematic review varied slightly, they typically involved: (1) the provision of information on the family stress and coping model; (2) a description of how thoughts, feeling and behaviours interact, with a focus on how the addicted individual's behaviour can impact on the affected other, as well as the addicted individual; and (3) problem solving training in relevant problematic addiction-related situations experienced by affected others (e.g., drinking, illicit drug use and gambling situations) (Rychtarik and McGillicuddy, 2005, Rychtarik and McGillicuddy, 2006, Rychtarik et al., 2015).

5-step approach

Based on the SSCS model, the 5-step approach is also an affected other-focused intervention that acknowledges the need for affected others to obtain assistance in their own right. The 5-step approach includes: (1) non-judgmental listening; (2) provision of relevant information about addiction; (3) assistance with developing various coping strategies; (4) increasing social support; and (5) further help-seeking and support options (Copello, 2000).

Pressures to Change

Pressures to Change is an addicted individual-focused intervention. It utilises both learning theory principles and the stages of change model to helps partners of addicted individuals develop coping responses that empower the partner and help incentivise the addicted individual to seek help or reduce their consumption (Barber and Crisp, 1995). The ultimate aim is to help the affected other move the addicted individual from pre-contemplation through to the action stage of change. Typically, Pressures to Change treatments consist of five 'levels of pressure' including: (1) information relating to the addictive behaviour and stages of change model; (2) identification of high-risk situations and the development of alternate activities; (3) behavioural strategies that can be employed across a range of occasions (e.g., when the addicted individual is sober or intoxicated or when a crisis occurs); and (5)

information on involving other people in the program (Barber and Crisp, 1995, Barber and Gilbertson, 1996, Barber and Gilbertson, 1998).

Other interventions

As outlined above, the remaining studies evaluated a range of interventions. Four of these studies evaluated interventions aimed at both affected others and addicted individuals. In a sample of 50 partners of alcoholics, Howells and Orford (2006) evaluated a treatment called 'Guidelines for therapeutic approach with partners' across a range of affected other and addicted individual outcomes. This treatment aimed to improve the coping strategies of affected others, which would in turn reduce the affected other's distress and assist with the addicted person's drinking problem. In a sample of 27 caregivers of individuals with illicit drug abuse, Masaeli et al. (2018) evaluated a 'Matrix Method' intervention across a range of affected other outcomes. This intervention aimed to improve the quality of life, anxiety, and depression of both the affected other and addicted person. In a sample of 100 affected others of gambling, Magnusson et al. (2019a) evaluated a structured CBT program across a range of affected other, addicted individual and relationship functioning outcomes. This CBT program aimed to address affected other- and addicted individual-focused outcomes by engaging the affected other and addicted individual in naturally reinforcing activities. Lastly, in a sample of 61 female partners of alcoholics, Halford et al. (2001) evaluated a stress management intervention across a range of affected other, addicted individual and relationship functioning outcomes. This intervention aimed to reduce the addicted individual's drinking, as well as reduce the impact of this drinking on the affected other via cognitive restructuring and enhancing pleasant activities.

Five studies evaluated affected other-focused interventions across a range of affected other outcomes. Buchner et al. (2019) evaluated an online self-directed program on 126 individuals affected by someone else's gambling that primarily aimed to benefit the affected others. de los Angeles Cruz-Almanza et al. (2006) evaluated a Rational-Emotive Behavioural Therapy (REBT) intervention, in a sample of 18 female partners of alcoholics, that aimed to promote the affected other's self-esteem, coping strategies and assertiveness. Roush and DeBlassie (1989) evaluated a group counselling intervention, in a sample of 24 adult children of alcoholics, that aimed to impact on the knowledge, attitudes, and behaviours of affected others. Similarly, in a sample of 23 adult children of alcoholics, Gustafson et al. (2012) evaluated a combination of group therapy, which aimed to address issues relating to co-dependency, and a computer-based intervention called 'Comprehensive Health Enhancement Support System' (CHESS), which aims to reduce the burden caused by chronic illness by tailoring information and advice to affected other's specific situation. Finally, in a sample of 82 adult children of alcoholics, Hansson et al. (2006) evaluated the efficacy of a CST intervention combined with an alcohol intervention, which aimed to address the drinking behaviour of affected others.

Four studies evaluated addicted individual-focused interventions. In a sample of 68 female partners of alcoholics, Yoshioka et al. (1992) investigated the efficacy of the 'Drinking Control Modification program' across a range of affected other outcomes. This program addressed the behaviour of the affected other with the aim of helping the addicted individual reduce their drinking and/or enter treatment. In a sample of 48 female partners of illicit drug users, Hojjat et al. (2017) evaluated a a harm reduction approach on a range of addicted individual and relationship functioning outcomes, which was aimed at reducing relapse rates. In a sample of 135 affected others of alcohol and illicit drug use, Kirby et al. (2017) evaluated a program called Treatment Entry Training (TEnT) on a range of affected other and addicted individual outcomes, which focused solely on training the affected other in identifying when the addicted individual may be suggestable to engaging in treatment. Lastly, Liepman et al. (1989) evaluated an intervention labelled as a motivational counselling intervention, on a range of affected other and addicted individual outcomes, in a sample of 24 affected others of alcohol. This intervention aimed to enhance the ability of affected others to confront addicted individuals about their addictive behaviour and encourage them to enter treatment.

Finally, there were three studies that did not provide sufficient detail to determine the aims of the intervention, simply describing the interventions as group and individual counselling (n=134; Clark and Hanna, 1989), self-help group (n=92; Passa and Giovazolias, 2015) and the standardised information technique (n=41; Zetterlind et al., 1996). These studies evaluated a range of affected other (Clark and Hannah, 1989; Passa and Giovazolia, 2015; Zetterlind et al., 1996), addicted individual (Zetterlind et al., 1996) and relationship functioning (Clark and Hannah, 1989; Passa and Giovazolia, 2015) outcomes.

4.2.2 Efficacy of affected other interventions across the addictions

Key findings

- **CRAFT displays the most consistent beneficial effects of intervention across affected other outcomes, followed by CST and the 5-Step Method.**
- **Pressures to Change, followed by CRAFT, produce the most consistent beneficial effects across addicted individual outcomes.**
- **CRAFT displays some beneficial effects of intervention across relationship functioning outcomes.**
- **When compared to control groups, face-to-face delivered affected other interventions show significantly lower post-treatment affected other depressive symptomatology and marital discord, as well as higher rates of addicted individual treatment entry and greater affected other coping skill acquisition.**
- **There is a paucity of studies evaluating the efficacy of self-directed interventions for affected others across the addictions, highlighting a clear gap in this literature.**

In this section, we will provide a brief narrative synthesis of the efficacy of interventions employed to treat affected others across the addictions, as described by Merkouris et al. (2020). Of the 40 included studies, half (50.0 per cent; k=20) evaluated interventions for individuals impacted by alcohol only, with the remaining studies evaluating interventions for a combination of alcohol and/or illicit drugs (17.5 per cent; k=7), gambling (17.5 per cent; k=7) and illicit drug use only (15.0 per cent; k=6). No studies evaluated interventions for individuals affected by someone else's gaming. The included studies evaluated a range of individually delivered face-to-face interventions (52.5 per cent; k=21), group-delivered face-to-face interventions (37.5 per cent; k=15) and self-directed interventions (22.5 per cent; k=9), with some studies evaluating a combination of individually-delivered, group-delivered and/or self-directed modalities (17.5 per cent; k=7). Across these studies, a range of affected other outcomes (97.5 per cent; k=39; e.g., anxiety symptomatology), addicted individual outcomes (62.5 per cent; k=25; e.g., treatment entry) and relationship/family functioning outcomes (45.0 per cent; k=18; e.g., marital/relationship discord) were evaluated (see section 4.2.3. below for a detailed synthesis of these outcomes).

Narrative synthesis

A narrative synthesis of the included studies revealed that, across affected other outcomes, CRAFT displayed the most consistent beneficial effects of intervention, followed by CST and 5-step intervention approaches. Pressures to Change consistently showed no beneficial effect of intervention on affected other outcomes, while the remaining interventions assessed differing outcomes that could not be synthesised meaningfully.

Pressures to Change, followed by CRAFT, produced the most consistent beneficial effects of intervention on addicted individual outcomes. In contrast, CST consistently showed no beneficial effect of treatment on addicted

individual outcomes. No studies evaluating the 5-step approach investigated addicted individual outcomes, with studies evaluating other interventions assessing differing addicted individual outcomes that could not be synthesised.

Finally, in relation to relationship functioning outcomes, CRAFT displayed some beneficial effects of intervention, as did the limited number of studies evaluating the efficacy of other interventions. In contrast, Pressures to Change displayed no beneficial effect on intervention and no studies evaluating CST or 5-step approaches evaluated relationship functioning outcomes.

Meta-analyses

In addition to the narrative synthesis, Merkouris et al. (2020) conducted a series of meta-analyses exploring the effectiveness of face-to-face delivered and self-directed interventions for affected others across addictions. Meta-analytic studies were conducted when there was at least two studies available. These meta-analyses consisted of RCTs (k=16) with a passive control group (e.g., no treatment, waitlist control). The meta-analytic evidence revealed that, when compared to control groups, face-to-face delivered interventions showed significantly lower post-treatment affected other depressive symptomatology (SMD= -0.46) and marital discord (SMD=-0.51), as well as higher rates of addicted individual treatment entry (RR=0.70) and greater affected other coping skill acquisition (SMD=-1.48). There were, however, no significant findings identified for the following outcomes: harms experienced by affected others and addicted individual's frequency of use. Moreover, meta-analysis were not conducted for affected other psychological distress/general mental health or affected other anxiety symptomatology as there were too few studies.

