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Review Article

Psychosocial factors that influence men's help-seeking for cancer symptoms: a systematic synthesis of mixed methods research

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Abstract

***Objective*: Effectiveness of cancer control partly depends upon early identification and treatment. Men appear to be more likely to delay help-seeking for symptoms, resulting in later diagnosis. This review aims to provide a mixed research synthesis of the psychosocial barriers to and facilitators of help-seeking for cancer symptoms among men.**

***Methods*: Systematic methods were followed, including a predefined research question and search strategy. Searches retrieved 7131 international records from online databases: MEDLINE ($n = 3011$), PubMed ($n = 471$), SCOPUS ($n = 896$), Informit ($n = 131$), PsychINFO ($n = 347$), and Web of Science ($n = 2275$). Forty studies were eligible for inclusion in the review (25 qualitative studies, 11 quantitative studies, and 4 mixed-method studies).**

***Results*: There was strong observational evidence for several psychosocial barriers to men's help-seeking behaviour: low cancer knowledge and inaccurate symptom interpretation, embarrassment and fear, and conformity to masculine gender role norms. The strongest facilitating factor associated with men's help-seeking behaviour was encouragement and support of spouses and family members. The majority of research was qualitative and used small samples, making generalisations to the wider population difficult.**

***Conclusions*: Men's help-seeking for cancer symptoms is influenced by several psychosocial factors, which, in part, may be gender-specific. Health promotion initiatives to improve help-seeking behaviour among men should aim to increase cancer knowledge, reduce embarrassment and fear, address social norms deterring timely help-seeking, and acknowledge informal help-seeking with spouses and family members. Increasing the theoretical grounding of research could aid cohesion across the research area and the design of effective health promotion interventions.**

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Introduction

Cancer is one of the leading causes of death, with over 8 million cancer deaths recorded in 2012 [1]. The impact of cancer is significant, affecting individuals and families, as well as the broader community and healthcare system. Prevention strategies may reduce the burden of cancer, including early detection and treatment [2], which have been associated with improved prognosis [3]. Early detection may be achieved through asymptomatic cancer screening or early diagnosis following timely medical help-seeking for symptoms.

There has been increasing concern regarding late diagnosis of cancer in men. Research has shown that a considerable proportion of men delay help-seeking for male-specific cancers, including prostate [4,5], testicular [6,7], and penile [8] cancers. Although evidence has been mixed, some studies have also found men to delay medical help-seeking significantly more than women for non-gender-specific cancers [9–12]. Consequently, there has been increased research interest in the medical help-seeking behaviour of men, as well as the psychosocial predictors of their help-seeking for cancer symptoms.

Medical help-seeking behaviour has been conceptualised in a variety of ways [13,14]. Stage process models of help-seeking theorise that help-seeking behaviour involves problem perception, problem appraisal, decision-making, and intentional action [14]. It has also been proposed that help-seeking must include interpersonal communication, which may be with a formal (i.e. healthcare

professional) or informal (e.g. family or friends) source [13]. Theoretically, each stage of the help-seeking process is influenced by a variety of psychosocial factors that vary according to stage of process [14]. Psychosocial factors may be risk factors for delayed help-seeking (i.e. barriers) or protective factors for timely help-seeking behaviour (i.e. facilitators) [14].

This paper conceptualises help-seeking according to the Aarhus statement [15], which was developed to guide the design and interpretation of research concerned with early diagnosis of cancer. The Aarhus statement defines the 'patient interval' as the time from when bodily changes/symptoms are noticed by an individual until the date of first presentation to a clinician. This time period is divided into an 'appraisal interval' and a 'help-seeking interval'. The help-seeking interval occurs from the moment a bodily change/symptom is interpreted as requiring medical advice until the act of seeking medical help with a healthcare professional. The help-seeking interval is therefore differentiated from the appraisal interval (i.e. individual detects and interprets bodily changes) but also subsumes it. This review considers psychosocial factors that impact on both appraisal and help-seeking intervals, but not the appraisal interval solely.

