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REVIEW ARTICLE

Men and suicide prevention: a scoping review

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Abstract

Background: Male suicide rates are higher than their female counterparts in almost every country around the world. Several developed countries have attempted to implement suicide prevention programmes, but few have specifically targeted men.

Aims: To identify what is currently known about suicide prevention strategies, programmes, and interventions of relevance to men.

Method: A scoping review guided by Arksey and O'Malley's five-stage framework.

Results: Twenty-two studies were included. Thematic analysis identified three categories: (i) male suicide prevention interventions; (ii) factors or coping strategies that interrupt the suicidal process in men; (iii) men's perspectives on service provision. Interventions included awareness campaigns; training of community "gatekeepers"; psychological support; and educational initiatives targeted to either GPs or depressed or suicidal men. Men emphasised the need to receive support from a trusted and respected individual, preferably in an informal setting. Connecting with others, reframing help-seeking as masculine, and the use of emotional regulation techniques were all identified as factors with potential to interrupt the suicidal process.

Conclusions: This review demonstrates the need for further research examining the perspectives of suicidal middle-aged men and their close family and friends.

Keywords

Masculinity, scoping review, prevention men, suicide

History

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Introduction

Suicide is a global public health concern, representing the second leading cause of death for people aged 15–29 worldwide (WHO, 2014). A striking feature of suicide epidemiology is the significant gender difference in incidence rates: despite females exhibiting a greater prevalence of suicidal ideation and behaviour (Beautrais, 2002; Henderson et al., 2005), male suicide rates are significantly higher than their female counterparts in almost every country across the globe. Although exceptions exist – China and Bangladesh have higher rates of female suicide thought to be due to specific combinations of sociocultural factors unique to these countries (WHO, 2012) – in richer countries, three times as many men die by suicide than women. Men aged 50 years and over are particularly vulnerable (WHO, 2014).

Although the strongest clinical predictor of suicide is a previous attempt or history of suicidal behaviour (Barzilay & Apter, 2014; Oquendo et al., 2004), it is widely recognised that the pathways to suicide are diverse, multifactorial and complex. Risk factors include loss, grief, misuse of drugs or alcohol, social isolation and low self-esteem, and long-term mental or physical illness (Centers for Disease Control and Prevention, 2014). Men's suicidal risk also changes with age and life circumstance (Hawton & van Heeringen, 2009). For

example, it is known that relationship breakdown and unemployment are social factors which pose substantially greater risks for males than for females (Milner et al., 2012; Scourfield & Evans, 2015; Tiffin et al., 2005). Marriage may confer a protective effect through provision of meaningful social support and reduction of risky behaviours that often precipitate suicide, while men's separation from their children has been cited as a primary cause of suicide in several coroner's inquests (Joiner, 2011; Payne et al., 2008; Shiner et al., 2009).

Research is also increasingly showing that male suicide is closely linked with conformity to traditional (hegemonic) masculine norms which stem from dominant models of male socialisation in the Western world (Connell & Messerschmidt, 2005; Wyllie et al., 2012). To be seen as strong, resilient, and in control has been identified as a key practice of masculinity in many Western and developed countries (O'Brien et al., 2005). Mental health problems can often leave people feeling weak, powerless and vulnerable, and have therefore been theorised to be "incompatible" with masculine ideals and norms (Courtenay, 2000; Emslie et al., 2006; Warren, 1983).

Several studies have identified relationships between hegemonic masculinity and higher levels of mental health stigma and suicide attempts (Robertson et al., 2015). Evidence suggests that encountering depression or unemployment can serve to erode valued aspects of some men's masculine identity and lead to suicide being viewed as a legitimate and rational path out of perceivably untenable

situations (Emslie et al., 2006; Heifner, 1997; Jensen et al., 2010; Oliffe & Han, 2014). Masculinities can also restrict help-seeking behaviour, primarily due to the perceived stigma attached to disclosing feelings of distress to peers, family members and health care professionals (Cleary, 2012). However, research has also emphasised that masculinity should not be viewed as a “toxic” monolithic construct. Men are able to redefine their own masculine ideals outside of usual hegemonic discourses, reconstructing a valued sense of self as part of their recovery following mental illness (Emslie et al., 2006; Tang et al., 2014).