This analysis also highlighted the paucity of literature evaluating the efficacy of self-directed interventions for affected others across the addictions. No significant differences between self-directed interventions and control groups were identified on any affected other, addicted individual or relationship functioning outcomes for which there were a sufficient number of studies. However, there were few too studies to run meta-analyses for many outcomes; and almost all of those that could be run only included two studies. These results should therefore be interpreted with caution. Importantly, these findings highlight a gap in the literature, whereby there is a clear need for the development and evaluation of self-directed interventions for individuals affected by someone else's gambling.

4.2.3 Affected other treatment outcome measurement across the addictions

Key findings

- **25 treatment outcomes have been evaluated across the addictions, predominantly affected other outcomes (98 per cent), but also addicted individual outcomes (63 per cent), and relationship or family functioning (45 per cent).**
- **There is, however, little consistency in the measurement instruments employed.**

Assessment instruments designed to evaluate the effectiveness of interventions for affected others are yet to be developed. The limited gambling literature has evaluated outcomes using gambling measures adapted for affected others (to measure gambling behaviours, gambling consequences, and gambler entry into treatment) or generic psychological measures (to measure psychological functioning, relationship functioning, and coping skill acquisition) (Makarchuk et al., 2002, Hodgins et al., 2007b, Nayoski and Hodgins, 2016, Rychtarik and

McGillicuddy, 2006). This literature, however, is very limited and has been conducted primarily by one research team. As such, there is little guidance for gambling clinicians and researchers in the selection of measures to evaluate affected other interventions. This is in contrast to the broader addictions field, in which there is a much larger intervention literature that can be used to guide the selection of treatment outcome measures (Templeton et al., 2010). Moreover, treatment outcome measures used with others affected by gambling harm have not been well-validated. The failure to identify differences across many constructs in the available studies may therefore be due to inadequate measurement of the construct (Nayoski and Hodgins, 2016).

In this section, we will identify the most commonly employed treatment outcome instruments from the studies included in Merkouris et al. (2020). To explore the degree to which these instruments can successfully identify changes in outcomes following an intervention, we will review the psychometric properties of each instrument, including the sensitivity of change, using the psychological assessment literature.

As displayed in Appendix D, 25 treatment outcomes were evaluated across the included studies. The majority of these were affected other outcomes (n=19), followed equally by addicted individual (n=3) and relationship or family functioning (n=3) outcomes. Across each of these outcomes, there was limited consistency in the type of measurement tools employed, with some outcomes evaluated by as many as eight different measurement tools.

Addicted individual outcomes included frequency of consumption, harms and adverse consequences, and treatment entry. Of these outcomes, frequency of consumption was the most commonly evaluated outcome (k=9; 22.5 per cent), followed by harms and adverse consequences (k=3; 7.5 per cent). While four different measurement tools were employed across the included studies to evaluate frequency of consumption, the Timeline Follow Back was the most utilised measurement tool and displayed the best psychometric properties. Two different measurement tools were used to assess the harms and adverse consequences of the addicted individual. The Health and Daily Living Form was most commonly used, and while it displayed good to excellent internal consistency no test-retest estimates were available. In contrast, the Drinker of Inventory Consequences, which was used by one study, has demonstrated good to excellent internal consistency and test-retest reliability.

Affected other outcomes included alcohol and substance use, anger, anxiety, blame, burden, coherence, coping, depression, harms and adverse consequences, hazardous alcohol use, likelihood of engaging in specific behaviours, loneliness, psychological distress/general mental health, purpose in life, readiness to change, self-esteem, social functioning, social support, and wellbeing/life satisfaction/quality of life. Of these outcomes, psychological distress/general mental health (k=16; 40 per cent) and depression (k=16; 40 per cent) were the most commonly evaluated outcomes, followed by coping styles (k=15; 37.5 per cent). Of the eight measures that were utilised to evaluate psychological distress/general mental health, the Symptom Rating Test and the Global Severity Index of the Brief Symptom Inventory were the most commonly utilised and displayed the best psychometric properties. Of the seven measures that were employed to assess depression, the Beck Depression Inventory and the Beck Depression Inventory-II were the most commonly employed. While these measures demonstrated excellent internal consistency, test-retest reliability estimates ranged from fair to excellent. In contrast, the eight- and nine-item versions of the Patient Health Questionnaire have demonstrated excellent internal consistency and test-retest reliability but have been used in fewer studies. Of the eight measures that were utilised to evaluate coping styles, the 30-item Coping Questionnaire was the most commonly employed. While this measure has displayed adequate to excellent internal consistency, there is no available information on its test-retest ability. While used to a lesser extent, the Spouse Situation Inventory, is the only coping style measure to have demonstrated excellent internal consistency and good test-retest reliability, with most measures failing to report any test-retest reliability estimates.

Relationship or family functioning included family functioning, marital or relationship satisfaction/quality, and physical aggression/abuse/violence. Of these outcomes, marital or relationship satisfaction/quality was the most commonly evaluated outcome (k=18; 45 per cent), followed by family functioning (k=7; 17.5 per cent) and physical aggression/abuse/violence (k=3; 7.5 per cent). Six different measurement tools were employed across the included

studies to evaluate marital or relationship satisfaction/quality. Of these, the Relationship Happiness Scale was the most commonly utilised, however, there is limited available information about its psychometric properties. While the Dyadic Adjustment Scale and the Relationship Assessment Scale were employed by fewer studies, these measures have demonstrated good psychometric properties. Two measurement tools were utilised to evaluate family functioning, with the Family Environment Scale employed by the majority of the included studies, and the Family Adaptability and Cohesion Evaluation Scale employed by only one study. Neither measure has demonstrated adequate psychometric properties across both reliability indices, with the Family Environment Scale demonstrating better internal consistency but lower test-retest reliability than the Family Adaptability and Cohesion Evaluation Scale. Physical aggression/abuse/violence was consistently measured by the Conflict Tactics Scale, however, this measure has demonstrated poor to excellent internal consistency, and poor to good test-retest reliability.

4.3. Discussion

The infancy of this field, coupled with the relatively limited success of the available interventions, suggests that an examination of the much larger intervention literature for affected others across the addictions (Templeton et al., 2010) may be helpful to advance intervention development for others affected by gambling harms. An examination of the literature (Merkouris et al., 2020) suggests that CRAFT was the most commonly employed intervention, with smaller numbers of studies examining the efficacy of CST, the 5-Step Method, and Pressures to Change. There were also a range of other affected other interventions for affected others (e.g., CBT, motivational interviewing, group counselling, and stress management). CRAFT displayed the most consistent beneficial effects of intervention across affected other outcomes, followed by CST and the 5-Step Method; Pressures to Change, followed by CRAFT, produced the most consistent beneficial effects across addicted individual outcomes; and CRAFT displayed some beneficial effects of intervention across relationship functioning outcomes. Meta-analytic evidence suggests that when compared to control groups, face-to-face delivered affected other interventions showed significantly lower post-treatment affected other depressive symptomatology and marital discord, as well as higher rates of addicted individual treatment entry and greater affected other coping skill acquisition. This analysis also highlighted the paucity of studies evaluating the efficacy of self-directed interventions for affected others across the addictions, highlighting a clear gap in this literature.

Assessment instruments designed to evaluate the effectiveness of interventions for people affected by gambling-related harm are yet to be developed. The gambling literature has evaluated outcomes using gambling measures adapted for affected others or generic psychological measures. As such, there is little guidance for gambling clinicians and researchers in the selection of measures to evaluate affected other interventions. This is in contrast to the broader addictions field, in which there is a much larger intervention literature that can be used to guide the selection of treatment outcome measures (Templeton et al., 2010). An examination of this literature (Merkouris et al., 2020) indicates that 25 treatment outcomes have been evaluated, predominantly affected other outcomes (98 per cent), but also addicted individual outcomes (63 per cent), and relationship or family functioning (45 per cent). There is, however, little consistency in the measurement instruments employed. Recommendations from this literature include: the Timeline Follow Back to measure frequency of gambling consumption; the Health and Daily Living Form or the Gambler Inventory of Consequences to measure harm and adverse consequences; the Symptom Rating Test and the Global Severity Index to measure general mental health; the Beck Depression Inventory or Patient Health Questionnaire to measure depression; the Coping Questionnaire or the Spouse Situation Inventory to measure coping styles; the Dyadic Adjustment Scale and the Relationship Assessment Scale to measure relationship satisfaction; the Family Adaptability and Cohesion Evaluation Scale to measure family functioning, and the Conflict Tactics Scale to measure physical violence.

Chapter 5: Conclusions

This scoping review aimed to identify the recent research relating to addressing gambling harms to affected others, with a view to mapping the available research literature. Specifically, the review aimed to explore the prevalence of affected others, the socio-demographic characteristics of affected others, the assessment of affected others, the harms experienced by affected others, the coping strategies employed by affected others, and interventions for affected others. This section provides a brief overview of the clinical, research and policy implications of the findings, as well as the limitations of this review.