Over the past decade a number of reviews have been published in this area. Although informative, previous reviews have predominantly been either too broad or narrow in scope. For example, Galdas and colleagues [16] reviewed factors that influence men's health-related help-seeking behaviour. They found evidence from male-specific literature supporting traditional masculinity as a key factor influencing help-seeking behaviour. Yousaf and colleagues' [17] systematic review of barriers associated with men's medical and psychological help-seeking found restricted emotional expression, embarrassment, anxiety, and fear to be the strongest barriers to help-seeking [17]. Both reviews impart insights into men's health-related help-seeking behaviour broadly, but neither provides a comprehensive review of male help-seeking specifically for cancer symptoms. Arguably, help-seeking for cancer symptoms may be distinctive because of perceptions about disease severity and the ambiguity of some warning signs (e.g. fatigue and unusual weight loss).

Other reviews have explored the factors influencing help-seeking for cancer symptoms but have been narrow in focus. For instance, reviews have explored psychosocial factors associated with help-seeking without a gender analysis [18,19], have examined male-specific help-seeking for specific forms of cancer [20,21], examined only qualitative evidence [22], or selectively examined the research literature (i.e. review was not systematic) [9]. In order to advance research, inform cancer prevention initiatives, and facilitate early diagnosis of cancer in men, a comprehensive systematic review is needed. Accordingly, the aim of this review was to present a mixed research synthesis of the psychosocial barriers to and facilitators of help-seeking for cancer symptoms among men. The primary research question was: what are the psychosocial factors that influence medical help-seeking for cancer symptoms in men?

Methods

The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement was followed in reporting for this review [23]. The research question, concepts, search strategy, and selection criteria were predefined, and methods for data analysis, critical appraisal, and synthesis were outlined following confirmation of the types of research included in the review.

Search strategy

Research concepts were defined to examine the psychosocial factors that influence medical help-seeking for cancer symptoms in men and included 'cancer', 'help-seeking', and 'males'. A search strategy was developed in consultation with a medical research librarian to increase search sensitivity. The following search string was adapted for six core databases: (cancer* OR oncolog* OR tumour* OR tumor* OR carcinoma* OR malignan* OR neoplas* OR melanoma* OR sarcoma* OR leukemia* OR leukaemia*) AND (helpseeking OR help-seeking OR self-refer* OR patient delay OR patient lag OR delayed diagnosis OR awareness OR ((healthcare* OR care* OR help* OR service*) adj3 (seek* OR participat* OR acceptance OR uptake OR utilisation)) AND (men OR male OR males OR gender* OR manhood OR masculin*) AND LANGUAGE (English). Databases included MEDLINE (from 1946-), PubMed (excluding MEDLINE; from 1946-), SCOPUS (Social Sciences and Humanities subject areas; from 1823-), PsychINFO (from 1806-), Informit (temporal coverage unknown), and Web of Science (SCI-EXP and SSCI; from 1900-). The search was performed on 12 March 2014.

Selection criteria

Studies were included if they examined real or anticipated help-seeking behaviour in the context of cancer symptoms and investigated psychosocial factors associated with help-seeking behaviour in men. Both gender comparative studies and studies sampling male population exclusively were eligible for inclusion in the review, as well as studies using mixed samples (e.g. prostate disease including prostate cancer) or sampling the general population. All methodologies and methods were included.

For all searches, an automatic exclusion restricted papers to English language. Manual exclusion criteria included female-only studies, studies in which

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male-specific results could not be extracted, studies with a majority of participants under the age of 18 years, case studies, reviews, commentaries, and conference abstracts. Studies that examined the pathway to treatment broadly were included, as well as studies that examined appraisal and help-seeking intervals concurrently. Studies that examined the appraisal interval solely were excluded. In addition, studies that examined cancer prevention broadly or cancer screening solely were excluded.

Study selection

In total, 7131 records were retrieved from searches on MEDLINE ($n=3011$), PubMed ($n=471$), SCOPUS ($n=896$), Informit ($n=131$), PsychINFO ($n=347$), and Web of Science ($n=2275$; see Figure 1 for PRIMSA diagram). The number of records totalled 5873 following removal of duplicates. All titles and abstracts were screened for relevance according to the inclusion and exclusion criteria, resulting in 5686 being excluded. Of the 188 full-text articles assessed for potential eligibility, 152 were excluded with reasons recorded, and 36 were included in this review.

A forwards and backwards reference search was carried out on all included studies on MEDLINE, SCOPUS, and Web of Science, as well as searching of digital theses, reference lists of relevant reviews, and an author search. All titles and abstracts were screened for relevance according to the inclusion and exclusion criteria. Additional four articles were identified for this review through further searching.

