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Review article

Men's anxiety: A systematic review

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ABSTRACT

Aim: Anxiety disorders are amongst the most commonly diagnosed mental illnesses amongst men; however male-specific anxiety research is lacking. This review explores men's anxiety symptoms and disorders including help-seeking, coping and the role of masculinity.

Method: Four electronic database searches identified 8,333 citations, with 25 studies meeting inclusion criteria. Nineteen studies employed quantitative methods, five studies reported qualitative research, and one utilised mixed methods.

Results: Unique profiles of anxiety, including psychosomatic symptoms, were identified and persisted over extended periods of time. Men commonly reported self-reliance over formal help-seeking, and typically managed anxiety symptoms through problem-based coping. Masculinity was related to anxiety in complex ways; adherence to norms of toughness could be protective against anxiety onset, while adherence to emotional restrictiveness and heterosexual presentation norms were positively associated with anxiety. The experience of, and help-seeking for anxiety transgressed many men's adherence to masculinity norms resulting in significant social and self-stigmas.

Limitations: The anxiety measurement scales utilised were inconsistent across included studies and there was limited scope of research into panic disorders, phobias and agoraphobia.

Conclusion: Findings demonstrate the enduring nature of anxiety for men and a potential under-reporting of symptoms, especially amongst younger men. To better tailor clinical care and public health resources to the needs of men with anxiety disorders, targeted research examining men's lived experiences of (and coping strategies for) anxiety is essential.

Anxiety disorders are amongst the most common mental health conditions for men worldwide (Kessler et al., 2010); however empirical research exploring the gendered dimensions of men's anxiety is lacking. Anxiety disorders (e.g., Generalised Anxiety Disorder [GAD] Social Anxiety Disorder [SAD] and specific phobias) are characterised by excessive and persistent fear-related responses and behaviours, beyond reasonably appropriate in the context or situation (American Psychiatric Association, 2013). These persistent and excessive anxious responses reach diagnostic threshold when associated with impairments in social, occupational and other important areas of functioning (American Psychiatric Association, 2013). As of 2010, anxiety disorders were the sixth leading cause of disability in both high and low income countries (Baxter et al., 2014; World Health Organization, 2014a) however, more recent evidence indicates rates of anxiety, in addition to fear, stress and depression are increasing globally as a result of the novel coronavirus (COVID-19) that emerged in 2019 (Rogers et al., 2020; World Health Organization, 2020).

Males are diagnosed with anxiety at half the rate of females, approximately 2.6% of males within the global population as compared to 4.6% of females (Baxter et al., 2013; World Health Organization, 2017). This lower rate of diagnosis is not however indicative of better mental health amongst males, as men exhibit increased rates of substance use, interpersonal violence and account for around three-quarters of suicides in Western countries (Hay et al., 2019; World Health

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Organization, 2014b). The reasons behind men's lower prevalence rates of anxiety disorders is unclear. Research has largely centred on exploring sex differences (i.e., male verses female) rather than gender differences, which include culturally and socially defined roles, responsibilities, attributes and entitlements (Darmstadt et al., 2019). Reviews by McLean and Anderson (2009) and Craske (2003) have summarised the ecological differences in fear and anxiety for males and females, and postulate the lower rates of anxiety in males may be due to: biological factors (e.g., genetic disposition and increased physiological reactivity in females), psychological temperament (e.g., reduced negative affect and anxiety sensitivity), stress responses (e.g., sex specific trauma exposures and increased threat appraisal in females), cognitive mechanisms (e.g., lower levels of rumination and worry) and environmental influences (e.g., gender socialisation and behavioural avoidance) all emerging at an individual level. Central in the emergence of these aetiological differences is the moderating impact of gender socialisation, that is, how men and women learn to *be* masculine or feminine. To date, the role and impact of gender socialisation and more specifically masculine norms is sporadically referenced in men's anxiety (Drioli-Phillips et al., 2020b; Kierski, 2014; McDermott et al., 2016; McLean and Anderson, 2009). Whilst prevalence rates of anxiety suggest men experience a lower burden of disease associated with anxiety relative to women, recent evidence highlights that men are less likely to disclose symptoms and seek psychological treatment (Clark et al., 2020a). In addition, as has been seen with other mental health disorders such as depression (Martin et al., 2013; Rice et al., 2020a) current diagnostic screening may not adequately detect anxiety symptoms and disorders in men, resulting in a potential under detection and under diagnosis of anxiety in men.

Dominant ideals characterizing masculine socialisation in the Western world continue to exert significant pressure on men, reinforcing and reifying stoicism, self-reliance, emotional restrictiveness, invulnerability and toughness as key indicators of manliness (Connell and Messerschmidt, 2005; Mauvais-Jarvis et al., 2020). More recently, masculinity frameworks have shifted towards a plurality of idealized 'masculinities', defined as the multifarious ways men action and embody gender, practices learnt over time and constantly shifting across diverse social situations and populations (Connell and Messerschmidt, 2005). The concept of masculinities challenges earlier contemporary ideals of a singular, one-dimensional representation of idealized masculinity, however still recognises a socially determined hierarchy, privileging some expressions of masculinity (e.g., heterosexual, able-bodied, employed) over subordinate and marginalized masculinities (e.g. men of colour, disabled, homosexual; Connell and Messerschmidt, 2005). Strict adherence to these patriarchal masculinities can negatively influence men's willingness to seek help (Seidler et al., 2016; Wong et al., 2017), and is predictive of increased maladaptive coping strategies in an attempt to overcome psychological distress, including social withdrawal, substance use, risk-taking and avoidance (Brownhill et al., 2002; Chuick et al., 2009; Whittle et al., 2015). Research reports that young men are especially vulnerable to the social pressures for embodying masculine norms (Rice et al., 2011) including reluctance to seek psychological support, with only 15% of young men who exhibit clinically significant anxiety utilising mental health services (Merikangas et al., 2011).

Much of the literature surrounding masculinity and men's mental health has centred on reductionist ideals of masculinity as a 'pathology.' Kiselica and Englar-Carlson (2010) proposed shifting towards a strength-based approach, integrating a plurality of diverse and intersecting masculinities. To date, the role of masculinity has been most widely explored in the context of depressive disorders, suggesting symptoms may be expressed through externalising behaviours (e.g., anger, aggression, risk taking and substance use) rather than typical internalised expressions of distress (Addis, 2008; Cavanagh et al., 2016; Rice et al., 2013; Seidler et al., 2016). Contrasting these insights men's anxiety disorders are poorly understood. Importantly, some men's mental health scholarship has considered anxiety and depression concomitantly due to their high comorbidity (McDermott et al., 2016), proposing that psychological distress may be experienced, and manifest differently, for men who endorse traditional masculine norms. Despite this, anxiety and depression should be considered separately, especially given they do not always co-occur or affect men in the same way. This limited scope in research has meant that public health campaigns and resources such as '*Real Men, Real Depression*' in the United States and '*HeadsUpGuy*' in Canada have focussed on depression somewhat obscuring (and perhaps subsuming) men's anxiety. Rigorous research seeking to understand men's experiences of anxiety, and more specifically help-seeking and coping strategies when anxiety arises, is important for advancing the field of men's mental health research. Such research should apply a gendered lens, in particular considering findings in the context of masculinity. Given anxiety is amongst the most common mental health conditions for men, a comprehensive exploration of these experiences will augment and advance contemporary overviews of men's mental illness. In addition, understanding how men seek help for, and cope with anxiety is integral to the efficacy of treatment and public health education. By taking a gendered approach, and considering anxiety through the lens of masculinity, community and therapeutic responses can be tailored based on men's experiences with anxiety, and responsive to their needs.