5.1 Clinical, research, and policy implications

5.1.1 Prevalence of affected others

- A considerable proportion of the general population report being affected by another person's gambling, suggesting that a relatively large proportion of the adult population may require support and assistance in relation to harms arising from another person's gambling.
- Estimates of affected other prevalence are predominantly derived from Nordic countries, with further estimates required for other countries.
- The development of a consistent measure of current affected other status for use in general population surveys would enhance comparisons across jurisdictions and over time within jurisdictions.
- Further longitudinal research determining incidence and patterns associated with change to affected other status is required (Langham et al., 2016).
- General practitioners are in a good position to identify affected others and their needs for support and assistance, advise them about available services, and encourage them to access these services (Hing et al., 2013, Orford et al., 2017, Salonen et al., 2016).
- Research is required to specifically explore the experience of subgroups of affected others other than intimate partners or to employ sufficiently large samples to examine differences and similarities between different subgroups of affected others.
- Studies are required examine the needs of affected others of those with lower-risk gambling problems and whether these needs are quantitatively or qualitatively different to those with more severe gambling problems (Rodda et al., 2019).

5.1.2 Socio-demographic characteristics of affected others

- Further research examining the socio-demographic characteristics associated with affected other status using population-level data with more consistent measurement of affected other status is required.

5.1.3 Assessment of affected others

- There is a need for a brief standardised measure of current affected other status so that population estimates of affected other prevalence can be reliably determined, compared across jurisdictions and over time, and associated with current gambling-related harm. This instrument requires an evaluation of the amount or type of concern (Salonen et al., 2014).
- New assessment instruments for use with affected others need to be subjected to more rigorous development procedures. Further validation and exploration of the psychometric properties of existing assessment instruments for use with affected others is required.
- Gambling clinicians and researchers would benefit from the development of assessment instruments designed to evaluate the effectiveness of interventions for affected others.
- Recommendations of treatment outcome measures from the addictions literature include: the Timeline Follow Back to measure frequency of gambling consumption; the Health and Daily Living Form or the Gambler Inventory of Consequences to measure harm and adverse consequences; the Symptom Rating Test and the Global Severity Index to measure general mental health; the Beck Depression Inventory or Patient Health Questionnaire to measure depression; the Coping Questionnaire or the Spouse Situation Inventory to measure coping styles; the Dyadic Adjustment Scale and the Relationship Assessment Scale to measure relationship satisfaction; the Family Adaptability and Cohesion Evaluation Scale to measure family functioning, and the Conflict Tactics Scale to measure physical violence.

5.1.4 Harms experienced by affected others

- It would be of interest for future research to explore which characteristics of gamblers and affected others influence the net benefits or harms they experience (Rockloff et al., 2019) and calculate the cost of affected others to the health system (Dickson-Swift et al., 2005).
- There is a need for additional research into the degree to which affected others report reduced performance at work or study and cultural harms as a result of exposure to gambling by others.
- There is a need for governments, industry, researchers, and service providers to take steps to protect affected others from these harms.
- Effective screening and referral protocols, including accessible and available services (Landon et al., 2018), are required for affected others.
- Interventions that assist affected others to address their own wellbeing, particularly in relation to financial management, coping skills training, legal options, and crisis management, are warranted (Dowling et al., 2009, 2014, Hing et al., 2013, Hodgins et al., 2007a, Holdsworth et al., 2013, Kourgiantakis et al., 2018, Rodda et al., 2019, Wenzel et al., 2008).
- Relationship- and family-oriented interventions that address practical, daily life issues and relational aspects (Klevan et al., 2019); (Rodda et al., 2019, Suomi et al., 2013) are required.
- Other opportunities may include the allocation of resources towards public health initiatives to raise awareness of the possible impacts of problem gambling on affected others and service availability, with a view to early detection of harms and prevention of further deleterious consequences (Dickson-Swift et al., 2005, Hing et al., 2013); (Holdsworth et al., 2013, Jeffrey et al., 2019, Landon et al., 2018, Patford, 2009, 2007b, 2007a).
- Other service providers, who may be the first point of contact for affected others, could be trained to raise their awareness of gambling-related harms, screen for problem gambling and affected other status, and provide harm minimisation strategies or appropriate referrals (Dickson-Swift et al., 2005, Jeffrey et al., 2019, Li et al., 2017, Patford, 2007b, Sullivan et al., 2007).

- The identification of discrepancies in the self-report of gamblers and their affected others highlight the importance of assessing gambling-related harm from both perspectives (Côté et al., 2018, Cunha and Relvas, 2015, Cunha et al., 2015, Li et al., 2017, Kalischuk, 2010, Kourgiantakis et al., 2013).
- Additional research employing a matched-pairs design of gamblers and their affected others to compare their experiences of harm is required (Jeffrey et al., 2019, Li et al., 2017).
- An enhanced understanding of the divergences in their perceptions can inform the development of more effective public-health initiatives and interventions for affected others, family support, couples, and families (Cunha et al., 2015, Ferland et al., 2008).
- Implications for clinical practice in which affected others are involved in treatment include the need to set shared therapeutic goals, maintain neutrality, and create a secure and non-defensive context (Cunha et al., 2015).
- There is a need for further systematic research employing larger samples of affected others from the general population or non-clinical sources to gain a full appreciation of the nature of the impact of gambling problems (Côté et al., 2018, Dowling et al., 2009, Estevez et al., 2020, Hodgins et al., 2007a, Wenzel et al., 2008, Salonen et al., 2014).
- Further quantitative longitudinal family-focused research examining how gambling-related harm changes over time is required (Bertrand et al., 2008, Dowling et al., 2009, Kalischuk, 2010, Langham et al., 2016, Mazzoleni et al., 2009, Salonen et al., 2014, Svensson et al., 2013).
- It is evident that direct gender comparisons are warranted in this area of research (Côté et al., 2018, Dowling et al., 2009, Mazzoleni et al., 2009, Patford, 2007b, Svensson et al., 2013).
- Understanding the impacts of problem gambling on affected others from different cultural backgrounds will enhance the development of culturally appropriate theoretical models, societal education, and family sensitive treatment programs (Chan et al., 2016, Bond et al., 2016, Mathews and Volberg, 2013).
- Further research to understand the risk and protective factors that determine the extent of gambling-related harm (Dowling et al., 2014, Kourgiantakis et al., 2013, Langham et al., 2016, Rodda et al., 2019, Vitaro et al., 2008) is required to inform the development of public health initiatives and interventions.

5.1.5 Coping strategies employed by affected others

- Future research is required to examine the coping strategies employed by affected others, whereby harms that have direct reference to gambling-related coping are grouped into the two main goals: to influence the gambling behaviour and increase the wellbeing of the partner, couple, and family (Côté et al., 2018).
- To inform the development of effective prevention and treatment efforts (Chan et al., 2016, Côté et al., 2018, Kourgiantakis et al., 2018, Leung et al., 2010), further research is required to understand which strategies affected others find most helpful and how these strategies work to improve their health and wellbeing (Orford et al., 2017), the impact of these strategies on the gambling behaviour and wellbeing of affected others (Côté et al., 2018), and whether these strategies mediate or moderate the stress-strain relationship (Chan et al., 2016).
- Future research investigating coping strategies require larger sample sizes that are representative of affected others in the general population, with an effort to recruit beyond intimate partners (particularly female partners) and English-speaking affected others from Western countries.
- Although there is some limited evidence that gamblers and their partners have a relatively high degree of concordance in their reporting of the coping strategies employed by affected others (Côté et al., 2018), additional research employing a matched-pairs design of gamblers and their affected others to compare their experiences is required.

- Longitudinal studies are required to determine how the coping strategies employed by affected others change over time and in response to the start of treatment or in response to a change in gambling behaviour.

5.1.6 Interventions for affected others

- Further research is required to quantify the numbers of affected others accessing community support services, such as emergency relief, financial support services, gambling services, and other counselling services, such as mental health and alcohol and other drug services (Dickson-Swift et al., 2005, Salonen et al., 2014), as well as the rates of different types of help-seeking reported by affected others in the general population (Svensson et al., 2013).
- A greater understanding of the facilitators and barriers to accessing these services, as well as the treatment needs of affected others presenting to these services, is needed.
- Access to help services by affected others is substantially lower than expected and many affected others report that they are reluctant to seek formal help, citing perceived barriers such as shame and stigma, highlighting the need for support services to overcome these barriers.
- It appears that the gambling problem has to typically become quite severe before affected others will seek assistance (Hodgins et al., 2007b), highlighting the importance of public health promotion efforts encouraging help-seeking by affected others as soon as possible (Chan et al., 2016).
- General practitioners may be an important complementary resource for brief interventions, particularly for affected others who do not wish to attend specialist problem gambling treatment providers (Sullivan et al., 2007).
- Further research is required to investigate the treatment preferences or needs of affective others in order to establish efficient and targeted support and treatment services (Salonen et al., 2014).
- Further development and evaluation of lower-intensity, self-directed interventions appears warranted to facilitate the recovery of affected others from gambling harms without formal treatment.
- Affected others indicate a need for both gambler-focused and affected other-focused interventions but further research exploring the key treatment characteristics associated with successful delivery of gambler-focused interventions is required (Archer et al., 2019).
- Studies investigating the efficacy of CRAFT for gambling may need to adopt additional components, such as increased accessibility and availability of gambling treatment, an increased focus on reinforcement schedules for abstinence, and role-playing to prepare affected others for different scenarios that may arise (Archer et al., 2019, Magnusson et al., 2019a, Nayoski and Hodgins, 2016).
- There is a need to expand access to evidence-based services for affected others by offering a broader range of evidence-based interventions for this heterogenous population.
- It is important that treatment is flexible so that it meets the varying needs of affected others (Crisp et al., 2001, Kalischuk, 2010, Kourgiantakis et al., 2018, Rodda et al., 2019, Salonen et al., 2016). A tailored approach focusing on core skills that are relevant to individual affected others could improve treatment motivation, outcomes, and adherence (Rodda et al., 2019).
- The delivery of tailored interventions requires a better understanding of the fit between service and client characteristics, as well as the development of advanced assessment procedures or navigation tools to assist affected others and their clinicians in determining the most appropriate treatment options (Rodda et al., 2013, Rodda et al., 2019).
- A more sophisticated range of interventions may be required, in which interventions target different types of harm or involve moving beyond a psychotherapeutic approach, such as working with banking providers to develop options for affected others (Rodda et al., 2019).