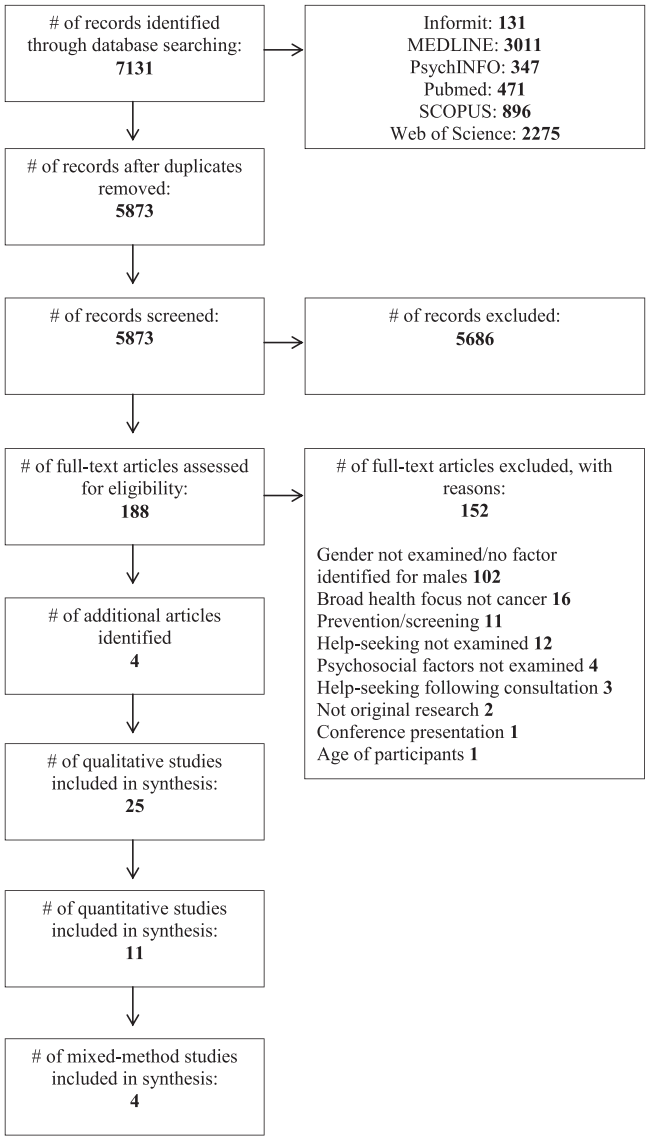

Figure 1. PRISMA flow diagram of study selection

Data synthesis

Data extraction and synthesis were conducted by the first author. All included studies were imported into NVivo 10 (QSR International Pty Ltd), and relevant findings were extracted and detailed according to research method (e.g. qualitative or quantitative; Tables S1 and S2, respectively, in the Supporting Information). For mixed-method studies, findings were extracted and reported according to the relevant method (i.e. qualitative or quantitative) [24]. Qualitative and quantitative findings were synthesised separately and according to factor type (i.e. barrier or facilitator). A barrier was defined as a risk factor associated with delayed medical help-seeking, whereas a facilitator was defined as a protective factor associated with timely medical help-seeking. Qualitative and quantitative findings were integrated during interpretation and discussion.

Critical appraisal

Studies were critically appraised for methodological quality, using three adapted critical appraisal instruments specifically designed for each method. Items were predominantly taken from the Standard Quality Assessment Criteria for Evaluating Primary Research Papers from a Variety of Fields [25], supplemented with items and detail from the Evaluation Tool for Qualitative Studies [26], and guidelines provided by O'Cathain and colleagues [27]. An average quality rating score was calculated for each study (score range 0–1) [25]. A score $\leq.50$ was considered low quality and indicated that a substantial number of checklist criteria had not been fulfilled. A score between .51 and .80 was considered medium quality, and a score $>.80$ was considered high quality. To assess inter-rater reliability, a subset of included articles ($n=13$) were critically appraised by the first author and an independent research associate. A good level of inter-rater reliability was observed using a single-

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measures intraclass correlation (*ICC* = .74, 95% CI [.35, .91]) [28]. To improve reliability, discrepancies in item scoring were discussed, and appraisal instruments were revised by the first author, followed by independent critical appraisal for the same studies by both researchers. An excellent level of inter-rater reliability was found on the second set of scores (*ICC* = .86, 95% CI [.60, .96]), and the remaining studies were appraised for quality by the first author. Quality judgements are reported as Supporting Information for synthesis and interpretation of findings. No studies were excluded or weighted in the results on the basis of quality scores.