Male suicide is a significant health concern requiring urgent attention, and the growing evidence of male-specific risk factors has important implications for planning and evaluating suicide prevention interventions. Several countries have attempted to implement suicide prevention programmes (Althaus & Hegerl, 2003; Szekely et al., 2013), which typically involve multisectoral strategies that aim to address the range of causes at an individual and population level, with particular attention to mental health and improved screening of depressed patients in primary care. Previous reviews of suicide prevention strategies have focussed on the effectiveness of interventions, but have not reported on important gender differences in suicide risk and behaviour (Mann et al., 2005; Zalsman et al., 2016). With this in mind, we scoped the empirical literature on suicide prevention strategies, programmes and interventions with the aim of highlighting studies of relevance to men. Our aim was to identify what is currently known about approaches to suicide prevention in men, and explore areas for future research and policy development.

Methods

We undertook a scoping review as our aim was to provide an overview of the current state of knowledge on the issue of suicide prevention in men. Scoping reviews are commonly used when studies in the reviewed sources are likely to have employed a range of data collection and analysis techniques, and/or when no prior synthesis has been undertaken on the topic (Arksey & O'Malley, 2005). The scoping review methodology allows the breadth of research on particular topic to be examined so that any gaps may be identified, guiding and developing the focus of future research. The approach taken in this review is grounded in the five-stage framework proposed by Arksey & O'Malley (2005), considering various enhancements recommended by Levac et al. (2010).

Identifying the research question

The research question developed to guide the review was: *What is known from the existing literature about approaches to suicide prevention in men?* Given the broad nature of a scoping review, it is important to define the parameters outlined before proceeding. In the context of this review, we took “men” to encompass men and boys of all ages. “Suicide” was considered to refer to completed or attempted suicide, suicidal behaviour, or suicidal ideation. The suicidal process is not necessarily a linear one; thus it is not always possible to extricate one stage from the other, given that they

are often intrinsically linked (Chi et al., 2014). Therefore, studies that focused on any stage of the suicidal process were of interest to this review. We defined “prevention” approaches as being any specific intervention, programme or service which aimed to reduce the incidence of suicide or suicidal behaviour or ideation in males, or strategies employed by men themselves (or those around them) that attempted to address suicidal behaviour and/or promote help-seeking.

Identifying relevant studies

Arksey & O'Malley (2005) suggest that broad keywords and search terms should be adopted that enable the breadth of the available literature to be covered. Search terms were developed relating to the three key concepts underpinning our review question: “suicide”; “male”; and “prevention”, and combined using Boolean operators. Free text terms were mapped to relevant subject headings (where possible, Medical Subject Headings [MeSH] were employed). Five databases were searched: CINAHL Plus; Embase; MEDLINE; PsycINFO; and OpenGrey on 11th of August 2016 using search strings tailored to each database to take account of variations in exploded terms and field aliases (see Supplementary file 1).

Study selection

Records were imported into EndNote (version X7.5) and screened against the follow inclusion criteria:

- (1) Article reported primary or secondary research using any study design: RCTs, cohort, case-control, population or hospital based case-series, case report, qualitative interview/questionnaire, secondary analysis of data, review article (systematic or otherwise).
- (2) Study focuses on intervention relating to suicide prevention, or perspectives/experience of preventative strategies or treatment.
- (3) Study participants are male (any age) or results are stratified by gender (if quantitative); participants are male or were in close contact with affected men e.g. friends, family, service providers (if qualitative).
- (4) Study was conducted in an industrialised/developed country (as defined by the International Monetary Fund, 2016).
- (5) The article was published in English after 1980.

Preliminary searches of the literature retrieved many studies referring to suicidal behaviour as a result of enduring mental conditions other than unipolar depression, such as schizophrenia or dementia. The “NOT” operator was therefore applied to exclude these studies from the search in order to increase specificity. We recognise this as a limitation of our review, as discussed later.

Electronic searches identified 2808 records. Four additional records were identified through hand searching of key journals. Of these, 2768 were excluded following deduplication and first stage screening. The remaining 40 articles were read in full by the first author (SS), leaving 22 which were deemed to meet the inclusion criteria (see Figure 1).