This systematic review is the first to explore men's experiences of clinical and sub-clinical anxiety. The aims of this review were to; 1) provide a comprehensive overview of men's experiences of anxiety disorders and symptoms, 2) explore men's help seeking behaviours for anxiety disorders, 3) describe men's coping in relation to symptoms of anxiety, and 4) report the influence of masculinity on men's experiences of anxiety. The empirical findings from this systematic review will be summarised and structured in responding to four discrete research questions; 1) What are men's experiences of anxiety? 2) What constitutes help-seeking in men with anxiety disorders? 3) What coping strategies are commonly associated with men experiencing anxiety disorders? and 4) Is there evidence for a specific role of masculinity in men's anxiety disorders?

1. Method

1.1. Data sources and search strategy

This review was conducted following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines (Moher et al., 2009). A systematic search of four electronic databases (CINAHL, EMBASE, MEDLINE and PsycINFO) was conducted in February 2021. The search strategy was devised in consultation with a university librarian for use with the PsycINFO database and adapted as required for other databases (see supplementary file 1). Both MeSH headings and free text words (outlined in Table 1) were used with a date range

Table 1
Syntax search terms for PsycINFO.

Participants	"male" OR "males" OR "men" OR "mens" OR "father*" OR "brother*" OR "boyfriend*" OR "husband*" OR "mate" OR "mates" OR "boy" OR "boys"
	AND
Intervention/ Interests	"experienc*" OR "experiences" OR "seek* help" OR "help seek*" OR "help-seek*" OR "health care seeking behav*" OR "help seeking behaviour" OR "health care utili$ation" OR "pathways to treatment" OR "masculin* OR "traditional masculin*" OR "masculine gender norm" OR "gender role conflict" OR "gender role strain" OR "gender norm" OR "gender social norm"
	AND
Outcomes	"anxiety" OR "anxiety disorders" OR "anxiety management" OR "anxiety treatment" OR "anxiety intervention"

publication limiter from 1990 to 2021 inclusive. Further manual searching of article reference lists was also undertaken.

1.2. Inclusion and exclusion criteria

Studies with a focus on either anxiety disorders, anxiety symptoms or sub-clinical anxiety symptoms were included for review. Anxiety disorders were classified in accordance with standardised diagnostic systems, such as the Diagnostic and Statistical Manual of Mental Disorders Fifth Edition (DSM-V; American Psychiatric Association, 2013). Sub-clinical anxiety was defined as mild, brief, masked or atypical psychopathological symptoms associated with anxiety disorders, yet failing to reach the disorder diagnostic criteria (Fehm et al., 2008; Haller et al., 2014). In accordance with diagnostic guidelines anxiety disorders reviewed included: Selective Mutism (SM), Specific Phobia (SP), Social Anxiety Disorder (SAD), Panic Disorder (PD), Agoraphobia, Generalised Anxiety Disorder (GAD). Obsessive Compulsive Disorder (OCD) and Post-Traumatic Stress Disorder (PTSD) were excluded from this review as they are not listed within the Anxiety Disorder section of the DSM-V, but instead are classified under Obsessive Compulsive and Trauma sections (American Psychiatric Association, 2013; Beesdo et al., 2009).

A transdiagnostic approach to the sub-diagnostic classifications of anxiety disorders (e.g., SAD, GAD, PD) within the DSM-5 (American Psychiatric Association, 2013) was adopted. While these sub-diagnoses may differ from one another in the object or situation eliciting the anxiety response, these anxiety disorders are highly comorbid and share a fear, or avoidance-based component (Barlow et al., 2004). Therefore, psychological mechanisms relevant to anxiety (such as worry, repetitive thinking and avoidance of emotions) were collectively considered across all anxiety disorders to better address the underlying emotional experience (Barlow et al., 2017). Studies with a mixed sex sample were included if they reported on gender differences in anxiety (beyond merely stating a difference in the level or prevalence of anxiety scores) and investigated mechanisms that underlie these gender differences between men and women. The inclusion and exclusion criteria for this systematic review is outlined in Table 2.

1.3. Screening

The screening process was undertaken in accordance with the Cochrane Collaboration guidelines (Lefebvre et al., 2019). Firstly, database search results were merged into reference management software and duplicates removed. One reviewer (KF) screened titles and abstracts to determine relevance based on the specified inclusion criteria. An additional reviewer (ZS) independently dual screened 20% of total results at both title and abstract level. Any discrepancy between the two reviewers was referred to a third reviewer (SR) for final decision. In accordance with the Cochrane guidelines, one reviewer (KF) worked independently at full text screening level to ensure included studies met the eligibility criteria.

1.4. Data abstraction and synthesis

Data was extracted by one reviewer (KF) and checked by two reviewers (ZS and SR). The extracted data included: author, year, location of study, design, setting participant characteristics, measures, analysis and primary outcomes. Data was extracted and synthesised from these included studies in line with four key research questions which were derived from the study aims of this review. A content analysis was undertaken to synthesise qualitative data in two stages. Both study themes and reported participant qualitative data was extracted and organised under the key research questions. The number of studies that addressed each theme was then reported to determine what patterns emerged amongst a range of qualitative papers. A formal meta-analysis was not conducted due to the diverse range of methodological underpinnings, variables and outcome measures of the included studies.

1.5. Quality assessment

Three types of assessment were undertaken within this review: 1) levels of evidence, 2) quantitative quality assessment and 3) qualitative quality assessment. These three assessments evaluated both the rigour of research study designs and the quality of the evidence itself. The rigour of research study designs informed the level of evidence of the included studies, and was assessed in accordance with the National Health and Medical Research Council (NHMRC) Evidence Hierarchy (National Health Medical Research Council, 2009).

The quality of evidence for the included studies was evaluated using two validated assessment tools based on recommendations outlined in Ma et al. (2020) and Hannes (2011). The National Institutes of Health Quality (NIH) Assessment Tool for Observational Cohort and Cross-Sectional Studies (National Heart Lung and Blood Institute, 2018) was used to determine methodological quality for the included quantitative studies, and the Critical Appraisal Skills Programme (CASP) Qualitative Research Assessment Tool (Critical Appraisal Skills Programme, 2018) guided evaluation of the qualitative studies methodological quality. One reviewer (KF) assessed study quality alongside data extraction with two reviewers (ZS and SR) resolving any uncertainty in classifications.

2. Results

The initial database searches returned 11,852 references of which 3519 were duplicates. Following this 8333 were screened at title and abstract level, and then the remaining 72 full-text publications were screened. After full-text review, 25 studies met full inclusion criteria and were therefore retained as the final studies for extraction and synthesis.