Results

Forty studies were included in the review (25 qualitative, 11 quantitative, and 4 mixed-method). Methodological heterogeneity was high across studies. Qualitative evidence was extracted from 25 qualitative studies and three mixed-method studies (Table S1 in the Supporting Information). Qualitative research methods included interview ($n = 20$), focus group ($n = 3$), and focus group plus interview ($n = 2$). Quantitative evidence was extracted from 11 quantitative studies and one mixed-method study (Table S2 in the Supporting Information). All quantitative research methods were observational; research methods included survey/structured interview ($n = 11$) and clinical data analysis ($n = 1$). Research objectives and outcomes (e.g. recall of actual help-seeking behaviour versus anticipated help-seeking behaviour) differed across studies, and consequently, statistical and analytical heterogeneity was also high. The majority of articles were rated as medium quality ($n = 25$), with 14 rated as high quality, and one qualitative study rated as low quality (Tables S1 and S2 in the Supporting Information). Higher quality ratings indicate more rigorous methodology and relevant results [29].

The characteristics of the studies and samples were varied (Tables S1 and S2 in the Supporting Information). Research was conducted in a range of locations, including Europe ($n = 29$), Australia/New Zealand ($n = 6$), USA ($n = 4$), and Iran ($n = 1$). The majority of research conducted in Europe was carried out in the UK/Ireland ($n = 20$), with the remaining studies predominantly conducted in high-income countries from Western Europe. Samples varied according to size (qualitative range 6–115; quantitative range 23–2208), gender (male only $n = 24$, mixed gender $n = 16$), age (range 15–92+ years), cancer site (male-specific and non-gender-specific cancers), and diagnostic cut-off period (for retrospective studies). Ethnicity of participants was infrequently reported across studies.

A range of psychosocial barriers and facilitators were associated with men's help-seeking for cancer symptoms (Tables S3 and S4 in the Supporting Information). Psychosocial factors were categorised according to themes: knowledge and awareness of cancer (i.e. previously knowing about cancer and symptoms), symptom recognition and interpretation (i.e. noticing and explaining bodily changes/symptoms), emotions (i.e. feelings towards a situation), attitudes (i.e. learned response to people and situations) and health beliefs (i.e. beliefs about health problems), coping processes (i.e. ways of dealing with stressors), social norms (i.e. group expectations about group members' behaviour), social support (i.e. resources provided by others to assist with coping), family and relationship health, and health system factors (i.e. how a system operates and is perceived to operate by individuals) [30].

Qualitative synthesis

Psychosocial barriers to help-seeking

Knowledge and awareness of cancer symptoms were associated with men's help-seeking behaviour, with a low level of cancer awareness or knowledge associated with delayed help-seeking for cancer symptoms in 12 studies [6,31–41]. This barrier was found across a range of cancer samples, including prostate [34,36,41], testicular [6,32,38], male breast [35], and head and neck [33] cancer. Low level of risk perception was also found to be a barrier in one study [40].

Symptom recognition and appraisal were commonly found to influence men's help-seeking behaviour. Symptom mildness and/or a gradual progression in symptom were associated with delayed help-seeking in seven studies [32,34–36,42–44]. Another related barrier was symptom misattribution, with eight studies reporting that some respondents initially attributed their symptoms to benign conditions [32,33,38,42–46]. Other symptom related barriers to help-seeking were uncertainty regarding symptom [38], sporadic symptoms [43,46], low level of attentiveness to body or health [47], previous benign diagnosis [43], trivialisation of symptoms [41], absence of an additional symptom [43], and the location of symptom [46].

Emotional factors were negatively associated with men's help-seeking behaviour. Thirteen studies found feelings of embarrassment and/or shame to be barriers to help-seeking for cancer symptoms [6,31,32,34,37,38,42–44,46,48–50], predominantly in male-specific cancers such as testicular [6,32,38,42,44,46,48] and prostate cancer [34,37,49,50]. Fear and anxiety were associated with delayed help-seeking in seven studies [6,31,36,40,42,44,51]. Specific fears reported across studies included: cancer [31,36,40,44], health professionals [31,36], examination [36,42], treatment or treatment side effects [36,42,44], hospitalisation [36], and perceived hypochondria [42,51]. Other concerns included examination in a sacred area of the body

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for Maori men [50] and body image in men affected by testicular cancer [32,44].