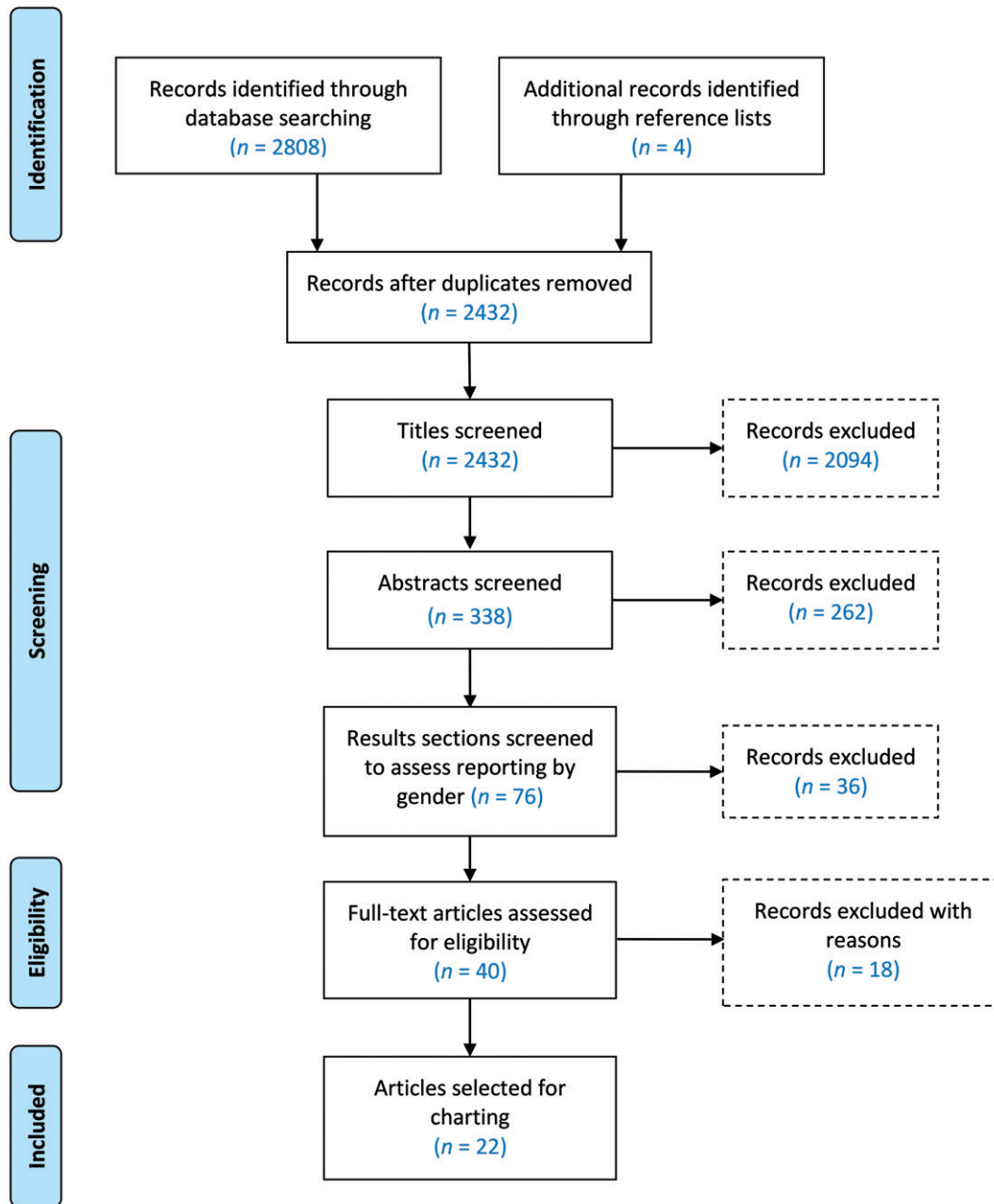


Figure 1. Flow diagram illustrating literature search process.

Charting the data

In line with Arksey & O'Malley's framework (2005), data from each article selected for final inclusion were extracted and charted using the following categories: *author*; *year of publication*; *study location*; *aim of study*; *study design*; *participant population*; *intervention or topic*; and *main findings* (see Supplementary file 2). A basic numerical analysis of the extent, nature and distribution of the charted findings was then conducted, in accordance with guidance by Levac et al. (2010). This involved calculating absolute frequencies for the: *geographical distribution* of included studies; *age groups* of study participants; the *research methods* used; and the *outcome measures* (if relevant). Charted findings were thematically analysed and are summarised narratively, below.