Table 2
Inclusion and Exclusion criteria

Inclusion criteria	(1) mixed gender or male only samples, (2) with quantitative or qualitative data, (3) addressing the experiences of diagnosed anxiety disorders or elevated subclinical anxiety symptoms (based on clinical interview or elevated self-report anxiety scales) OR (4) evaluating anxiety and sub-clinical anxiety symptoms in relation to at least one of the following; help-seeking, coping or masculinity, (5) published in English, (6) in a peer-reviewed journal or PhD thesis. Studies with a focus on interventions and treatments for anxiety were also included for review if they had a mixed gender or male only sample *and* evaluated anxiety or sub-clinical anxiety symptoms in relation to at least one of the following: (1) the experiences of diagnosed anxiety disorders or elevated subclinical anxiety symptoms, (2) help-seeking, (3) coping or (4) masculinity.
Exclusion criteria	(1) female only samples, (2) samples with a mean age <12 years, (3) studies inclusive of post-traumatic stress disorder or obsessive-compulsive disorder, (5) measuring anxiety in relation to a physical condition or illness, dental, health, body-image or performance-based (e.g., test anxiety and sporting anxiety), (6) not disaggregating gender based differences, and (7) non-peer reviewed books or reports (see supplementary file 2).

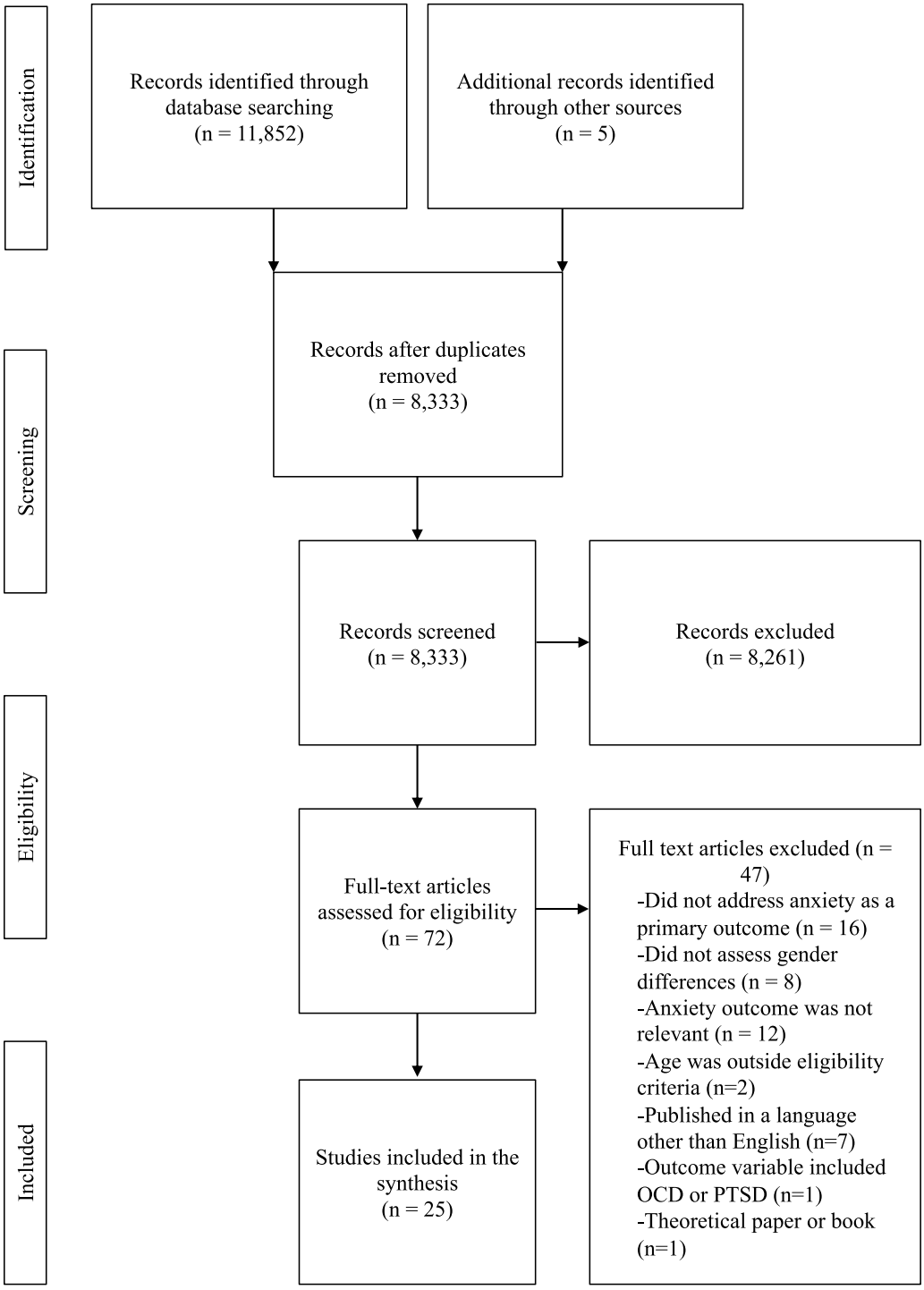

Fig. 1. Study selection PRISMA Flow Diagram.

Fig. 1 presents the PRISMA flow diagram for the selection process of the included studies.

2.1. Study and sample characteristics

Year and location. Of the 25 included studies, 72% were published in the last 10 years (n = 18) and 24% were published in 2020 (n = 6). Majority of the studies were conducted in the USA (n = 8, 32%) and Australia (n = 8, 76.92%). Quantitative study characteristics are outlined in Table 3 (n = 19 and n = 1 mixed methods study, 23.08%) and qualitative study characteristics are available in Table 4 (n = 5 and n = 1 mixed methods study, 20%).

Participants. In total there were 10,134 participants (7646 males and 3 transgender males) and 260 online forum posts included in the synthesis. Participants ranged from 9 to 74 years of age; and most study participants had a mean age range between 12 and 25 (n = 16, 64%). The majority of studies did not report participant ethnicity (n = 16, 64%) however for those that did, 73% of total participants were Caucasian, 11% African American, 7% Asian, 6% Latino or Hispanic, <1% Indian and 3% categorised as 'other'. A majority of the studies had a student sample population (n = 16, 64%) and were largely recruited through schools and universities (n = 15, 60%). Six (24%) of the

Table 3
Characteristics, key findings and quality rating of quantitative studies.