Attitudes and health beliefs were associated with men's help-seeking behaviour. Conflicting responsibilities were associated with men's delayed help-seeking in seven studies, suggesting a low prioritisation of health among some men [32,40,42,43,47,50,52]. Five studies described employment as impacting on help-seeking [32,42,47,50,52]; men were aware of their symptoms but were too busy to visit the doctor, were too busy to detect symptoms, or there was pressure from within the workplace to continue working. One study reported family responsibility as impeding help-seeking [32]. Optimism was a barrier to help-seeking in seven studies; some men believed their symptoms would go away without intervention [32,38,40,43,46,48,50]. Other barriers to help-seeking were fatalism [31,42,53] and beliefs that cancer affects older people [32,38] or would never happen to them [54]. Two coping strategies were associated with delayed help-seeking: denial [6,38,41,53] and avoidant coping [36,52].

Social normative factors were frequently reported as barriers to men's help-seeking. Thirteen studies reported at least one masculine gender role norm as inhibiting appropriate help-seeking behaviour [31,36,38–40,42–44,48–51,55]. The most commonly reported masculine gender role norm influencing help-seeking was machismo [31,36,39,40,42,49–51]; men who wanted to appear strong and in control feared appearing weak if they sought help. Additional masculine gender role norms that negatively impacted on help-seeking behaviour were stoicism [43,55] and self-reliance [31,41,43,53]. The perception of health as a feminine issue also appeared to delay help-seeking for cancer symptoms among men in eight studies [31,36,39,44,47,49,51,52]. Other social normative factors included difficulty with communication because of social norms [37,40], taboos around men's health and discussing health [38,51], the marginalisation of men's health [38], and social status of symptom (e.g. prostate symptoms were perceived as less serious than other symptoms, such as heart symptoms) [36].

Two social support factors were found to influence men's help-seeking behaviour. Emotional protection of others was found to be a barrier, with respondents indicating that they did not want to burden their families with a potential illness [34,38]. Disclosing symptoms to others was a barrier in three studies [38,41,43], with friends reassuring respondents that their symptoms were normal or benign in two studies [38,41].

Cultural factors were seldom explored across studies. Four of the included qualitative studies explicitly examined ethnicity as a factor related to help-seeking for cancer symptoms [37,40,50,56]. Absence of culturally sensitive healthcare and information was found to inhibit help-seeking among Maori [50] and Aboriginal and/or Torres Strait Islander men [37]. Maori men affected by prostate symptoms reported reservations about being examined in a sacred area of the body and did not feel culturally safe in seeking help [50]. Machismo was reportedly a greater barrier to help-seeking for Irish men in comparison to white British men [40].

Health system and service factors associated with delayed help-seeking included perceived lack of access [6,41], inadequate culturally appropriate healthcare and information [37,50], perceived long wait times and short appointments [31,40], concerns about confidentiality [37], and concerns regarding loss of dignity or respect with healthcare professionals [31]. Two studies found respondents felt disconnected from health service providers (e.g. because of lack of attention from healthcare professionals) [31,51]. Moreover, some men reported a previous negative experience with the healthcare system [31], or a low level of previous contact with the system [32,53]. Financial cost was a barrier in one study [31].

Psychosocial facilitators of help-seeking

The most frequently reported factor positively associated with men's help-seeking behaviour was social support from spouses or family members, which was found to facilitate timely help-seeking in 15 studies [32–34,36,38,41,44–48,50,51,53,57]. Similarly, disclosing symptoms to friends was found to facilitate help-seeking in three studies [38,41,43]. In addition to social support, perceiving help-seeking as a social norm (e.g. where significant others are described as comfortable seeking help) was found to facilitate help-seeking behaviour in one study [50].

Perceived symptom severity/prolonged symptoms were found to facilitate help-seeking in 12 studies [32,33,36–38,41,43–46,51,57]. Changes in symptom [45], alternative explanation for symptom [43], previous benign diagnosis [43], and type of symptom [39] were also found to facilitate men's help-seeking. Furthermore, in support of the importance of cancer knowledge, seven studies found higher levels of cancer knowledge to facilitate timely help-seeking [32,34,36,41,42,51,56]. Knowledge was gained through a variety of channels, including informal knowledge through friends and family [32,34,36,41,42] or a cancer-related death of a significant other [41].