- There is value in integrating affected others into interventions and addressing issues at the couple level (Hodgins et al., 2007b, Ingle et al., 2008, Jiménez-Murcia et al., 2017).
- Routine screening and in-depth assessment of the couple relationship, followed by couples therapy, if necessary, is required (Lee, 2014).
- Further research designed to establish criteria for directing gamblers into individual, couple, or combined treatment is necessary (Tremblay et al., 2018).
- Because relationship issues may not be adequately addressed in many current interventions, incorporating affected others into gambling treatment may require new treatment models, funding, training, and evidence-based procedures (Chan et al., 2016, Ingle et al., 2008, Kalischuk, 2010, Kourgiantakis et al., 2018).
- Further research examining the efficacy of different types of treatments for affected others and different types of family involvement on both gamblers and their affected others is required (Kourgiantakis et al., 2013, Hodgins et al., 2007a).
- Further research with larger samples is required to determine the stability of therapeutic changes over longer periods of time (Lee, 2002; Orford et al., 2017, Rychtarik and McGillicuddy, 2006) and the efficacy of these treatments compared to control conditions or comparison conditions.
- It is important for future research to determine the mechanisms of change underpinning these interventions (Bertrand et al., 2008, Dowling et al., 2009, Ingle et al., 2008, Rychtarik and McGillicuddy, 2006), which interventions work best with partner involvement (Bertrand et al., 2008, Ingle et al., 2008), the factors that predict positive outcomes (Ingle et al., 2008), which treatment components are most effective (Rychtarik and McGillicuddy, 2006, Tremblay et al., 2015), and when and under what conditions affected others benefit most from affected other involvement (Bertrand et al., 2008).
- The development and evaluation of culturally sensitive treatment programs and service models for affected others and couples is required (Chan et al., 2016).

5.2 Study limitations

This scoping review aimed to map the extent, range, and nature of literature on adult affected others, with a view to creating a document that can inform clinical, research, and policy decision-making in relation to this important population. The inclusion criteria employed due to the broad nature of the research questions, however, resulted in several limitations that should be considered when interpreting the findings of this review. First, only peer-reviewed studies published in the English language were included, which potentially represents a sampling bias, whereby grey literature, such as government-funded reports, are excluded. Second, only studies with empirical data were included, which resulted in the exclusion of some information relevant to the treatment of affected others, such as the description of some interventions (e.g., (Bertrand et al., 2008) or mental health guidelines (Bond et al., 2016) that were not evaluated in samples of affected others at the time of the systematic search. Third, only studies with direct relevance to affected others, as indicated by related terms used in study titles, abstract, or aims, were included, with the exception of some studies identified during the manual searching of reference lists. Fourth, the focus was on adult affected others to inform the development of interventions for this group; but it is clear that children raised in problem gambling families report a range of gambling-related harms and require attention from a public health perspective. Finally, several studies in which composite addiction samples, outcome measures, or stakeholder samples were excluded, which may have provided some additional insight into the experiences of affected others.

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Appendices

Appendix A Electronic search strategy

Group 1 – gambling terms

1. (TI ga R AB gambl*)

AND

Group 2 - family member terms

2. (TI CSO OR AB CSO) OR
3. (TI AO OR AB AO) OR
4. (TI “significant other*” OR AB “significant other*”) OR
5. (TI “concerned other*” OR AB “concerned other*”) OR
6. (TI “affected other*” OR AB “affected other*”) OR
7. (TI “affected by” OR AB “affected by”) OR
8. (TI famil* OR AB famil*) OR
9. (TI relatives OR AB relatives) OR
10. (TI friend OR AB friend) OR
11. (TI partner OR AB partner) OR
12. (TI couple OR AB couple) OR
13. (TI “child* of” OR AB “child* of”) OR
14. (TI son OR AB son) OR
15. (TI daughter OR AB daughter) OR
16. (TI parent OR AB parent) OR
17. (TI carer OR AB carer) OR
18. (TI spous* OR AB spous*) OR
19. (TI wife OR AB wife)
20. (TI wives OR AB wives) OR
21. (TI husband OR AB husband) OR
22. (TI sibling OR AB sibling) OR
23. (TI brother OR AB brother) OR
24. (TI sister OR AB sister) OR
25. (TI mother OR AB mother) OR
26. (TI father OR AB father) OR
27. (TI grandparent OR AB grandparent) OR
28. (TI grandchild* OR AB grandchild*) OR
29. (TI colleague OR AB colleague) OR
30. (TI co-worker OR AB co-worker) OR
31. (TI coworker OR AB coworker) OR
32. (TI caregiver OR AB caregiver)
33. (TI “someone else*” OR AB “someone else*”)
34. (TI intergenerational OR AB intergenerational)

Appendix B Characteristics of included studies

Study ID	Country of publication	Affected other sample recruitment source	Type of affected others sampled	Affected other sample size	Affected other age (mean, standard deviation)	Affected other gender (% male)	Study design
Archer et al. (2019)	United Kingdom	Systematic review of 14 studies (5 gambling studies) implementing CRAFT for AOs across addictions	All AOs	691 across conditions (143 across gambling studies)	45-52 (across treatment conditions)	0%-28%	Systematic review across addictions
Bastiani et al. (2015)	United Kingdom	Treatment-seeking AOs	All AOs	2468	Males: 44.1 (SD=14.3); Females: 44.7 (SD=12.8)	23.1%	Cross-sectional
Browne et al. (2017)	Canada	Commercial online panel	All AOs	115	Not reported	48%	Cross-sectional
Buchner et al. (2019)	Germany	Convenience	All AOs	126	38.8 (SD=11.1)	11.1%	Feasibility trial
Chan et al. (2016)	Hong Kong	Treatment-seeking AOs	All AOs	103	44.6 (SD=11.9)	13%	Cross-sectional
Côté et al. (2018)	Canada	AOs of treatment-seeking gamblers	Partners	9	37.4 (SD=16.7)	11%	Qualitative
Crisp et al. (2001)	Australia	Treatment-seeking AOs	Partners	440	Not reported	29.6%	Cross-sectional
Cunha and Relvas (2015)	Portgual	Convenience	Partners	13	43.46 (SD=10.41)	30.77%	Cross-sectional
Cunha and Relvas (2015)	Portugal	Couple/family treatment-seeking	Partners	1	Not reported	0%	Qualitative
Dannon et al. (2006)	Israel	AOs of treatment-seeking gamblers	Family members (parents and siblings)	93	Parents: 68.4 (SD=14.9); Siblings: 32.6 (SD = 17.9)	45%	Cross-sectional
Dickson-Swift et al. (2005)	Australia	Convenience	Partners	7	Not reported	29%	Qualitative

Study ID	Country of publication	Affected other sample recruitment source	Type of affected others sampled	Affected other sample size	Affected other age (mean, standard deviation)	Affected other gender (% male)	Study design
Diskin and Hodgins (2009)	Canada	Convenience	Not reported	47	Not reported	Not reported	Randomised controlled trial
Dowling et al. (2009)	Australia	AOs of treatment-seeking gamblers	Partners	29	45.2 (SD=10.2)	97%	Cross-sectional
Dowling et al. (2014)	Australia	Treatment-seeking AOs	All AOs	366	Not reported	16.4%	Cross-sectional
Dowling et al. (2016a)	Australia	Systematic review of 14 studies exploring relationship between problem gambling and intimate partner violence	Partners	31-7214 (M=1443, SD=2155, median=391)	Not reported	0%-100%	Systematic review
Dowling et al. (2016b)	Australia	Not available	Not available	Not available	Not available	Not available	Scale development
Estevez et al. (2020)	Spain	Treatment-seeking AOs	Family members	89	48.63 (SD=13.36)	30%	Cross-sectional
Ferland et al. (2008)	Canada	AOs of treatment-seeking gamblers	Partners	7	40.4 (SD=8.8)	0%	Cross-sectional
Garrido-Ferńandez et al. (2011)	Spain	Couple/family treatment-seeking	Partners	20	Not reported	Not reported	Randomised trial
Goh et al. (2016)	Singapore	Successful family exclusion order applications (over nearly 5 year period)	Family members	105	Not reported	29.5%	Qualitative
Gokler et al. (2014)	Turkey	Random selection of households	Partners	20 of 800	36.85 (SD=8:44)	0%	Cross-sectional
Goodwin et al. (2017)	Australia	Commercial online panel	All AOs	2129	46.96 (SD=15.18)	45.3%	Cross-sectional
Hing et al. (2013)	Australia	Treatment-seeking AOs	All AOs	48	46.9 (SD=13.0)	25%	Mixed methods