Study, Design, Setting	Participant Characteristics	Key Findings	Quality Rating	[a]Level of Evidence
Auerbach *et al.* (2012); Canada; longitudinal; students.	NC; n = 105; mixed gender (45 male); age range = 12-18 years years (M = 15.12).	-Girls reported higher levels of overall anxiety ($p < .05$). -Low perceived control associated with physical symptoms in boys ($b = –3.29$, $p < .01$), and social anxiety and total anxiety levels for girls ($b = –3.71$, $p < .001$). -For girls, interpersonal stress mediated an association between low perceived control and both social anxiety ($b = 0.74$, SE = 0.26, $p < .05$) and total anxiety ($b = 2.02$, SE = 0.75, $p < .05$). -For boys, interpersonal stress mediated an association between low perceived control and physical anxiety ($b = 0.89$, SE = 0.45, $p < .05$). -Low perceived control contributed to greater levels of dependent interpersonal stress, which then triggered higher levels of social anxiety for girls, and physical anxiety for boys.	Fair	Level II
Bender *et al.* (2012); Denmark: cross-sectional; students.	NC; n = 544; mixed gender (246 male); age range = 9-16 years (M= 12.24).	- Girls reported higher levels of overall anxiety [$F(1,542) = 73.87$, $p < .001$]. - Boys had greater difficulties surrounding emotional awareness [$F(1,542) = 6.02$, $p = .01$]. Whereas girls had more difficulties regulating their emotions overall [$F(1,542) = 4.38$, $p = .04$]. -For boys, non-acceptance of negative emotional responses (4%, $p < .01$) predicted anxiety, 23% of variance in anxiety scores. - For girls, limited access to effective emotion reg. strategies (10%, $p < .001$), as well as a lack of emotional clarity (2%, $p < .05$) predicted anxiety, 37% of variance in anxiety scores.	Poor	Level IV
Berger *et al.* (2013); USA; cross-sectional survey; general community.	S/NC Anxiety rating scale cut-off; n = 85; male; age range = 19–77 years (M = 45.4).	-Acceptance to the label “anxiety” stronger than “depression” ($p = .01$). -Psychotherapy had higher levels of acceptance for help seeking over medication or friends/family and other forms of help seeking ($p < .001$). -Men responded more positively to advice from psychotherapist than primary care physician or partner. -Masculine norms negatively impacted attitudes toward psychotherapy ($r = -.27$, $p < .05$) and medication ($r = -.37$, $p < .01$).	Poor	Level IV
Bruch (2007); USA; cross-sectional; students.	SAD rating scale cut-off; n = 127; male; age range = 18-26 years (M = 19.6).	-Men with increased social anxiety had increased estimates of the probability ($r = .54$, $p < .01$) and cost of negative events ($r = .42$, $p < .01$). -Bias in probability: Men with increased tough social norms had decreased probability estimates of negative events involving male role norms ($r = -.22$, $p < .05$). -Bias in cost: Men with increased tough social norms and increased anxiety levels overestimated costs associated with negative interpersonal events targeting explicit male norms. This association increased from medium adherence ($b = 2.62$, $p < .001$) to high adherence ($b = 4.08$, $p < .0001$).	Poor	Level IV
Bryne (2000); Australia; cross-sectional; students.	S/NC Anxiety rating scale cut-off; n = 224; mixed gender (106 male); age range = 12–18 years (M = 15.05).	-Boys anxiety levels had decreased from year 7 to year 9 [$F(3,92) = 2.69$, $p = .01$] and year 9 to year 12 [$F(2, 63) = 5.13$, $p = .001$]. -Girls anxiety levels had increased from year 7 to year 9 [$F(2,61) = 6.02$, $p = .004$] and year 9 to year 12 [$F(4,91) = 3.06$, $p = .02$]. -By year 12 girls and boys were using different coping strategies, girls started with problem-based coping in year 7 then shifted to emotion based over time.	Poor	Level IV
Clark *et al.* (2020); Australia; cross-sectional; students.	SAD and GAD rating scale cut-off; n = 702; male; age range = 12-18 years (M = 14.70).	-Greater stigma towards non-clinical vignette (10% of participants), than SAD (5%) and GAD (4%). - Severity was greater in SAD when compared to non-clinical, however no difference in severity between GAD and non-clinical. -50% of the stigma seen was "weak not sick" category, 50% of stigma in direct association with hegemonic masculinity norms. -Boys who displayed increased stigma towards SAD had more negative attitudes towards formal help seeking ($p = .03$) and those with increased stigma towards GAD had negative attitudes towards online help seeking ($p = .005$).	Poor	Level IV
de Anda *et al.* (1997); USA; cross-sectional; students.	S/NC Anxiety rating scale cut-off; n = 54; mixed gender (16 males); age range = 12–14 years (M = 13).	-Girls reported higher levels of overall anxiety and higher durations of stress [$t(43) = 2.76$, $p < .01$]. -No significant difference between boys and girls in physical symptoms, however types of physical symptoms were	Poor	Level IV

(*continued on next page*)

Table 3 (*continued*)

Study, Design, Setting	Participant Characteristics	Key Findings	Quality Rating	[a]Level of Evidence
		different. Girls reported more biting of nails, crying, feel like crying, boys reported reduced appetite. -Girls reported sadness as a frequent response to stress (73.7%) in comparison to boys (6.3%). Boys reported feeling more out of control (37.5%) in comparison to girls (18.4%).		
Duchesne *et al.* (2016); Canada; longitudinal; students.	S/NC Anxiety rating scale cut-off; n = 493; mixed gender (224 male); age range = 11–16 years (M = 11.82 at T1 and 16.82 at T6).	- Low anxiety group very similar trajectories for boys (20% of boys) and girls (19% of girls) anxiety levels decreased to almost undetected anxiety at age 16. - High anxiety group very similar trajectories for boys (28% of boys) and girls (27% of girls) anxiety levels remained consistently high to age 16. -Moderate anxiety group was different for boys and girls. -Boys moderate anxiety group (52%) decreased slightly and steadily in anxiety levels to age 16. -Girls moderate anxiety group (39%) remained stable until age 16, then a moderate increasing anxiety group emerged (15%) where anxiety levels increased to severe at age 14, then stabilised to age 16.	Fair	Level II
Gallegos *et al.* (2019); USA; cross-sectional; university students.	NC; n = 529; mixed gender (243 male); age range = NR (M = 19).	-6 vignettes all men: anxiety + moral anger, anxiety + non-moral anger, anxiety + positive (described men positively in terms of job performance), no anxiety + moral anger, no anxiety + non-moral anger, no anxiety + positive. -Men who expressed anxiety verses no anxiety were seen as less masculine [$F(1, 523) = 8.78$, $p = .003$] and less competent [$F(1, 523) = 10.59$, $p = .001$]. -Men who expressed moral anger verses non-moral anger were seen as more masculine [$F(2, 523) = 35.09$, $p = .001$] and more competent [$F(2, 523) = 36.78$, $p = .001$]. -Morality had a buffering effect on loss of masculinity when displaying anxiety.	Poor	Level IV
Garcia-Lopez *et al.* (2008); Spain; cross-sectional; students.	SAD rating scale cut-off; n = 2,543; mixed gender (1317 male); age range = 12-17 years (M = 13.90).	-Girls reported higher levels of overall anxiety ($p < .001$). -Highest percentage of socially anxious adolescents in 12-13 year age group, then decreased to 17 years. -Boys and girls did not have differing reported triggering situations. -Girls more likely to report higher avoidant coping styles than boys. -Some gender differences but not significantly remarkable. Therefore, no norm ranges are needed for separate age and gender groups.	Poor	Level IV
Iwamoto *et al.* (2012); USA; cross-sectional; prisoners.	S/NC Anxiety rating scale cut-off; n = 123; male; age range = NR (M = 31.70).	-Incarcerated men with stronger heterosexual presentation and less informal supports ($B = 0.56$, $p < .001$) had higher anxiety symptoms.	Poor	Level IV
Maddock *et al.** (2017); Ireland; mixed pre-post pilot (quant) and qualitative; homeless service users.	S/NC Anxiety rating scale cut-off; n = 12; male; age range = 21-52 years (M = 40).	Quantitative -12 participants began the Mindfulness Based Stress Reduction (MBSR) program and 7 completed. -Anxiety scores decreased from pre to post intervention ($Z = -2.371$, $p = 0.02$). Qualitative -Qualitative findings matched quantitative improvements seen in mental wellbeing variables. -MBSR themes: 1) enhance coping skills (less rumination, increased ability to accept negative thoughts/emotions and increased ability to regulate attention) 2) enhanced mindful traits (enhanced self-awareness, decreased emotional reactivity, increased self-control and compassion) and 3) enhanced wellbeing (improved mood, relationships and less negative emotions). -Reiterated importance of acknowledging emotions were short lived, not getting bogged down, processing difficult emotions.	Fair	Level III
Pachankis *et al.* (2006); USA; cross-sectional; tertiary students.	SAD rating scale cut-off; n = 174; male (87 heterosexual and 87 gay men); age range = 18-24 years (M = 20.25).	-Gay male sample reported increased social interaction anxiety scores than the heterosexual group [$F(1, 174) = 13.18$, $p < .0001$]. -Comfort being gay negatively associated with gender conformity, social interaction anxiety, social phobia and negative evaluation. -Sexual orientation was found to account for 76% of the variance in the anxiety measure [$F(28, 138) = 15.81$, $p < .0001$].	Poor	Level IV
Pavlova *et al.* (2017); Russia; cross-sectional; students.	SAD rating scale cut-off; n = 183; mixed gender (90 male); age range = 12–16 years (M = NR).	-Social anxiety associated with depression ($p < .05$) and suicidal thoughts ($B = .57$, $p < .001$). -Masculinity found to be negatively associated with social anxiety regardless of biological sex ($p < .001$).	Poor	Level IV