Several family and relationship health factors were found to facilitate men's help-seeking for cancer symptoms. A belief in the importance of family health was found to be an enabling factor for Maori [50], African, and Afro-Caribbean men [56]. Perceiving the symptom to impact on a partner or family member [34,50] and concern among prostate cancer patients over future sexual functioning [56] facilitated timely help-seeking for some men.

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A small number of additional factors were positively associated with men's help-seeking. Contradictory emotional factors that facilitated timely help-seeking were lack of an emotional response to symptom or medical help-seeking [32,47], as well as worry about a symptom [27]. Optimism/low risk perception was associated with timely help-seeking for cancer symptoms [43]. Health service and system factors found to facilitate help-seeking in men were having private health insurance [36], trust in expert assessment [47], and culturally appropriate healthcare (e.g. increasing clients' perception of being culturally safe with healthcare professionals) [50].

Quantitative synthesis

Psychosocial barriers to help-seeking

A range of knowledge and symptom recognition factors were associated with help-seeking behaviour across quantitative studies. A low level of cancer knowledge was associated with delayed help-seeking in men affected by penile cancer [8]. Symptom mildness and symptom misattribution were associated with help-seeking delay among men affected by testicular [58] and colorectal cancer [10]. Not being aware of a symptom also contributed to help-seeking delay in one study [58]. In one questionnaire study [59], 54% ($n = 101$) of mixed-gender respondents who had noticed changes to a mole or freckle in the past year did not seek help, with men more likely than women to report being unsure what to do in response to the change.

Emotions were also associated with men's delayed help-seeking for cancer symptoms. Fear was a barrier to timely help-seeking in two studies [8,60], with African-American men more likely to report fear than White men ($p < .01$) [60]. In one study of men affected by colorectal cancer, a low level of concern about symptoms and concern about bothering health professionals were associated with help-seeking delay [10]. Embarrassment was associated with delayed help-seeking behaviour in men with penile cancer symptoms [8].

Psychological barriers, such as attitudes and health beliefs, were associated with men's help-seeking for cancer symptoms. Conflicting responsibilities or not having time to see a doctor were barriers to help-seeking for men affected by prostate [60] and colorectal cancer [10]. Optimism was associated with delayed help-seeking in two studies [8,60], with African-American men more likely than White men ($p < .01$) to believe a symptom would go away [60]. In one study, delayed help-seeking of 9 months or more was found in men who held a belief that cancer is incurable (i.e. fatalism), a good appraisal of health status, and low levels of depression and state anxiety [61].

Several quantitative studies explored intention to seek help for cancer symptoms, as well as anticipated barriers to help-seeking [62–64]. Symptom mildness, trivialisation of symptoms, embarrassment, and fear were associated with anticipated delays in help-seeking for urinary symptoms [62]. Specific fears included cancer, treatment, and treatment side effects [62]. Concerns about what a doctor might discover and wasting a doctor's time were also reported as barriers to seeking medical advice [63]. Other anticipated barriers included perceived difficulty in making an appointment with health-professionals [63], a negative attitude towards health professionals/system [62], and being 'too busy to make time' to see a doctor [64].

Psychosocial facilitators of help-seeking

Several varied psychosocial factors were associated with more timely help-seeking behaviour in quantitative studies. Encouragement or perceived support from a partner was associated with help-seeking behaviour in two studies [65,66]. Information seeking was associated with more timely help-seeking behaviour (less than 3 weeks; $p < .02$) in men affected by prostate cancer [67]. In one quantitative study that explored intention to seek help for urinary symptoms, prostate cancer awareness and symptom severity were associated with intention to seek medical help [62].

Discussion

The aim of this paper was to review the psychosocial barriers to and facilitators of help-seeking for cancer symptoms among men. Overall, a range of psychosocial factors were found to influence help-seeking behaviour, with strong observational evidence for a number of emerging factors: the impact of symptom knowledge and interpretation, embarrassment and fear, conformity to gender role norms, and conflicting responsibilities. Almost all studies were considered of sound quality (medium to high quality); however, methodological heterogeneity was high across the included studies, and integrated findings should be interpreted with caution.