Results

Twenty two articles were identified that reported the findings of studies of relevance to suicide prevention strategies, programmes or interventions in men (see Supplementary file 2). The studies originated from 11 countries: the UK (3), Australia (3), Canada (3), the USA (3) and Japan (3). The remainder was from Israel (1), Taiwan (1) and Europe (4) (Hungary, Germany, Ireland and Switzerland). Of these, six were qualitative studies, two were mixed methods, and the remainder were quantitative studies (RCTs; post-intervention measures; pre- and post-intervention, with or without control; and secondary analysis). Study participants typically spanned the young adult to middle-age years (11 articles), with two focusing solely on adolescents, one on middle age, and the rest (8) targeting all men aged 18 years and over. Reported

quantitative outcome measures included at least one of: *male suicide rates* (6), *number of suicide attempts* (4) and *suicidal ideation or suicidal thoughts* (6).

Thematic analysis of the study findings resulted in the identification of three categories:

- (i) male suicide prevention interventions;
- (ii) factors or coping strategies that interrupt the suicidal process in men;
- (iii) men's perspectives on service provision.

Male suicide prevention interventions

Several interventions that specifically aim to prevent male suicide have been evaluated and reported in the literature. Interventions were predominantly complex/multimodal (i.e. characterized by several different modes of activity or occurrence), encompassing awareness campaigns (Hübner-Liebermann et al., 2010; Matsubayashi et al., 2014; Ono et al., 2013; Szekely et al., 2013; Wang et al., 2013); training of community "gatekeepers" (Hübner-Liebermann et al., 2010; Knox et al., 2003; Ono et al., 2013; Shelef et al., 2016); psychological support (Britton et al., 2014; Chen et al., 2012; Knox et al., 2003; Mishara et al., 2005; Nakao et al., 2007; Ono et al., 2013; Pratt et al., 2015; Saewyc et al., 2014); and educational initiatives targeted to either GPs or depressed or suicidal men (Hübner-Liebermann et al., 2010; Knox et al., 2003; Nakao et al., 2007; Shelef et al., 2016; Szanto et al., 2007; Szekely et al., 2013). Of the six multimodal interventions, all except one (Wang et al., 2013) were reported as significantly decreasing male suicide rates or attempts. Wang et al. (2013) reported that, following their depression awareness campaign, suicide attempts remained unchanged but lifetime prevalence of suicidal ideation decreased significantly by 10%.

Awareness campaigns

Posters, leaflets and websites providing information on the symptoms of depression, as well as the resources available to men should they feel the need to seek help, have been widely utilised in awareness campaigns (Hübner-Liebermann et al., 2010; Matsubayashi et al., 2014; Ono et al., 2013; Szekely et al., 2013; Wang et al., 2013). Typically, telephone numbers for the provision of general support have been provided, as well as emergency contact details for any men experiencing a crisis or urgent need, though the intensity of campaigns varied considerably across included studies. In addition to the above, cinema advertisements, public lectures, annual action days, and community workshops have been utilised (Hübner-Liebermann et al., 2010; Szekely et al., 2013). Only one study mentioned suicide explicitly in their campaign, where there was a particular focus on the risk factors of suicidal behaviour and awareness of available resources and referral procedures for people potentially at risk (Ono et al., 2013). This study, which examined the effectiveness of a community-based multimodal intervention for suicide prevention in rural areas of Japan with high suicide rates, found that the intervention worked to reduced suicide attempts, though not in highly populated rural areas (Ono et al., 2013). No explanation was offered by the authors as to why this might be the case. Awareness campaigns that had not been integrated

into a wider suicide prevention programme have also been found to exhibit diminished effects on suicide rates and suicidal behaviour: Matsubayashi et al. (2014) distributed informative leaflets to commuters at major train stations and the surrounding streets across a Japanese city. A significant decrease in male suicide rates was observed two months after leaflet distribution, but this effect waned at the five-month mark, illustrating that public awareness campaigns alone, if intensive, have the potential to impact suicide rates in the short-term. As a control region was not included in the study, however, it was unclear whether this decrease was simply part of a wider trend observed across surrounding areas at the time.