(*continued on next page*)

Table 3 (*continued*)

Study, Design, Setting	Participant Characteristics	Key Findings	Quality Rating	[a]Level of Evidence
		-Positive correlations found between concern over mistakes ($p < .05$) and overdoing with social distress ($p < .001$) with social anxiety. -Positive correlations found between the social anxiety and suppression of emotions and outward well-being subscales.		
Rice *et al.* (2020); Australia; pre-post pilot; outpatients.	SAD structured clinical interview; n = 89; mixed gender (43 male, 3 transgender male); age range = 14-25 years (M = 19.80).	-N=89 participants at commencement, N=76 (85.4%) completing the post-treatment assessment. Feasibility and safety indicators met; acceptability not met. -Social anxiety symptoms had the largest improvement pre and post ($d = 0.73$, $p < .001$) and 48.33% (n = 29) of participants showed reliable improvement. -Males improved on 14/22 variables ($d = 0.39$), non-males improved on18/22 variables ($d = 0.56$).	Good	Level III
Yang *et al.* (2018); Hong Kong; cross-sectional; general community.	SAD rating scale cut-off; n = 2000; male; age range = 18-60 years (M = NR).	-Discrepancy stress ($z = 10.22$) and self-esteem ($z = 3.85$) mediated the association between masculine role discrepancy and social anxiety ($p < .001$). -Relationship between discrepancy stress and social anxiety (Cohen's $f^2 = .32$) stronger than self-esteem and anxiety (Cohen's $f^2 = .02$). -Younger males, single males and those with lower education were found to have more masculine role discrepancy, discrepancy stress and worse mental health outcomes (in particular social anxiety). -Social anxiety and depression positively associated ($r = .11$, $p < .01$).	Poor	Level IV
Jones (1999); NR; cross-sectional; general community.	S/NC Anxiety rating scale cut-off; n = 130; male (125 gay men, 5 bisexual); age range = 22–54 years (M = 36.08).	-Trait anxiety associated with success, power and competition ($r = .26$, $p < .01$), restrictive emotionality ($r = .34$, $p < .01$) and restrictive affectionate behaviour between men ($r = .25$, $p < .01$). -Trait anxiety negatively associated with problem based coping ($r = -.34$, $p < .01$) and positively associated with emotion focused coping ($r = .66$, $p < .01$). -Trait anxiety and depression correlated ($r = .70$, $p < .01$). -Coping styles accounted for between 35-45% of total explained variance in anxiety. -Within the coping styles, only emotion-orientated coping had a positive contribution to trait anxiety variance ($\beta = .43$, $t = 5.42$, $p < .001$).	Poor	Level IV
Moscovitch *et al.* (2005); USA: cross-sectional; university students.	SAD rating scale cut-off; n = 97; mixed gender (43 male); age range = 17–22 years (M = 18.70).	-Masculinity ($r = -.45$) and independence ($r = -.33$) were negatively associated with social anxiety. -Masculinity, femininity, independence and interdependence accounted for 30% of the variance in social anxiety. - For men more independent constructs rather than interdependent revealed less social anxiety, for women more interdependence rather than independence results in less social anxiety.	Poor	Level IV
Clark *et al.* (2020); Australia; cross-sectional; students.	S/NC Anxiety rating scale cut-off; n = 1732; male; age range = 12–18 years (M = 14.83).	-Higher mental health literacy was associated with increased formal help seeking attitudes and intentions ($r = .17$, $p < .001$) and informal help seeking attitudes and intentions ($r = .06$, $p < .05$). -Higher mental health literacy negatively associated with masculinity scores ($r = -.30$, $p < .001$). -Moderating effect of masculinity on the relationship between anxiety mental health literacy and attitudes to formal help-seeking ($b = -0.0016$, SE = 0.0006, $t = -2.72$, $p = .006$). -Higher anxiety mental health literacy positively associated with formal help seeking attitudes in participants with low/average traditional masculine values ($b = 0.018$, SE = .006, $t = 2.93$, $p = .003$). However, no relationship was found between help seeking attitudes and mental health literacy when participants had a greater alignment with hegemonic masculinity ($b = -0.002$, SE = 0.005, $t = -0.42$, $p = .678$).	Poor	Level IV
Ren *et al.* (2020); China; cross-sectional; university students.	GAD rating scale cut-off; n = 122; male; age range = NR (M = 21.01).	-Worry strongly influenced by other nodes in the network (highly dependent on other symptoms). -Worry (0.53 predictability score) and meta worry (0.50 predictability score) had the greatest expected influence on anxiety. Most important nodes in the present network.	Fair	Level IV

Note: * Mixed methods.

[a] NHMRC Evidence Hierarchy for Etiology Studies comprises the following categories: Level I the highest form of evidence (systematic reviews), Level II (prospective cohort studies), Level III-2 (retrospective cohort studies), Level III-1 (case-control studies) and Level IV the lowest form of evidence (cross-sectional study or case series); NHMRC = National Health and Medical Research Council, NC = non-clinical, M = mean, NR = not reported, S/NC = sub/non-clinical, SAD = Social anxiety disorder, GAD = Generalised anxiety disorder, SE = Standard error.