Symptom knowledge and symptom interpretation were frequently associated with men's help-seeking behaviour across studies. Just under half of the included studies found evidence for an aspect of cancer knowledge or awareness to influence help-seeking behaviour [6,8,31–42,51,56,62]. Low levels of cancer knowledge were associated with delayed help-seeking, while a higher level appeared to facilitate timely help-seeking. These findings are in line with non-gender-specific [18,19,22] and female-specific research [68] that has found knowledge of cancer warning signs to influence help-seeking behaviour. This suggests that the significance of this factor is widespread and may

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not be gender-specific. Furthermore, symptom interpretation influenced men's help-seeking behaviour. Perceived symptom mildness and misattribution were frequently recurring barriers [10,32–36,38,42–46,58,62], with studies commonly finding respondents wrongly attributed cancer symptoms to benign illness and self-monitored symptoms until they were severe and required medical attention. Although symptom recognition is an important factor in help-seeking behaviour, behavioural research has indicated that symptom recognition is not always associated with seeking help among men and women [69,70]. This suggests that other psychosocial factors are likely to impact help-seeking intentions and behaviour, such as attitudes towards cancer [14,70].

Overall, embarrassment [6,8,31,32,34,37,38,42–44,46,48–50,62] and fear/anxiety [6,8,31,36,40,42,44,51,60,62,63] were dominant emotional factors negatively influencing men's help-seeking for cancer symptoms. This is in line with the wider literature, in which fear of severe disease, medical consultation, and embarrassment has been associated with delayed health-related help-seeking in both men and women [17,19,22]. In this review, fear of embarrassment was predominantly reported in studies sampling men affected by cancers of the reproductive organs. Smith and colleagues [22] have also shown fear of embarrassment to be a barrier to help-seeking in both men and women, particularly for symptoms in a sexual area. A unique finding in this review was that embarrassment was often expressed concomitantly with masculine gender role norms and perceived gender differences in health and health behaviours across qualitative studies.

Conformity to masculine gender role norms [31,36,38–40,42–44,48–51,55] and perceived gender differences in health [31,36,39,44,47,49,51,52] appeared to be important barriers to men's help-seeking, which is consistent with the wider health-related help-seeking literature [16]. A considerable number of men indicated that masculine gender role norms influence decisions to seek help for medical symptoms. This was often related to perceptions of gender differences in health and health behaviours across qualitative studies, in which men considered medical help-seeking behaviour to be a feminine activity [31,36,39,44,47,49,51,52]. Women were commonly seen as knowing their bodies more intimately than men, to be more comfortable disclosing health issues, and to be more psychologically at ease in seeking help for illness.

These findings are in line with theories of masculine gender role socialisation and male help-seeking [71,72], which propose that men perceive social pressure to conform to dominant masculine gender role norms (e.g. independence and control) that are in contrast to the help-seeking process [71,72]. Deviation from dominant gender role norms may lead to gender role conflict, a psychological state that can lead to emotional, cognitive, and/or behavioural problems [73], including risky health behaviours. Recent research has highlighted the importance of context for masculine gender role ideals [74]. It is theorised that masculinities interact with contextual factors, such as age, class, culture, and illness characteristics, to influence health behaviour [74]. This is illustrated by one qualitative study, where Irish men were found to be more reluctant than white British men to talk about cancer and health because of the 'macho' Irish culture, which was linked to historical and social contextual factors [40].

Encouragement and support of spouses and family members was commonly associated with timely help-seeking behaviour [32–34,36,38,41,44–48,50,51,53,57,65,66]. While this is in line with non-gender-specific reviews [19,75], this factor appeared to be distinctly gender-specific. For example, disclosure of a symptom to a healthcare professional was seen as a threat to masculinity, but disclosure to a female spouse was considered acceptable and non-threatening. Hale and colleagues [36] argued that pressure from female partners to consult with a healthcare professional provides men with an acceptable excuse for help-seeking and may prevent men from feeling that their masculinity is compromised.

The frequent disclosure of symptoms to female romantic partners also highlights the occurrence of informal help-seeking behaviour. During the help-seeking interval, it is proposed that an individual considers and selects an appropriate source of help based on level of personal comfort and/or consideration of knowledge [13]. Many men from the included studies appeared to consider women as knowledgeable and experienced in the health domain. As such, female spouses and family members may play an important intermediary or 'gate-keeper' role in men's health by checking symptoms, collecting or providing information, prompting help-seeking, and maintaining gender role norms.