Study ID	Country of publication	Affected other sample recruitment source	Type of affected others sampled	Affected other sample size	Affected other age (mean, standard deviation)	Affected other gender (% male)	Study design
Hodgins et al. (2007a)	Canada	Convenience	All AOs	186	45 (SD=12.2)	18%	Cross-sectional
Hodgins et al. (2007b)	Canada	Convenience	All AOs	187	45 (SD=12.2)	18%	Randomised controlled trial
Hodgins and Makarchuk (2003)	Canada	Convenience	All AOs	Sample 1: 58; Sample 2:66	Not reported	Not reported	Cross-sectional
Holdsworth et al. (2013)	Australia	Convenience	Partners	18	Not reported	5.6%	Qualitative
Ingle et al. (2008)	USA	AOs of treatment-seeking gamblers	Partners	4410 gamblers (including 2142 with partner)	Not reported	Not reported	Single-arm trial
Izmirli et al. (2014)	Turkey	Stratified random sampling from women registered with family physicians in one district	Partners	260	Not reported	0%	Cross-sectional
Jeffrey et al. (2019)	Australia	Commercial online panel	Partners	1009	Not reported	17%	Cross-sectional
Jiménez-Murcia et al. (2015)	Spain	AOs of treatment-seeking gamblers	Family members	440 gamblers (Not reported AOs)	Not reported	Not reported	Single-arm trial
Jiménez-Murcia et al. (2017)	Spain	AOs of treatment-seeking gamblers	All AOs	537 gamblers (Not reported AOs)	Not reported	Not reported	Randomised controlled trial
Klevan et al. (2019)	Norway	Treatment-seeking AOs	Partners	9	Not reported	0%	Qualitative
Kourgiantakis et al. (2013)	Canada	Systematic review of 30 studies examining effects of problem gambling on families and family involvement in treatment	All AOs	Mean=490	Not reported	Not reported	Systematic review

Study ID	Country of publication	Affected other sample recruitment source	Type of affected others sampled	Affected other sample size	Affected other age (mean, standard deviation)	Affected other gender (% male)	Study design
Kourgiantakis et al. (2018)	Canada	Couple/family treatment-seeking	Family members	11	48 (SD=15.09)	27%	Qualitative
Krishnan and Orford (2002)	United Kingdom	Convenience	All AOs	16	Not reported	21.1%	Mixed methods
Landon et al. (2018)	New Zealand	Treatment-seeking AOs from Māori community	All AOs	10	Not reported	20%	Qualitative
Lee and Rovers (2008)	Canada	Couple/family treatment-seeking	Partners	24	Not reported	Not reported	Mixed methods
Lee (2009)	Canada	AOs of treatment-seeking gamblers	Partners	Illustrative composite case generated from 3 couples	Not available	Not available	Qualitative
Lee (2014)	Canada	AOs of treatment-seeking gamblers	Partners	8	Not reported	Not reported	Qualitative
Lee (2015)	Canada	AOs of treatment-seeking gamblers	Partners	1	32	0%	Qualitative
Lee and Awosoga (2015)	Canada	Convenience	Partners	30	48.9 (SD=Not reported)	66%	Randomised controlled trial
Leung et al. (2010)	Hong Kong	AOs of treatment-seeking gamblers	Partners	10	41.8 (SD=4.0)	0%	Mixed methods
Li et al. (2017)	Australia	Commercial online panel	All AOs	Panel a: 1678; Panel b: 451	45.8 (SD=Not reported)	30.25%	Cross-sectional
Liao (2008)	USA	Convenience	Partners	31	M = 53 (SD=Not reported)	25.8%	Cross-sectional
Magnusson et al. (2019a),	Sweden	Convenience	Family members	100	45 (SD=14)	11%	Randomised controlled trial
Magnusson et al. (2019b)	Sweden	Convenience	All AOs	133	45 (SD=14.5)	23%	Cross-sectional

Study ID	Country of publication	Affected other sample recruitment source	Type of affected others sampled	Affected other sample size	Affected other age (mean, standard deviation)	Affected other gender (% male)	Study design
Makarchuk et al. (2002)	Canada	Convenience	Family members	31	40.6 (SD=12.9)	19%	Randomised controlled trial
Mathews and Volberg (2013).	Singapore	AOs of treatment-seeking gamblers	Family members	50	Not reported	20%	Qualitative
Mazzoleni et al. (2009)	Brazil	AOs of treatment-seeking gamblers	Partners	25	40.6 (SD=9.1)	0%	Cross-sectional
Mladenović et al. (2015)	Serbia	Couples/family treatment	Family members (parents and partners)	Not reported	Not reported	Not reported	Single-arm trial
Muelleman et al. (2002)	USA	Emergency department	Partners	286	Median=29.	0%	Cross-sectional
Nayoski and Hodgins (2016)	Canada	Convenience	Family members	31	Individual intervention: 47 (SD= 12.8); workbook: 46 (SD=12.9)	9.7%	Randomised trial
Nilsson et al. (2018)	Sweden	Convenience	All AOs	18	41.9 (SD=Not reported)	11.1%	Randomised trial
Nilsson et al. (2019)	Sweden	Convenience	All AOs	136	45.3 (SD=14.9)	24.3%	Randomised trial
Orford et al. (2005)	United Kingdom	Narrative review highlighting recommended set of assessment members for AOs across the addictions	Family members	Not available	Not available	Not available	Narrative review of scale development
Orford et al. (2017)	United Kingdom	AOs of treatment-seeking gamblers; treatment-seeking AOs	Family members	215	Not reported	17.8%	Single-arm trial
Palmer du Preez et al. (2018)	New Zealand	Treatment-seeking AOs	Not reported	84	Not reported	27.4%	Cross-sectional

Study ID	Country of publication	Affected other sample recruitment source	Type of affected others sampled	Affected other sample size	Affected other age (mean, standard deviation)	Affected other gender (% male)	Study design
Patford (2007a)	Australia	Convenience	Partners	13	33.77 (SD=Not reported)	100%	Qualitative
Patford (2007b)	Australia	Convenience	Adult children	15	Not reported	27%	Qualitative
Patford (2007c)	Australia	Convenience	Parents	15	58.2 (SD=Not reported)	7%	Qualitative
Patford (2009)	Australia	Convenience	Partners	23	40.4 (SD=Not reported)	0%	Qualitative
Petry et al. (2006)	USA	Convenience	Not reported	159	Not reported	Not reported	Randomised controlled trial
Potenza et al. (2001)	USA	Treatment-seeking AOs	All AOs	411	Not reported	Not reported	Cross-sectional
Riley et al. (2018)	Australia	Systematic review of 53 studies examining gambling-related harms to AOs	All AOs	Not reported	Not reported	Not reported	Systematic review
Rockloff et al. (2019)	Australia	Representative general population	All AOs	225	Not reported	Not reported	Cross-sectional
Rodda et al. (2013)	Australia	Treatment-seeking AOs	All AOs	63	Not reported	13%	Cross-sectional
Rodda and Lubman (2014)	Australia	Treatment-seeking AOs	All AOs	488	Not reported	Not reported	Cross-sectional
Rodda et al. (2019)	Australia	Treatment-seeking AOs	All AOs	62	36 (SD=12.5)	8.4%	Mixed methods
Rychtarik and McGillicuddy (2006)	USA	Convenience	Partners	21	43.17 (SD=9.73)	17%	Randomised controlled trial
Salonen et al. (2014)	Finland	Representative general population	All AOs	897	Not reported	51%	Cross-sectional
Salonen et al. (2015)	Finland	Representative general population	All AOs	865	Not reported	Not reported	Cross-sectional (time-series)

Study ID	Country of publication	Affected other sample recruitment source	Type of affected others sampled	Affected other sample size	Affected other age (mean, standard deviation)	Affected other gender (% male)	Study design
Salonen et al. (2016)	Finland	Representative general population	All AOs	847	Not reported	Not reported	Cross-sectional
Schluter et al. (2008)	New Zealand	Drawn from Pacific Islands Families (PIF) cohort study	Partners	16 of 1400	Not reported	Not reported	Cross-sectional
Shiue (2015)	Japan	Representative general population	Family members (cohabiting)	215	Not reported	Not reported	Cross-sectional
Sullivan et al. (2007)	New Zealand	Primary health organisations	All AOs	281	Not reported	Not reported	Cross-sectional
Suomi et al. (2013)	Australia	Treatment-seeking AOs	All AOs	Phase 1: 120; Phase 2: 32	Phase 1: Males 36.1 (SD=12.1), Females 42.4 (SD=116); Phase 2: Males 34.8 (SD=34.8), Females 41.0 (SD=13.8)	Phase 1: 47.5%; Phase 2: 12.5%	Mixed methods
Svensson et al. (2013)	Sweden	Representative general population	All AOs	1472	Not reported	52.9%	Longitudinal
Tremblay et al. (2018)	Canada	Couples/family treatment-seeking	Partners	21	Not reported	14.3%	Mixed methods
Vitaro et al. (2008)	Canada	Drawn from community cohort study	Adult children	42	Baseline: 16 (SD=Not reported); Follow-up: 23 (SD=Not reported).	57%	Cohort
Wenzel et al. (2008)	Norway	Representative general population	All AOs	70	Not reported	Not reported	Cross-sectional
Wood and Griffiths (2007)	United Kingdom	Treatment-seeking AOs	All AOs	21	Not reported	Not reported	Cross-sectional
Wood and Wood (2009)	United Kingdom	Treatment-seeking AOs	All AOs	20	Not reported	Not reported	Cross-sectional