Health education

Community involvement

Several studies have explored strategies involving key members of the community charged with increasing awareness and understanding of risk factors that make men more vulnerable to suicide (Hübner-Liebermann et al., 2010; Knox et al., 2003; Ono et al., 2013; Shelef et al., 2016). These interventions have aimed to improve early detection of suicidal individuals, in order to signpost them to the appropriate mental health or social care service(s). To achieve this, the current evidence suggests that establishing "gatekeepers" is a universal priority (Hübner-Liebermann et al., 2010; Knox et al., 2003; Ono et al., 2013; Shelef et al., 2016). In this context, gatekeepers have been defined as individuals who have face-to-face contact with large numbers of community members as part of their regular routine, and are trained in the recognition and referral of those at risk of suicide (U.S. Department of Health and Human Services, 2012). Gatekeepers have included community leaders, doctors, nurses, pharmacists, police personnel, priests, school teachers and youth workers (Hübner-Liebermann et al., 2010; Ono et al., 2013).

As part of a four-level intervention programme, Hübner-Liebermann et al. (2010) held over 30 community training workshops, and also produced a media guide for reporting suicide in collaboration with the regional press. Two studies in military settings have examined the impact of similar community education and training on suicide (Knox et al., 2003; Shelef et al., 2016). All of the aforementioned studies reported decreases in male suicide rates following the various interventions. Directly attributing the observed decreases in male suicide rates across these studies to interaction with gatekeepers is challenging, however, as no single study focused on community involvement alone – all were multi-component suicide prevention programmes.

GP education and collaboration

A range of initiatives have focussed on raising awareness among GPs, mainly through lectures, educational videos, interactive workshops, large-scale collaborative events or conferences, improved depression screening, and strengthening partnerships between GPs and other psychiatric outpatient services (Hübner-Liebermann et al., 2010; Szanto et al., 2007; Szekely et al., 2013). Similar to the awareness campaigns, the majority of educational packages have centred on depression

and have been part of a larger suicide prevention strategy, although one study (Szanto et al., 2007) focused solely on GP education in Hungary, including case discussions of patients who had recently died by suicide. Another study implemented their two-year community-based four-level intervention programme in a similarly sized town in Hungary, where interactive educational workshops were developed and offered to GPs (Szekely et al., 2013). Hübner-Liebermann et al. (2010) aimed to improve collaboration with GPs through the distribution of teaching videos and patient videos, information brochures and screening sheets, as well as eight continuing medical education events attended by over 350 participants, conducted in association with the regional confederation of doctors. The above studies used a quasi-experimental (before and after) cohort study design with at least one control region. All reported significant declines in male suicide rates, except Wang et al.'s (2013) depression awareness campaign, where only suicidal ideation decreased. The low-base rate of completed suicide attempts may mean that studies such as this lacked sufficient power to detect a change in outcome (Nock et al., 2008).

Education targeted toward men

A number of studies have explored the effectiveness of educational initiatives aimed at men, which have formed part of a larger, multi-layered suicide prevention programme (Knox et al., 2003; Nakao et al., 2007; Shelef et al., 2016). Two studies have been conducted in military settings, which incorporated suicide prevention into their curriculum, covering knowledge of basic suicide risk factors, intervention skills and referral procedures for people potentially at risk (Knox et al., 2003; Shelef et al., 2016). A Japanese-based study has examined the impact of an “Employee Assistance Programme” (EAP) on suicide-related behaviours in the workplace (Nakao et al., 2007). The programme involved seminars on job-related mental health, including early detection of depressed or distressed colleagues and communication skills, honing men's aptitude in careful listening through role-playing. Though these seminars did not explicitly allude to suicide, the initiative achieved a significant decrease in the number of men reporting suicidal thoughts; though this may have been a result of the concurrent offering of free, anonymous psychological support (Nakao et al., 2007).

Psychological support

Guidance from trained professionals

The provision of contact with either a mental health professional or trained volunteer has been widely explored as a male suicide prevention intervention (Chen et al., 2012; Knox et al., 2003; Mishara et al., 2005; Nakao et al., 2007; Ono et al., 2013). In one study where anonymous support was offered to men free of charge via email, phone or face-to-face with a counsellor, the overwhelming majority of participants appeared to prefer communicating via email (Nakao et al., 2007). Where a service user has been a third party (e.g. a concerned friend or relative), telephone contact with a trained volunteer has been identified as a more desirable and accessible method, in terms of understanding mental health

problems and improving communication with the suicidal man (Mishara et al., 2005). In both cases, these methods have been noted to be preferential to referral to a health professional and were effective in reducing suicidal ideation in the participating men. The use of a “case management” technique has also been found to be effective in significantly reducing the risk of suicide reattempt than those in a non-contact group (Chen et al., 2012). Here, case management involved making contact with suicide attempters within one week of their attempt, followed by the provision of psychological support for a six-month period; this was primarily achieved through telephone conversations. During periods of more intensive care, home visits by public health nurses and psychiatrists provide further support and may facilitate adherence to referrals for psychiatric treatment (Chen et al., 2012; Ono et al., 2013).