Table 4
Characteristics, key findings and quality rating of qualitative studies

Study, Design, Setting	Participant Characteristics	Key Findings	Quality Rating*
Clark *et al.* (2018)[a]; Australia; individual interviews, focus groups and vignettes; students.	AD self-report, NC; n = 29; male; age range= 12-18 years (M = 15.17).	-Overall preference for self-reliance rather than help-seeking. -Barriers to help-seeking: stigma, masculine norms, limited awareness of anxiety and help seeking options, concerns of overwhelming emotions, effort. -Didn't think anyone had the ability to help anyway. -Facilitators to help-seeking: Fast access/ low effort interventions, confidentiality, normalising of anxiety (masculine context), knowing what supports are available.	9
Clark *et al.* (2018)[b]; Australia; individual interviews, focus groups and vignettes; students.	AD self-report, NC; n = 29; male; age range= 12-18 years (M = 15.17).	-Young males weren't aware of computerised help-seeking as a concept. -Concern for confidentiality and security of information. -Concern over autonomy and decision-making power. -Could be a safer first step rather than going straight into face-to-face help seeking. -Needs to require little effort to be effective (link in with a computerised program being used already).	9
Drioli-Phillips *et al.* (2020)[c]; Australia; forum posts; forum users.	AD self-report; n = 130 FP; male; age range = 12+ (M = NR).	-Men attempted to authenticate their anxiety. -Orienting to a diagnosis (expressed clinical diagnosis, specified clinical confirmation as if validating it as a medical illness). -Severity of their anxiety (anxiety tended to pose a severe threat to their future, viewed as an objective enduring construct). -Longevity of anxiety (most men discussed lifelong duration of anxiety). -Men discussed previously attempts to seek help.	8
Kierski (2014); UK; individual interviews; psychotherapists.	NC; n = 8; male; age range = 40-74 years (M = NR).	-Looking for peer support and others experiences through forum posts. -Anxiety is manifold (both physical and emotional reactions). -Feelings of failure and not being good enough. -Loss of control, which affected self-esteem. -Anxiety lifelong but the patterns and nature of anxiety shifts through stages. -Positive aspects, anxiety can facilitate self-knowledge.	5
Drioli-Phillips *et al.* (2020)[d]; Australia; forum posts; forum users.	AD self-report; n = 130 FP; male; age range = 12+ (M = NR).	-Men described anxiety as an out of control physical and mental state. -Immobilising sensations, feeling trapped by anxiety and powerless to it. -Anxiety as an independent entity to oneself. -Referred to two selves (anxious and non-anxious self).	7
Maddock *et al.** (2017); Ireland; mixed pre-post pilot (quant) and qualitative; homeless service users.	S/NC Anxiety rating scale cut-off; n = 12; male; age range = 21-52 years (M = 40).	-Discussed Mindfulness Based Stress Reduction program. -Enhanced participants coping skills (less rumination, increased ability to accept negative thoughts/emotions and increased ability to regulate attention) -Improved mindful traits, decreased emotional reactivity, increased self-control and compassion. -Overall improved mood, relationships and less negative emotions. -Reiterated importance of acknowledging emotions were short lived, not getting bogged down, processing difficult emotions.	8

Note: *Out of 10; **Mixed methods; M = mean; FP = forum posts; NR = not reported; NC = non-clinical; AD = anxiety disorder.

[a] Clark, L. H., et al. (2018) Barriers and facilitating factors to help-seeking for symptoms of clinical anxiety in adolescent males.

[b] Clark, L. H., et al. (2018) Capturing the attitudes of adolescent males' towards computerised mental health help-seeking.

[c] Drioli-Phillips, P. G., et al. (2020) Men's talk about anxiety online: Constructing an authentically anxious identity allows help-seeking.

[d] Drioli-Phillips, P. G., et al. (2020) I Feel Abused by My Own Mind: Themes of Control in Men's Online Accounts of Living With Anxiety.

included studies were recruited through a mental health service including community mental health settings ($n = 4$, 16%) and online mental health forums ($n = 2$, 8%).

Mental health status. The included studies covered three population groups; nonclinical samples ($n = 20$, 76%) clinical samples ($n = 2$, 12%) and a mix of clinical and non-clinical participant samples ($n = 3$, 12%). The majority of the five studies with clinically anxious samples did not report the sub-type of anxiety disorder of participants ($n = 4$, 16%), while one study (4%) focused on social anxiety disorder. Clinically significant levels of anxiety, or elevated levels of anxiety symptoms were determined by rating scale cut points ($n = 16$, 64%) or participant self-report ($n = 3$, 12%) with only one study using a structured clinical interview.

2.2. Quality assessment

2.2.1. Levels of evidence

None of the 25 included studies reviewed obtained Level I evidence in accordance with the NHMRC Evidence Hierarchy. Based on extensive database screening, to our knowledge there has been no systematic review or meta-analysis (Level I) or randomised controlled trials exploring men's anxiety disorders and symptoms in the existing literature to date. Level of evidence ratings for quantitative studies are outlined in Table 3.

2.2.2. Quantitative and qualitative quality assessment

The included quantitative and mixed methods studies ($n = 20$, 80%) had overall poor to fair study quality, suggesting a potential risk of bias (see supplementary file 2 for risk of bias ratings). The qualitative studies and mixed methods study ($n = 6$, 24%), had a moderate-high level of research quality indicating a good strength of evidence and trustworthiness (see supplementary file 3)

2.2.3. Synthesis of empirical findings

Findings from the included 25 studies were synthesised to address each of the four research questions within this systematic review.

What are men's experiences of anxiety? In total, nine (36%) studies evaluated men's experiences of anxiety through sex difference comparative samples, and five (20%) studies contained within-male only samples.

Between-group including male studies. Nine (36%) included studies evaluated sex differences in the prevalence rates of anxiety symptoms and disorders. Females were found to have significantly higher rates of reported anxiety symptoms and disorders in seven out of nine studies, ranging in size from 11 to 27% (Auerbach et al., 2012; Bender et al., 2012; Byrne, 2000; de Anda et al., 1997; Duchesne and Ratelle, 2016; Garcia-Lopez et al., 2008; Rice et al., 2020b). The remaining two studies (8%) did not find sex differences between male's and female's anxiety levels (Moscovitch et al., 2005; Pavlova and Kholmogorova, 2017).

Patterns in the trajectory of anxiety symptoms varied between young males and females with young males generally experiencing a decrease in anxiety symptoms between the ages of 14–16 years, whereas for young females of the same age, anxiety symptoms increased (Byrne, 2000; Duchesne and Ratelle, 2016). Behavioural, emotional and social responses to increased anxiety symptoms also varied with young males, in comparison to young females, reporting more externalised physical or psychosomatic symptoms of anxiety (such as loss of appetite, restlessness, racing heart, sweaty hands and dizziness) over internalised sadness and teariness (Auerbach et al., 2012; de Anda et al., 1997). Young males typically experienced less social disruption as a result of their anxiety symptoms than young females, who were more likely to report interpersonal stress and social withdrawal (Auerbach et al., 2012).

The reasons for these sex differences were explained through cognitive and emotional mechanisms of anxiety, specific to males and females (Auerbach et al., 2012; Bender et al., 2012; Byrne, 2000; Duchesne and Ratelle, 2016). Both young males and females who held beliefs of low control over themselves, the world and their future, experienced high levels of interpersonal stress, which led to increased physical anxiety symptoms in young males and social anxiety symptoms in young females (Auerbach et al., 2012). Furthermore, young males reported lower emotional awareness, and non-acceptance of negative emotion which predicted increased anxiety symptoms (Bender et al., 2012).

Within male studies. Two quantitative (8%) and three qualitative studies (12%) expanded on the comparative sex differences mentioned above, to identify gender nuances in the experiences of anxiety, specific to male only samples. In reviewing quantitative evidence, worry and meta worry cognitions, in comparison to intolerance of uncertainty and attention bias towards threat, were the strongest predictors of anxiety levels in adult men (Ren et al., 2020). However, predictors for anxiety differed across male sub-population groups, such as gay men. Gay men, had higher levels of overall anxiety relative to heterosexual men, and anxiety severity was strongly influenced by an individual's acceptance towards being gay (Jones, 1999).

In reviewing the qualitative evidence, men across the lifespan described anxiety experiences through physical sensations, *"…I can't sleep, don't want to eat, feel sick and have body tremor[s]"* (Drioli-Phillips et al., 2020a) and emotional turmoil, *"…inside I feel chaotic"* (Kierski, 2014). Furthermore, these patterns of anxiety and symptoms appeared to be enduring, ever present and sometimes life-long, leaving men feeling powerless and out of control. Men expressed being *"scared to lose control and become crazy one day"* or *"spiral to a place…[they] can't come back from"* (Drioli-Phillips et al., 2020b). Some men perceived anxiety as something happening to them, *"like the mind and body were two separate things"* and compartmentalised anxiety symptoms as an external entity (Drioli-Phillips et al., 2020a). Parallel to these described sensations, men also recounted internalised judgement at *"failing"* to regain control over their anxiety (Kierski, 2014) as if they were *"doing their anxiety to themselves"* (Drioli-Phillips et al., 2020a). These internalised judgements were expressed through feelings of self-blame "*I literally punished myself by creating or manifesting intrusive thoughts*," failure and powerlessness as a result of both experiencing and disclosing anxiety (Drioli-Phillips et al., 2020a; Kierski, 2014).