Appendix C Summary of data extraction from included studies

Study ID	Systematic reviews	RQ1	RQ2	RQ3	RQ4									RQ5			RQ6					
					RQ4a							RQ4b	RQ4c	RQ5a	RQ5b	RQ5c	RQ6a	RQ6b	RQ6c	RQ6d	RQ6e	RQ6f
					Financial	Relationship	Emotional	Health	Work	Cultural	Criminal											
Archer et al. 2019	X																					
Bastiani et al. 2015																	X					
Browne et al. 2017b												X										
Buchner et al. 2019														X				X		X		
Chan et al. 2016							X	X						X		X						
Côté et al. 2018														X								
Crisp et al. 2001																			X			
Cunha and Relvas 2015					X	X	X						X					X				
Cunha et al. 2015					X	X	X						X									
Dannon et al. 2006							X															
Dickson-Swift et al. 2005					X	X	X	X														
Diskin and Hodgins 2009													X									
Dowling et al. 2009						X	X															
Dowling et al. 2014				X	X	X	X	X	X									X				
Dowling et al. 2016a	X																					
Dowling et al. 2016b				X																		
Estevez et al. 2020							X							X		X						
Ferland et al. 2008					X	X	X						X									

Study ID	Systematic reviews	RQ1	RQ2	RQ3	RQ4									RQ5			RQ6					
					RQ4a							RQ4b	RQ4c	RQ5a	RQ5b	RQ5c	RQ6a	RQ6b	RQ6c	RQ6d	RQ6e	RQ6f
					Financial	Relationship	Emotional	Health	Work	Cultural	Criminal											
Garrido-Fernandez et al. 2011																					X	
Goh et al. 2016					X	X	X	X												X		
Gokler et al. 2014						X																
Goodwin et al. 2017		X											X									
Hing et al. 2013														X	X	X		X	X	X		
Hodgins et al. 2007a				X	X	X	X									X						
Hodgins et al. 2007b																				X		
Hodgins and Makarchuk 2003													X									
Holdsworth et al. 2013					X	X	X	X														
Ingle et al. 2008																						X
Izmirli et al. 2014						X																
Jeffrey et al. 2019					X	X	X	X	X		X		X									
Jimenez-Murcia et al. 2015																						X
Jimenez-Murcia et al. 2017																						X
Klevan et al. 2019					X	X								X	X	X			X			
Kourgiantakis et al. 2013	X																					
Kourgiantakis et al. 2018							X									X			X			X

Study ID	Systematic reviews	RQ1	RQ2	RQ3	RQ4									RQ5			RQ6					
					RQ4a							RQ4b	RQ4c	RQ5a	RQ5b	RQ5c	RQ6a	RQ6b	RQ6c	RQ6d	RQ6e	RQ6f
					Financial	Relationship	Emotional	Health	Work	Cultural	Criminal											
Krishnan and Orford 2002					X	X	X				X			X	X	X			X			
Landon et al. 2018					X	X	X				X				X	X						
Lee and Rovers 2008						X	X														X	
Lee 2009																					X	
Lee 2014																					X	
Lee 2015																					X	
Lee and Awosoga 2015													X								X	
Leung et al. 2010							X	X						X		X						
Li et al. 2017				X	X	X	X	X	X	X	X		X									
Liao 2008						X																
Magnusson et al. 2019a						X	X							X						X		
Magnusson et al. 2019b													X									
Makarchuk et al. 2002				X			X												X	X		
Mathews and Volberg 2013					X	X	X															
Mazzoleni et al. 2009						X	X															
Mladenovic et al. 2015																					X	
Muelleman et al. 2002						X																
Nayoski and Hodgins 2016																				X		
Nilsson et al. 2018							X														X	X

Study ID	Systematic reviews	RQ1	RQ2	RQ3	RQ4									RQ5			RQ6					
					RQ4a							RQ4b	RQ4c	RQ5a	RQ5b	RQ5c	RQ6a	RQ6b	RQ6c	RQ6d	RQ6e	RQ6f
					Financial	Relationship	Emotional	Health	Work	Cultural	Criminal											
Nilsson et al. 2019						X	X	X													X	X
Orford et al. 2005				X																		
Orford et al. 2017				X			X	X						X						X		
Palmer du Preez et al. 2018						X																
Patford 2007a					X	X	X	X			X			X	X							
Patford 2007b					X	X	X	X						X	X							
Patford 2007c					X	X	X	X			X			X	X							
Patford 2009					X	X	X	X			X			X	X							
Petry et al. 2006													X									
Potenza et al. 2001																	X					
Riley et al. 2018	X																					
Rockloff et al. 2019		X		X								X										
Rodda et al. 2013																	X	X		X		
Rodda and Lubman 2014																	X					
Rodda et al. 2019				X	X	X	X	X	X					X				X	X			
Rychtarik and McGillicuddy 2006				X			X													X		
Salonen et al. 2014		X	X	X		X	X	X														
Salonen et al. 2015		X																				

Study ID	Systematic reviews	RQ1	RQ2	RQ3	RQ4									RQ5			RQ6					
					RQ4a							RQ4b	RQ4c	RQ5a	RQ5b	RQ5c	RQ6a	RQ6b	RQ6c	RQ6d	RQ6e	RQ6f
					Financial	Relationship	Emotional	Health	Work	Cultural	Criminal											
Salonen et al. 2016		X	X		X	X	X	X			X											
Schluter et al. 2008						X																
Shiue 2015		X		X			X	X														
Sullivan et al. 2007		X		X			X	X										X	X			
Suomi et al. 2013						X								X								
Svensson et al. 2013		X	X	X	X	X	X	X	X		X			X			X					
Tremblay et al. 2018					X	X	X						X								X	X
Vitaro et al. 2008							X															
Wenzel et al. 2008		X	X	X	X	X	X	X														
Wood and Griffiths 2007														X			X					
Wood and Wood 2009														X								

Appendix D Summary of measures employed to assess treatment outcomes across the addictions

Construct	Measurement tool	k (%)a	Timeframe	Internal consistency	Test re-test	Sources
Addicted individual outcomes						
Frequency of consumption	Timeline Follow Back (Sobell and Sobell, 1992)	5 (12.5%)	Timeframe can vary. Included studies ranged from 1 - 12 months	α = 0.84 – 0.94	r=-0.13 - 0.94 (timeframe not reported)	Sobell and Sobell (1992)
	Drinking Norms Rating Form	2 (5.0%)	Original: 3-month Included articles: 30-day	Not available	r = 0.69 (1-month)	Broadwater et al. (2006)
	Form-90-Collateral (Miller, 1996, Scheurich et al., 2005)	1 (2.5%)	Original: 90-days Included article: 30 days	Not available	r = 0.76 – 0.99 (7 days); ICC = 0.74 – 0.98 (7 days)	Miller (1996), Scheurich et al. (2005)
	Khavari Alcohol Test (Khavari and Farber, 1978)	1 (2.5%)	N/A	α = 0.16	r= 0.92 (2-weeks)	Khavari and Farber (1978), Hogan et al. (2020)
Harms and adverse consequences	Health and Daily Living Form Form (Moos et al., 1984)	2 (5.0%)	Not specified	α = 0.77 – 0.92	Not available	Bradford and Rickwood (2012)
	Drinker Inventory of Consequences (Miller, 1995)	1 (2.5%)	3- months and lifetime	α = 0.70 - 0.90	r = 0.79 – 0.96 (2 days); ICC = 0.70 – 0.92 (2 days)	Miller (1995)
Treatment entry	Treatment Service Review-6 (Cacciola et al., 2008)	1 (2.5%)	Timeframes can vary: 7, 14 or 28 days	Not available	ICC = 0.71 - 0.90 (7 days); ICC = 0.79 – 0.95 (14 days); ICC = 0.83 – 0.95 (28 days)	Cacciola et al. (2008)
Affected other outcomes						
Alcohol and substance use	Form-90-Drug Intake (Miller, 1996, Tonigan et al., 1997)	1 (2.5%)	90-days	Not available	r= 0.47 – 0.99 (90 days); ICC = 0.35 – 0.98 (90 days)	Miller (1996), Tonigan et al. (1997)
Anger	State-Trait Anger Expression Inventory (Spielberger, 1988)	5 (12.5%)	Not specified	α = 0.86 – 0.93	r = 0.01 – 0.88 (2 weeks)	Spielberger (1988), Bishop and Quah (1998)