Cognitive techniques

Two studies have explored the use of cognitive techniques, specifically school-based mindfulness and cognitive behavioural suicide therapy (CBST) for male prisoners (Britton et al., 2014; Pratt et al., 2015). Among the targeted populations, the latter reported significant reductions in suicidal behaviours whilst the former observed reductions in suicidal ideation. It should be noted that the training required to successfully deliver the mindfulness intervention was only eight weeks in length, in contrast to the three to five years of relevant experience demanded of the clinical psychologists providing the CBST therapy.

Confidential forums for discussing sexuality

Indirect psychological support in the form of school-based Gay-Straight Alliances (GSA) has also been shown to reduce odds of suicide attempts and suicidal thoughts in lesbian/gay/bisexual (LGB) students and heterosexual boys alike (Saewyc et al., 2014). The same effect, however, was not observed in heterosexual girls. These student-led groups provide a confidential “safe-space” for individuals to discuss matters pertaining to sexual orientation, gender identity and expression. The inclusivity they nurture has been suggested to potentially alter the environment in such a way that reduces stress for heterosexual boys who do not fit the stereotypes of idealised (hegemonic) masculine behaviour (Saewyc et al., 2014).

What interrupts the suicidal process in men?

Three key themes pertaining to influential factors or coping strategies that prevent a suicide attempt in men were discerned from the literature. Men have been reported as able to find ways of redefining help-seeking behaviour as masculine (Jordan et al., 2012; Oliffe et al., 2012), while considering consequences for loved ones appeared to exert a strong influence on interrupting a suicide attempt (Fogarty et al., 2015; Player et al., 2015; Reading & Bowen, 2014; Shand et al., 2015). Related to this, a feeling of connectedness, often established through sharing experiences with other suicide survivors or from a sense of obligation to others, emerged as a protective factor (Jordan et al., 2012;

Oliffe et al., 2012; Player et al., 2015). The use of emotional regulation techniques was popular among men and highlighted their preference for a pragmatic, solution-oriented approach to overcoming suicidality (Jordan et al., 2012; Khurana & Romer, 2012; Oliffe et al., 2012; Player et al., 2015; Reading & Bowen, 2014).

Reframing masculinity

Some men have justified their decision to seek help by challenging unhelpful perceptions and reframing what it is to “be a real man” (Jordan et al., 2012; Oliffe et al., 2012). Seeking support – viewed by many men as a “feminine” behaviour – was re-evaluated by Canadian men who experienced depression as a rational, practical decision, necessary to re-establish control and safeguard survival (Oliffe et al., 2012). In another qualitative study of 36 formerly suicidal young men, participants were seen to position the above actions as brave, demonstrating their potential in serving to preserve rather than threaten an individual’s masculinity (Jordan et al., 2012).

Connectedness

A sense of connectedness to family, friends or mental health professionals has been emphasised as an important factor in preventing male suicide. Challenging the belief that “nobody cares”, through exposure to testimony of previous suicide attempters or positive encounters with mental health professionals, has been found to be important in achieving this (Jordan et al., 2012). Idealised masculine roles of the “provider” and “protector” have also emerged as a protective factor: men have expressed their feelings of obligation toward loved ones, particular children, as fundamental in interrupting a suicide attempt (Oliffe et al., 2012; Player et al., 2015). A number of studies have described how a sense of purpose and obligation associated with fatherhood, and the thoughts of the effects on their children, have motivated men to reconsider suicide (Fogarty et al., 2015; Player et al., 2015; Reading & Bowen, 2014; Shand et al., 2015).