Men also commonly perceived conflicting responsibilities as inhibiting medical help-seeking, which may indicate a low prioritisation of health [10,32,40,42,43,47,50,52,60,64]. Furthermore, some studies reported that work responsibilities impacted on the ability of men to seek help from a medical professional [42,47,50,52]. The association between low prioritisation of health and delayed help-seeking behaviour has also been observed in women affected by cancer [76], suggesting that this factor may not be gender-specific. Future research might explore conflicting responsibilities further by investigating the value of employment and health among men and whether this is associated with conformity to masculine gender role norms.

Differences in results were also observed between qualitative and quantitative research studies. Across both qualitative and quantitative studies, evidence was found for the importance of cancer knowledge and symptom

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interpretation, conflicting responsibilities, fear, and embarrassment. Evidence also emerged in qualitative research about the importance of social normative and health system factors, but these factors were not observed in quantitative research. Future research in men's help-seeking could build on findings from qualitative research using quantitative methods to test the limits and generalisability of observations arising from the former.

Limitations of existing research and future directions

There is growing evidence of a number of psychosocial factors associated with men's help-seeking for cancer symptoms, but there are significant limitations with existing research that limit the strength of this evidence. First, a majority ($n = 34$) of studies included in this review explored factors associated with help-seeking through open-ended questions and reported descriptive results, and as such, the predictive strength of emerging psychosocial factors is unknown [14]. The different goals of quantitative and qualitative research, and the associated epistemological frameworks, may explain why strong themes regarding social norms and masculinity were found across qualitative studies, but masculinity variables were not examined in the quantitative research. Validated measures focused on perceptions of masculinity, and their impact on behaviour [77–79] could be utilised in future studies to test the predictive strength of masculinity variables in relation to real or anticipated help-seeking for cancer symptoms. Furthermore, a mixed-method approach (i.e. using both qualitative and quantitative methods concurrently or sequentially) may assist in exploring the underlying processes involved in men's help-seeking behaviour [80].

Second, research in this area has largely been independent of theory. Theoretical grounding provides a context for generating interventions that may redress problems with help-seeking. Evidence for an increasingly wide range of factors associated with help-seeking behaviour has emerged; therefore, the application and testing of health behaviour models is required to identify the pathway of influence in order to assist with the design of effective health promotion interventions [14].

Third, the two main research designs used across studies (i.e. retrospective and anticipated help-seeking designs) have limitations. Retrospective designs may have resulted in recall errors due to significant time elapsed since initial symptom or diagnosis [14]. Also, several quantitative studies investigated anticipated barriers to help-seeking for hypothetical symptoms, which may not accurately reflect real barriers to help-seeking because of the influence of unforeseen factors [14]. While these designs have limitations, they appear to be predominantly used because of ethical concerns regarding prospective designs. Future retrospective studies may include calendar landmarking instruments to improve accuracy of recall [14,81] or use verification procedures.

Finally, only a minority of included studies explored variation between different groups of men (e.g. based on ethnicity and age), limiting generalisability. The qualitative studies reviewed commonly used small samples, and only one quantitative study examined differences among men [60]. It is reasonable to propose that psychosocial factors associated with help-seeking behaviour in men may differ according to a variety of demographic or sociocultural factors [71,74]. For example, masculine gender role norms were found to be recurring barriers to help-seeking for cancer symptoms in men, but the reported role norms (e.g. machismo) are arguably Western traditional concepts [16].

Despite these limitations, preliminary evidence suggests that cancer prevention initiatives to improve men's help-seeking behaviour should aim to increase cancer knowledge, reduce embarrassment and fear, address social norms deterring timely help-seeking, and acknowledge informal help-seeking. Cancer prevention strategies may attempt to address gender role norms deterring help-seeking by normalising or reframing men's help-seeking or, alternatively, by targeting health promotion messages at spouses and family members. An example of this approach is the Stand by Your Man campaign run in the UK, which asked women to encourage the men in their lives to increase their cancer knowledge and talk more frequently about health issues [82]. Future health promotion initiatives should consider targeting the range of psychosocial factors found to influence men's help-seeking for cancer symptoms.

Conclusion

This review provides an overview of psychosocial barriers and facilitators found to influence help-seeking for cancer symptoms among men. Cancer prevention initiatives to improve men's help-seeking behaviour should aim to increase cancer knowledge, reduce strong emotions such as embarrassment and fear, and address social norms deterring timely help-seeking. Moreover, the design of cancer prevention interventions should acknowledge informal help-seeking with spouses and family members. Future research should examine variation between men, use statistical hypothesis testing based on factors emerging from qualitative research, and increase the theoretical grounding of research.

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