Construct	Measurement tool	k (%)a	Timeframe	Internal consistency	Test re-test	Sources
	State-Trait Anger Expression Inventor-2 (Spielberger, 1999)	4 (10.0%)	Not specified	α = 0.71-0.96	r = 0.22 - 0.78 (7-44 days); r = 0.41-0.82 (21 - 28 days).	Spielberger (1999)
Anxiety	State/Trait Anxiety Inventory (Spielberger et al., 1983b, Spielberger et al., 1983a)	5 (12.5%)	State: current (i.e., right now); Trait: In general	α = 0.83 – 0.93 (state) α = 0.86 – 0.92 (trait)	r = 0.16 – 0.62 (state; 2 months); r = 0.73 – 0.86 (trait; 2 months)	Spielberger et al. (1983b)
	Generalised Anxiety Disorder scale – 7 (Spitzer et al., 2006)	2 (5.0%)	2 weeks	α = 0.92	ICC = 0.83 (1 week)	Spitzer et al. (2006)
	Beck Anxiety Inventory (Beck et al., 1988)	1 (2.5%)	1 week	α = 0.92	r = 0.75 (1 week)	Beck et al. (1988)
	Depression Anxiety Stress Scale (Anxiety subscale) (Lovibond and Lovibond, 1996, Brown et al., 1997)	1 (2.5%)	1 week	α = 0.88-0.89	r = 0.71- 0.81 (2 weeks)	Brown et al. (1997)
	Jackson Personality Inventory (Jackson, 1977)	1 (2.5%)	Not specified	α = 0.83 - 0.95	Not available	Jackson (1977)
	The Zung Self-Rating Anxiety Scale (Zung, 1971)	1 (2.5%)	1 week	α = 0.84 – 0.90	ICC = 0.91 (12 days)	Masaeli et al. (2018), (Samakouri et al., 2012)
Blame	Responsibility/Blame Subscale (Tweed and Ryff, 1996)	1 (2.5%)	Not specified	α = 0.90	r = 0.89 (4 weeks)	Tweed and Ryff (1996)
Burden	Relative Stress Scale (Greene et al., 1982)	1 (2.5%)	Not specified	α = 0.72-0.96	r = 0.85 (3 weeks)	Greene et al. (1982)
Coherence	Brief Assessment of Sense of Coherence (Schumann et al., 2003)	1 (2.5%)	Not specified	α = 0.71	Not available	Schumann et al. (2003)
Coping	Coping Questionnaire (30-item (Orford et al., 2005)	6 (15.0%)	3-months	α= 0.60 - 0.85	Not available	Orford et al. (2005)

Construct	Measurement tool	k (%)a	Timeframe	Internal consistency	Test re-test	Sources
	Sobriety Support Subscale of the Spouse Sobriety Influence Inventory 2 (Ager et al., 2020)	2 (5.0%)	6-months	α = 0.72	r = 0.51 (6 months)	Corcoran and Fischer (2013)
	Spouse Situation Inventory (Rychtarik and McGillicuddy, 1997)	2 (5.0%)	12-months	α = 0.91	r = 0.72 – 0.73 (2 weeks)	Rychtarik and McGillicuddy (1997)
	Coping Behaviour Scale (Orford et al., 1975)	1 (2.5%)	12-months	Not available	Not available	
	Coping Questionnaire (68-item (Orford et al., 1975)	1 (2.5%)	3-months	α = 0.70 – 0.82	Not available	
	Coping Questionnaire (22-item (Howells and Orford, 2006)	1 (2.5%)	Past month	α = 0.76 – 0.77	Not available	de los Angeles Cruz-Almanza et al. (2006)
	Enabling Behaviours Subscale of the Behaviour Enabling Scale (Rotunda, 1996)	1 (2.5%)	12-months and lifetime	α = 0.77 – 0.81.	Not available	Rotunda (1996)
	Ways of Coping Questionnaire (Folkman and Lazarus, 1985)	1 (2.5%)	Not specified	α = 0.61 - 0.85	r = 0.36 - 0.52 (2 weeks)	Rotunda et al. (2004)
Depression	Beck Depression Inventory (Beck et al., 1961)	5 (12.5%)	1-week	α = 0.81 – 0.87	r = 0.48 – 0.86 (range from 1 hour to 4 months)	Masaeli et al. (2018), Beck and Steer (1984), Beck et al. (1988)
	Beck Depression Inventory-II (Beck et al., 1996b)	5 (12.5%)	2-weeks	α = 0.81 - 0.86	r = 0.48 – 0.86 (range from 1 week to 6 months)	Wang and Gorenstein (2013)
	Drinker's Partner Distress Scale (Barber and Crisp, 1995)	2 (5.0%)	Past month	α = .86	r = 0.71 (3-month)	Barber and Crisp (1995)

Construct	Measurement tool	k (%)a	Timeframe	Internal consistency	Test re-test	Sources
	Beck Depression Inventory – IA (Beck et al., 1996a)	1 (2.5%)	2-weeks	α = 0.89	Not available	Beck et al. (1996b)
	Center of Epidemiologic Studies Depression Scale (Radloff, 1977)	1 (2.5%)	1-week	α = 0.84 – 0.90	r = 0.32 – 0.67 (range from 2 – 8 weeks)	Radloff (1977)
	Patient Health Questionnaire – 9-item (Kroenke et al., 2001)	1 (2.5%)	2-weeks	α = 0.86 - 0.89	r = 0.84 (48 hours)	Kroenke et al. (2001)
	Patient Health Questionnaire – 8-item (Kroenke et al., 2009)	1 (2.5%)	2-week	α = 0.88	ICC = 0.83 (11 days)	Shin et al. (2019), Mattsson et al. (2020)
Harms and adverse consequences	Family Member Impact Questionnaire (Orford et al., 2005)	2 (5.0%)	3-months	α = 0.69 - 0.77	Not available	Orford et al. (2005)
	Inventory of Consequences Scale for the Gambler and Concerned Significant Other (Hodgins et al., 2007a)	2 (5.0%)	Past month	α = 0.86 - 0.89	ICC = 0.93 (7 -10 days)	Hodgins et al. (2007a)
	Inventory of Drug Use Consequences (InDUC; Miller, Tonigan and Longabaugh, 1995)	1 (2.5%)	3 months and lifetime	α = 0.69 – 0.95 (3 months) α = 0.68 – 0.94 (lifetime)	r = 0.34 – 0.93 (2 days) ICC = 0.33 – 0.92 (2 days)	Bennett et al. (2009), Tonigan and Miller (2002)
	Pictorial Representation of Illness and Self Measure (Reinhardt et al., 2006)	1 (2.5%)	Current (i.e., at the moment)	Not applicable	r = 0.95 - 0.98 (24 hours)	Kassardjian et al. (2008)
	Short Index of Problems (SIP) - Derived from the Drinker Inventory of Consequences (Miller et al., 1995)	1 (2.5%)	3 months and lifetime	α = 0.61 – 0.89 (3 months) α = 0.57 – 0.81 (lifetime)	r = 0.71 – 0.95	Miller et al. (1995)

Construct	Measurement tool	k (%)a	Timeframe	Internal consistency	Test re-test	Sources
	Significant Other Survey – Self-Report Benishek et al. (2012)	1 (2.5%)	30 days	α = 0.76 - 0.91 (problem frequency domain) α = 0.78 - 0.90 (problem severity domain)	r = 0.48 - 0.62 (7 days; problem frequency domain); r = 0.44 - 0.59 (7 days; problem severity domain)	Benishek et al. (2012)
	The Hardship Scale (Orford et al., 1975)	1 (2.5%)	12 months	α = 0.66 – 0.76 (original article)	Not available	Orford et al. (1975)
Hazardous alcohol use	Alcohol Use Disorders Identification Test (Saunders et al., 1993)	2 (5.0%)	Past year	α = 0.44 – 0.93	r = 0.84 (1 month)	Saunders et al. (1993), Selin (2003)
	Alcohol Use Disorders Identification Test – Consumption (Bush et al., 1998)	2 (5.0%)	Not specified	α = 0.94	r = 0.91 (1 week)	Meneses-Gaya et al. (2010)Jeong Jeong et al. (2017)
Likelihood of engaging in specific behaviours	Response Probability Scale of Assertion Inventory (Gambrill and Richey, 1975)	1 (2.5%)	Not specified	Not available	r = 0.81 (5 weeks)	Gambrill and Richey (1975)
Loneliness	UCLA Loneliness Scale (Russell et al., 1978)	1 (2.5%)	Not specified	α = 0.96	r = 0.73 (2 months)	Russell et al. (1978)
Psychological distress/ general mental health	Symptom Rating Test (Kellner et al., 1968)	6 (15.0%)	Past week or past day	α = 0.86 - 0.93	r = 0.94 (24 hours)	Howells and Orford (2006), Kellner and Sheffield (1973)
	Brief Symptom Inventory - Global severity index (Derogatis and Spencer, 1993)	3 (7.5%)	Past week	α = 0.71 - 0.85	r = 0.90 (2 weeks)	Derogatis and Spencer (1993)

Construct	Measurement tool	k (%)a	Timeframe	Internal consistency	Test re-test	Sources
	Symptom Checklist-90 (Derogatis, Lipman, and Covi, 1973)	2 (5.0%)	Past week	α = 0.73 - 0.97	Not available	Fridell et al. (2002), Hansson et al. (2007)
	General Health Questionnaire (Goldberg and Hillier, 1979)	1 (2.5%)	Past few weeks	α = 0.90 - 0.93	r = 0.58 (2 weeks)	Malakouti et al. (2007), Goldberg (1988)
	Mental Health Inventory-5 (Berwick et al., 1991)	1 (2.5%)	Past month	α = 0.83	Not available	Cuijpers et al. (2009)
	Perceived Stress Questionnaire (Fliege et al., 2005)	1 (2.5%)	Past 2 years and past month	α = 0.85 – 0.94	Not available	Fliege et al. (2005)
	Profile of Mood States (McNair et al., 1971)	1 (2.5%)	Current (i.e., right now)	α = 0.72 – 0.95	Not available	McNair et al. (1971) Terry and Lane (2000)
	Symptom Checklist-90 – Revised (Derogatis, 1992)	1 (2.5%)	Past week	α = 0.87	Not available	Klaghofer and Brähler (2001)
Purpose in life	Purpose in Life Scale (Crumbaugh, 1969)	1 (2.5%)	Not specified	α = 0.81 - 0.85	r = 0.79 (6 weeks)	Crumbaugh (1969) Reker and Cousins (1979)
Readiness to Change	Stages of Change Readiness and Treatment Eagerness Scale (Miller and Tonigan, 1997)	1 (2.5%)	Current (i.e., right now)	α = 0.87 - 0.96	r= 0.83 - 0.93 (2 days); ICC = 0.82 - 0.91 (2 days)	Miller and Tonigan (1997)
Self-esteem	Coopersmith Self-esteem Inventory (Coopersmith, 1967)	1 (2.5%)	Not specified	α = 0.86	r = 0.80 (range from 6 – 58 weeks)	Johnson et al. (1983), Ryden (1978)
	Life Satisfaction Scale (Headley and Wearing, 1981)	1 (2.5%)	Not specified	α = 0.86	Not available	Barber and Crisp (1995)