Emotional regulation

Several studies have highlighted the positive impact of a man’s ability to experience suicidal thoughts without the concomitant desire of acting upon them in the prevention of suicide attempts (Jordan et al., 2012; Oliffe et al., 2012; Player et al., 2015; Reading & Bowen, 2014). Changing unhelpful patterns of thinking, in a manner akin to cognitive behavioural therapy, may be self-driven or achieved alongside guidance from a mental health professional (Jordan et al., 2012; Player et al., 2015). Modifying one’s own thought patterns, however, requires a certain level of introspection and vigilant self-monitoring, and men may lack this self-awareness if they do not acknowledge their own distress or low mood (Oliffe et al., 2012). Family and friends of male suicide survivors have agreed that effective monitoring of, and appropriate response to, men’s warning signs are crucial in keeping men safe (Player et al., 2015). Such self-awareness may be contingent on men possessing the willingness to acknowledge and receive support to address a substantial

problem (Oliffe et al., 2012). However, there is evidence that using emotional regulation (keeping feelings under control) as a coping strategy may be protective in reducing the risk of suicidal ideation in young males (Khurana & Romer, 2012). Men facing acute and immediate risk may also benefit from distraction techniques. For example, family and friends of suicidal men have noted that keeping men distracted, even for an hour or two, was crucial in providing a space where they were not actively planning an attempt (Player et al., 2015). In the absence of family or friends, alternative behavioural strategies that have also successfully deterred a suicide attempt included reading, painting, exercising and go-karting (Player et al., 2015; Reading & Bowen, 2014).

Male perspectives on service provision and care

Two major themes regarding constructive approaches mental health services may adopt toward helping suicidal men were identified from the literature: the importance of trust and respect between men and their mental health professional has been deemed vital by men and service providers alike (Grace et al., 2016; Jordan et al., 2012; Player et al., 2015; Reading & Bowen, 2014), while placing mental health initiatives in a less formal setting may make men more amenable to the help-seeking process (Grace et al., 2016; Jordan et al., 2012; Shand et al., 2015).

Trust and respect

Studies involving samples of men who have previously attempted suicide have consistently found that establishing the trust and respect of mental health professionals is fundamental to men’s initial and ongoing engagement with health and social care services (Grace et al., 2016; Jordan et al., 2012; Player et al., 2015; Reading & Bowen, 2014). Men’s wariness of approaching or seeking help from formal mental health services has been argued to support the use of more routine or casual exchanges prior to any discussion around mental health (Jordan et al., 2012); a view also acknowledged and shared by service providers themselves (Grace et al., 2016). Communicating with genuine empathy and interest toward men’s individual biographies, without judgement or condescension, have been highlighted as necessary qualities in a mental health professional (Jordan et al., 2012; Reading & Bowen, 2014). This mutual respect has been noted as driving men to reconnect with humanity and actively refute their belief that “nobody cares” – an attitude reinforced by previously unsatisfactory experiences with health professionals or difficulty in even accessing the required services (Jordan et al., 2012; Player et al., 2015).

Importance of informal setting

Studies have indicated that men find a “subtle” approach in encouraging them to make contact with supportive services more acceptable (Grace et al., 2016; Jordan et al., 2012). Reflecting an acute awareness of the stigma associated with the use of mental health services, men have outlined a desire for more discrete services, not overtly or exclusively associated with mental health (Grace et al., 2016). In order to challenge these negative attitudes, service providers have

highlighted the need to engage young men in mental health at the earliest possible stage in life by encouraging and supporting them to be more open and articulate in the recognition and expression of their feelings, thereby helping to normalise the topic (Grace et al., 2016). The use of interventions that promote social interaction, such as sports-based activities or social media (rather than those perceived as formal or clinical) have been highly valued by men, as have community-based informal support centres. Grounding such dialogue in these formats may hold promise for young men in particular (Jordan et al., 2012; Shand et al., 2015).

Discussion

The unique focus of this scoping review – in summarising the current quantitative and qualitative literature of relevance to male suicide prevention strategies, programmes and interventions – has bridged an important gap in the literature. Previous reviews of the effectiveness of suicide prevention strategies have recommended that future research on evidenced-based prevention strategies should focus on specific targeted populations, as data suggest that specific risk groups might need a tailored preventive approach (Zalsman et al., 2016). Men are a group at high risk of suicide, and the findings from our review highlight some important considerations for future research aiming to inform the development of tailored approaches to male suicide prevention.