What constitutes help-seeking in men with anxiety disorders? Five studies (20%) had a primary focus on help-seeking for anxiety disorders, and three of these five studies (60%) contained samples of young men, between the ages of 12 to 18 years (Clark et al., 2018a, 2018b; Clark et al., 2020a). Young men had an overarching preference for self-reliance or informal support for anxiety disorders (Clark et al., 2018a, 2018b), and these sources of informal and emotional support appeared effective in reducing symptoms of anxiety (Pavlova and Kholmogorova, 2017). Self-reliance was reported as a response to the perceived barriers of formal help-seeking identified through qualitative studies as; a limited awareness of anxiety symptoms, reluctance (e.g., confidentiality concerns), scepticism (e.g., it won't help) or fear of stigma related to treatment and help-seeking options (Clark et al., 2018a). The themes of stigma emerging for young men were strongly associated with a perceived compromise to their social status and more specifically their masculinity, "*…there's a sort of stereotype of males…. if you are suffering from one of those [mental health problems] that you are weaker than everyone else*" (Clark et al., 2018a).

Stigma as a barrier for help seeking was also identified in quantitative studies, though the relative influence of self and social stigma was described differently amongst men (Berger et al., 2013; Clark et al., 2020a). Increased levels of self-stigma were negatively associated with men's willingness to seek help (Berger et al., 2013). However, social stigma was not as pervasive and prevalent for anxiety, in comparison to other mental health disorders such as depression (Berger et al., 2013). When responding to vignettes presenting young men with clinical and non-clinical anxiety, male participants reported stigmatised views only towards the non-clinically anxious vignettes (Clark et al., 2020a). These findings suggest sub-threshold anxiety symptoms were more stigmatised or encouraged different forms of stigmatised views, than diagnosed

anxiety disorders, which may be perceived as more severe (Clark et al., 2020a). The most prominent stigmatised attitude was a 'weak not sick' sentiment towards anxiety disorders, that is, a belief that mental disorders signal weakness not legitimate illness (Yap et al., 2014).

Despite these barriers, specific themes were also identified as facilitators for help-seeking attitudes and behaviours. Young men in particular referred to the importance of fast access, low effort interventions (e.g., highly visible and easily accessible information, immediate methods of help-seeking communication) and resources that maintained confidentiality (Clark et al., 2018a, b). Information based resources normalising anxiety disorders were another facilitating help-seeking option identified in two qualitative studies (Clark et al., 2018a; Drioli-Phillips et al., 2020b). Young men in particular reinforced the importance of disseminating information on the symptoms and treatment of anxiety to *"putting it in front of kids as often as possible…"* and outlining both the seriousness of anxiety and efficacy of treatment (Clark et al., 2018a). Participants suggested they would be more likely to access websites and resources utilising less diagnostic-driven and formal, jargon-ridden vocabulary, such as general men's health, work or relationship issues rather than clinical anxiety (Clark et al., 2018a). Furthermore, information on anxiety presented through a 'traditionally masculine' lens, including stereotypically 'manly' case examples, *"like, the tradies [tradesmen]…the guys that work sort of in tough situations"* was described by young men to be more relatable (Clark et al., 2018a).

Upon overcoming potential barriers and seeking help for anxiety disorders, there was limited evidence surrounding what promotes service engagement. Within the quantitative studies, men appeared to be accepting of talk-therapy relative to medication and responded best to treatment recommendations from psychotherapists rather than a romantic partner or doctor (Berger et al., 2013). Qualitative studies with young men focused on digital help-seeking services, and while the maintenance of confidentiality was beneficial, there was still a reported preference for face-to-face connection (Clark et al., 2018b). When engaging with informal services such as online chat forums, men seemed to be looking for immediate support with a desire for comradery, reciprocity and relatability in the form of 'second-stories;' the disclosure of personal stories to promote the understanding of shared similar experiences (Drioli-Phillips et al., 2020b).

What coping strategies are commonly associated with men experiencing anxiety disorders? Four studies (16%) suggested that men employ problem-based coping strategies to deal with anxiety. This was one of the most consistent sex-based differences within comparative samples, with women reportedly displaying avoidant or emotion based coping strategies (Byrne, 2000; Garcia-Lopez et al., 2008). Two studies (8%) (de Anda et al., 1997; Garcia-Lopez et al., 2008) with 12–17 year-old adolescent student samples described the nature of anxiety and fear provoking situations as similar between young men and women. However, young men were more likely to employ problem-based coping mechanisms, described as functional problem-solving strategies and engaging in, rather than avoiding, stressful situations. In association young men were more successful in reducing anxiety symptoms (Byrne, 2000; de Anda et al., 1997; Garcia-Lopez et al., 2008). One study (4%) depicted this change within a cross-sectional study for young women and men in grades 7, 9 and 12 (Byrne, 2000). Within the different age cohorts, young men in grades 9 and 12 had higher levels of problem-based coping and lower levels of anxiety, whereas young women had lower levels of problem-based coping at the same age and higher levels of anxiety overall. This gender differentiation in coping strategies emerged around 14–15 years of age (Byrne, 2000; Garcia--Lopez et al., 2008). Problem based coping was also a significant predictor of anxiety symptoms in within-male samples (Jones, 1999). Both gay and heterosexual men who engaged in more problem-based coping strategies were more likely to report lower levels of anxiety overall (Jones, 1999).

Whilst problem-based coping emerged as an effective coping mechanism for anxiety disorders, no studies described the exact nature, and practical examples of these strategies. Two studies (8%) were identified within this review with results reported for interventions targeting male anxiety and sub-clinical anxiety symptoms in relation to either: the experiences of diagnosed anxiety disorders or elevated subclinical anxiety symptoms, help-seeking, coping or masculinity. Both of these interventions reduced men and young men's reported anxiety levels respectively, and simultaneously provided context for effective coping mechanisms that manage, regulate and reduce anxiety symptoms (Maddock et al., 2017; Rice et al., 2020b). These interventions included a non-gender-sensitised Mindfulness Based Stress Reduction program (MBSR; Maddock et al., 2017) and a gender-sensitised digital co-designed program (Entourage) for young people diagnosed with social anxiety (Rice et al., 2020b). The gender-sensitised moderation strategies included action-orientated, structured therapy, accessible language with minimal jargon, and normalised experiences of mental ill-health (Rice et al., 2020b). Both programs reported statistically significant reductions in anxiety symptoms. Coping skills in particular were improved through increased grounding capabilities, less ruminative cognitive patterns, ability to accept difficult thoughts and emotions and an ability to regulate attention (Maddock et al., 2017).