Construct	Measurement tool	k (%)a	Timeframe	Internal consistency	Test re-test	Sources
	Rosenberg Self-esteem Scale (Rosenberg, 1965)	1 (2.5%)	Not specified	α = 0.45 – 0.90	r = 0.85 (2 weeks); r = 0.63 (7 months)	Schmitt and Allik (2005), Silber and Tippett (1965), Shorkey and Whiteman (1978)
	State Self-esteem Scale (Heatherton and Polivy, 1991)	1 (2.5%)	Current (i.e., right now)	α = 0.92	r = 0.48 - 0.75 (timeframes unclear)	Heatherton and Polivy (1991)
Social functioning	Social Adjustment Scale—Self-Report (Weissman and Bothwell, 1976)	1 (2.5%)	2-weeks	α = 0.71 – 0.76	r = 0.72 – 0.82 (2 months)	Allison and Vitelli (2003)
Social support	Interview Schedule for Social Interaction Henderson et al. (1980), Undén and Orth-Gomér (1989)	1 (2.5%)	Not specified	α = 0.37-0.81	r= 0.51-0.79 (18 days); r = 0.74 - 0.88 (4 months) r = 0.72 - 0.87 (8 months); r = 0.66 - 0.85 (12 months)	Henderson et al. (1980), Undén and Orth-Gomér (1989), Hansson et al. (2007)
	Medical Outcomes Study Social Support Survey (Sherbourne and Stewart, 1991)	1 (2.5%)	Not specified	α = 0.91 - 0.97	r = 0.72 - 0.78 (1 year)	Sherbourne and Stewart (1991)
	Social Support Questionnaire (Toner and Velleman, 2014)	1 (2.5%)	3 months	α = 0.81 - 0.88	r = 0.97 (2-4 hours)	Orford et al. (2017), Toner and Velleman (2014)
Wellbeing/ life satisfaction/ quality of life	Life Satisfaction Scale (Headley and Wearing, 1981)	3 (7.5%)	Not specified	α = 0.87	Not available	Barber and Crisp (1995)
	World Health Organisation Quality of Life – Brief Scale (Group, 1998)	2 (5.0%)	2 weeks	α = 0.66 – 0.94	r = 0.66 – 0.87 (ranged from 2-8 weeks)	Group (1998)
	Psychological Well-being scale (Diener et al., 2010)	1 (2.5%)	Not specified	α = 0.87	r = 0.71 (1 month)	Diener et al. (2010)
	Ryff's Psychological Well-Being Scales (Ryff, 1989)	1 (2.5%)	Not specified	α = 0.87-0.93	r = 0.81-0.85 (6 weeks)	Ryff (1989)

Construct	Measurement tool	k (%)a	Timeframe	Internal consistency	Test re-test	Sources
	Satisfaction with life scale (Diener et al., 1985)	1 (2.5%)	Not specified	α = 0.87	r = 0.82 (2 months)	Diener et al. (1985)
Relationship or family functioning measures						
Family functioning	Family Environment Scale (Moos, Insel, and Humphrey, 1974 (Moos and Humphrey, 1974)	6 (15.0%)	Current	α = 0.61 – 0.78	r = 0.68 - 0.86 (2 months) r = 0.54 - 0.91 (4 months)	Moss and Moos (2009)
	Family Adaptability and Cohesion Evaluation Scale (Olson et al., 1985)	1 (2%)	Not specified	α = 0.45 – 0.68	r = 0.80 - 0.83 (not reported)	Olson et al. (1985)
Marital or relationship satisfaction/quality	Relationship Happiness Scale (Azrin et al., 1973)	8 (20.0%)	Current (i.e., today)	Not available	ICC = 0.77 (not reported)	Cicchetti (1994)
	Dyadic Adjustment Scale (Spanier, 1976)	3 (7.5%)	Not specified	α = 0.96	r = 0.75 - 0.87 (2 weeks)	Spanier (1976), Carey et al. (1993)
	Relationship Assessment Scale (Hendrick, 1988)	3 (7.5%)	Not specified	α = 0.73 - 0.86	r = 0.85 (6-7 weeks)	Hendrick (1988), Hendrick et al. (1998)
	Drinker's Partner Distress Scale (Barber and Crisp, 1995)	2 (5.0%)	Past month	α = 0.83	r = 0.50	Barber and Crisp (1995)
	Quality of Marriage Index (Norton, 1983) (Norton, 1983)	1 (2.5%)	Not specified	α = 0.96	r = 0.65 (3 months)	Osilla et al. (2018), Nazarinia et al. (2009)
	The Enrich Marital Inventory Questionnaire - Short Form (Fowers and Olson, 1989)	1 (2.5%)	Not specified	α = 0.68 - 0.86	r = 0.77 - 0.92 (4 weeks)	Fowers and Olson (1989)

Construct	Measurement tool	k (%)a	Timeframe	Internal consistency	Test re-test	Sources
Physical aggression/ abuse/violence	Conflict Tactics Scale Straus (1979)	3 (7.5%)	Past year	α = 0.50-76 (Reasoning); α = 0.77-0.88 (Verbal aggression); α = 0.62 - 0.88 (Violence)	r = 0.49 - 0.79 (2 months)	Straus (1979)

[a] Percentage based on 40 included studies (across 46 articles) from a systematic review and meta-analysis evaluating the effectiveness of psychosocial treatments across the addictions

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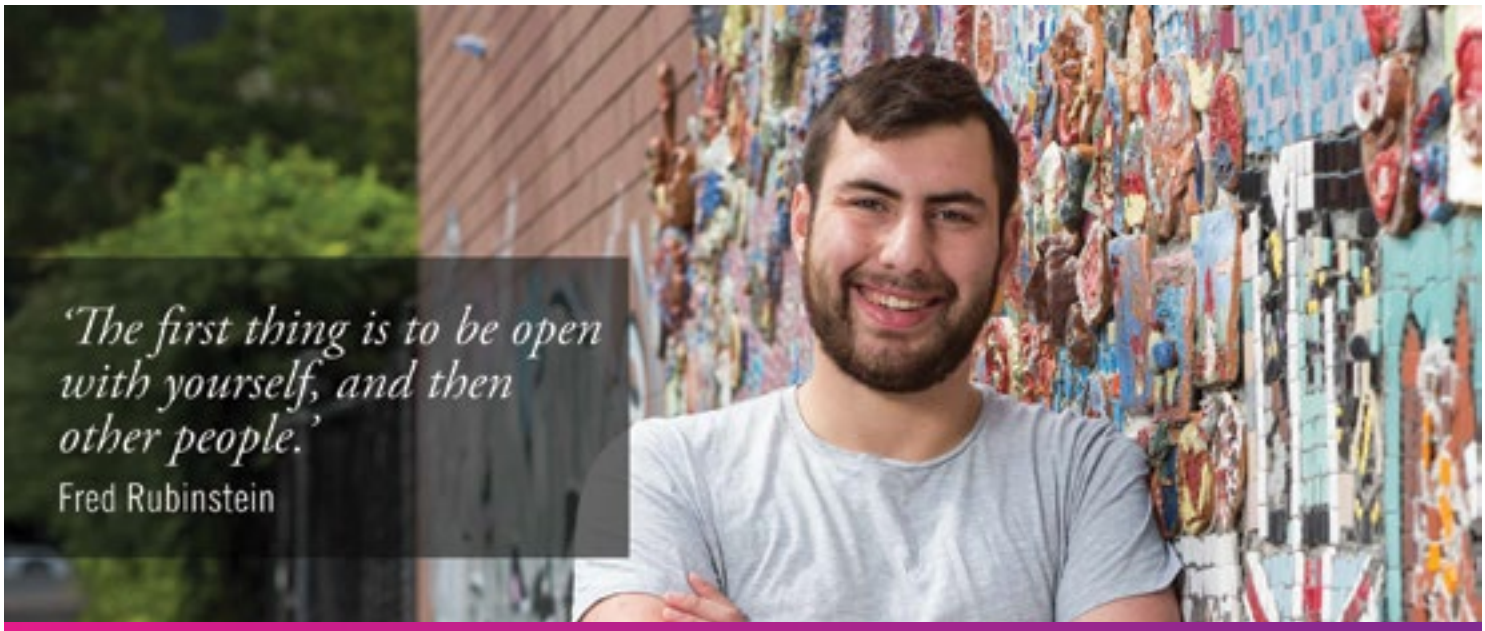

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