Overall, although our findings confirm that health beliefs and behaviours related to traditional norms of masculinity are an important feature of suicidal action (Cleary, 2017), it is also evident from the current literature that men should not be considered to be a homogenous group, and that masculinity should not be considered a “toxic”, inflexible concept. It is clear in the current evidence that, at least within the context of suicide, men’s identities are fluid and may be redefined depending on the situation, while different men identify with different configurations of masculinity. The “protector” and “provider” roles typical of Western, culturally dominant (hegemonic) masculinity have been found to instil a sense of obligation in men, where renegeing on these responsibilities is regarded as both “unmanly” and cruel, consequently interrupting the suicidal process (Oliffe et al., 2012). This is in contrast to other studies in the literature that describe how men deliberately reconstruct their masculinity *outside* of hegemonic ideals as part of their recovery from suicidality (Emslie et al., 2006; Tang et al., 2014; emphasis added). While Oliffe et al. (2012) have highlighted how the majority of men defined their masculinity within the context of a connectedness to others and drew strength from these support networks, these findings should be situated against the current epidemiological pattern in Western, developed countries when considering their relevance. For example, the group at greatest risk of suicide in the UK – middle-aged men – are also the least likely to feel they can rely on their partner, family or friends in case of a serious problem (ONS, 2015). The potential benefits afforded by a man’s immediate social network may therefore be severely limited in this particular group of men.

There is a paucity of qualitative research concerning the experiences and perspectives of suicidal men; we identified

only four such studies in the published literature (Jordan et al., 2012; Oliffe et al., 2012; Player et al., 2015; Reading & Bowen, 2014). These important studies emphasise the need to gain further insights into men’s experiences in order to help shape service delivery and highlight strategies that men themselves utilise to successfully interrupt the suicidal process. Future investigations could usefully focus on exploring the experience of men who have faced suicidality rather than depression alone. Depressive symptoms in men are poorly understood or differentiated from other mental illnesses (Oliffe et al., 2016), and suicide and depression have a complex relationship with an abundance of factors that contribute to their development. We did not identify any qualitative studies which have focused exclusively on men of middle age (45–65 years old). As this cohort experience the highest rates of suicide across many developed countries, efforts to recruit middle-aged men into future studies should be prioritised, since perspectives and coping strategies may differ across age groups.

In view of the value men have placed on a supportive social network in aiding recovery, additional qualitative research with members of this network may also be of benefit: exploring the attitudes toward suicidal men may foster a greater understanding of stigma, both real and perceived, and also inform ways in which these individuals may best help men at risk of suicide.

Further research is also required to determine whether male gender moderates the effectiveness of specific suicide prevention interventions and approaches. Of particular interest would be research examining the effectiveness of awareness raising and communication with young men through social media and mental health promotion in school-aged populations. While social media platforms are popular among young men, concerns that anonymity cultivates the capacity for cyberbullying have been expressed, potentially causing further harm to already vulnerable individuals (Grace et al., 2016). Research evaluating both the effectiveness and service user perspectives relating to the use of social media platforms in engaging suicidal young men is therefore needed. The incorporation of mental health promoting strategies into the educational curriculum from a young age may serve to decrease stigma surrounding depression and suicidal ideation, consequently reducing the aversion to seeking support and accessing formal mental health services (Robertson et al., 2015). Given the apparent propensity of males to use emotional regulation techniques as a form of successful coping strategy for suicidal ideation, it seems logical to explore methods of nurturing these techniques from an early age, rather than simply changing services and waiting for men to seek help. The lack of current literature on this topic – in particular, the feasibility and cost-effectiveness of such an intervention – necessitates further research.

Our review had a number of limitations. We excluded studies that focused on men with long-term conditions or severe mental illness, as it is likely that these men have different experiences and needs. The restriction of primary study location to developed or industrialised countries was considered appropriate given the importance of sociocultural context in suicide and the Western-centred perspective of the current review. However, while social and cultural factors

may share broad similarities between countries, there remains the need to replicate and evaluate these studies in local contexts. Finally, methodological appraisal of the quality of included studies was not undertaken as this is beyond the remit of a scoping review.

Conclusions

This scoping review has summarised the empirical literature on suicide prevention strategies, programmes, and interventions of relevance to men. Three categories were identified that highlight some important areas for future research aiming to inform the development of tailored approaches to male suicide prevention. Key elements for consideration in the design and delivery of suicide prevention strategies for men that can be distilled from the current literature relate to receiving support from a trusted and respected individual in an informal setting; connecting with others; reframing help-seeking as masculine; and the use of emotional regulation techniques. Findings from the review indicate that future research could usefully focus on exploring men's perspectives and experiences of suicide-related behaviour, and determining whether male gender moderates the effectiveness of specific suicide prevention interventions and approaches.

Declaration of interest

No potential conflict of interest was reported by the authors.

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Supplementary material available online