Is there evidence for a specific role of masculinity in men's anxiety disorders? Ten studies (40%) addressed the impact of masculinity on men's anxiety disorders. The role of masculinity within men's anxiety comprised differing masculine norms presenting as either helpful or harmful according to individual presentation and across populations. Two studies (8%; Bruch, 2007; Moscovitch et al., 2005) reported higher adherence to masculine norms was protective against increased anxiety levels for men, seven studies (28%; e.g., Berger et al., 2013; Clark et al., 2020a) indicated one or more masculine norms had a deleterious influence on reported anxiety levels and one study (4%; Pavlova and Kholmogorova, 2017) had mixed findings. Two quantitative studies reported masculinity to be negatively associated with anxiety levels for young men ($r = -0.45$, $p < .001$), suggesting as masculinity increased, levels of anxiety symptoms decreased (Moscovitch et al., 2005; Pavlova and Kholmogorova, 2017). Young men (18–26 years old) with higher conformity to masculine norms of toughness, in comparison to young men with low conformity, were less likely to perceive negative events as probable (Bruch, 2007). Toughness in this study was defined as the importance for a man to maintain an air of confidence, determination and self-reliance (Bruch, 2007). In contrast, higher endorsement of masculine norms: restrictive emotionality, restricted affectionate behaviour towards other men and overt heterosexual presentation, were all associated with increased levels of anxiety in young and adult men (Iwamoto et al., 2012; Jones, 1999; Pavlova and Kholmogorova, 2017).

In addition to considering the role of specific masculine norms in isolation, overall a strong adherence to traditional masculine norms had obstructive effects on young and adult men's help-seeking for anxiety (Berger et al., 2013; Clark et al., 2020b). Men with overall increased adherence to masculine norms were less likely to accept psychotherapy and medication for mental health treatment (Berger et al., 2013). They were also less accepting of informal help-seeking advice from friends, family and romantic partners (Berger et al., 2013). Furthermore, higher levels of mental health literacy were associated with positive help-seeking attitudes and behaviours for young men with anxiety; however this relationship decreased as alignment to traditional masculine norms increased (Clark et al., 2020b). More specifically, mental health literacy had no association with favourable attitudes towards formal and informal help-seeking in men with high conformity to traditional masculine norms (Clark et al., 2020b).

Men who experienced elevated gender role discrepancy; a perceived failure to live up to societal expectations of ideal manhood, had greater discrepancy stress and social anxiety (Yang et al., 2018). The results also highlighted a complex interaction between masculinity and men's anxiety levels; higher levels of gender role discrepancy increased social anxiety levels, whilst simultaneously the experience of anxiety resulted

in a perceived cost to men's masculinity (Drioli-Phillips et al., 2020a; Gallegos et al., 2019; Yang et al., 2018). This relationship between gender role discrepancy and social anxiety was particularly prominent for younger men who were single (Yang et al., 2018). Throughout the qualitative data, men emotionally detached from their anxiety, conceptualising symptoms as external entities out of their control, "*panic attack has reared its ugly head again*" in an attempt to recover and preserve threatened masculinity (Drioli-Phillips et al., 2020a). Additionally, an association between anxiety, social stigma and masculinity also emerged within the included studies. Both male and female participants appraised vignettes of men with anxiety as less masculine than male vignettes without anxiety, or male vignettes of anxiety in response to a moral dilemma or contextual event (Gallegos et al., 2019).

3. Discussion

This review provides the first synthesis of the literature on men's anxiety, focusing on help-seeking, coping and the influence of masculinity. While broad in scope, the four research questions under which findings were shared were inherently inter-related and provide a comprehensive overview of the unique and multifarious challenges for men with anxiety. The current findings indicate that men can have unique constellations of anxiety symptoms and experiences of anxiety disorders, commonly defaulting to self-reliance over formal help-seeking, and managing these symptoms through problem-based coping strategies. The experience of anxiety for men, appears to transgress some masculine norms, perpetuating social and self-stigmas. Men who disclose and seek help for anxiety may transgress traditional masculine norms, wherein their panic trumps composure and self-doubt overrides idealized self-reliance and aspirations for a competitive edge.

To date, anxiety disorders have been largely overlooked within the men's mental health literature, and there remains a much-needed gap for high quality, diverse, within-men research uncovering the nuanced experiences for men with anxiety. The methodological quality of included qualitative studies was moderate to high, however the quality of quantitative studies was poor to fair, lacking well-designed, randomised and case-control methodologies. In including both quantitative and qualitative evidence within this review, the breadth, depth and nuance through differentiating and defining personal reflections and perspectives offers some beginning insights. This review extends upon previous research examining men's help-seeking (Seidler et al., 2016) and gender differences (McLean and Anderson, 2009) alone, and helps in conceptualising the intricacies associated with anxiety amongst men. Findings lay the foundation for future research focusing on men's anxiety and potential considerations for clinical and community-based interventions.

In the reviewed sex differences studies, women had increased levels of anxiety symptoms and disorders, a finding consistent with previous empirical research (Bourdon et al., 1988; Costello et al., 2004; Craske, 2003; Dowbiggin, 2009). Rather than merely stating reported gender differences, this review addressed calls to explore underlying mechanisms for these differences, such as gender socialisation (Craske, 2003; McLean and Anderson, 2009; McLean et al., 2011). As such, young men reporting increased anxiety severity, were more likely to report physical symptoms (e.g., headaches, loss of appetite, body tremors) and sensations of losing control instead of social disruptions, teariness and interpersonal distress compared to age matched women (Auerbach et al., 2012; Bender et al., 2012). These sex differences were largely reflective of how cognitive and emotional vulnerabilities manifest, rather than the cognitions or emotions themselves. Subjective descriptions of anxiety throughout the qualitative data reiterated that for men anxiety tended to manifest physically, and centred on feelings of being out of control (Drioli-Phillips et al., 2020a). Men depicted anxiety symptoms as enduring, ever-present and sometimes life-long, leading to conceptualisations of anxiety being an external entity, or something happening to men (Drioli-Phillips et al., 2020a). Furthermore, men perceived themselves as a failure if they were unable to regain control over anxious states (Drioli-Phillips et al., 2020a; Kierski, 2014). Similar experiences of somatic sensations and subjective descriptions (e.g., feeling out of control, perceiving failure) have also been found in literature pertaining to men's depression (Apesoa-Varano et al., 2015; Heifner, 1997; Rice et al., 2019). Whilst the patterns of men's anxiety appear to be enduring, and sometimes lifelong, how men attempt to regain control over their anxiety, and whether this differs from other mental disorders such as depression is not yet known.

Rather than formal help-seeking for anxiety, young men reported a preference for self-reliance or informal sources of support (Clark et al., 2018a, 2018b). These findings are consistent with previous literature highlighting men's reluctance to seek help and reduced engagement in psychological services (Harris et al., 2015; Rice et al., 2018b). Young men's reticence towards formal help-seeking services and mental health interventions for anxiety largely stemmed from confidentiality concerns, perceived stigma, judgement by self and peers and the assumption of help-seeking being futile (Clark et al., 2018a). Young men also reported a lack of understanding and education regarding anxiety disorders, which translated into a limited awareness of treatment and help-seeking options (Clark et al., 2018a). Conversely, help-seeking resources and services that were low effort with fast access, maintained anonymity, conveyed stories of relatable lived-experiences and attempted to normalise anxiety within a masculine context facilitated help-seeking behaviour in young men (Clark et al., 2018a; Drioli-Phillips et al., 2020b). These findings are in line with previous literature which has highlighted the importance of aiming for a purposeful, early orienting and educating of men to mental health systems and treatment, providing gender-sensitive options that integrate men's strengths amidst a collaborative and transparent delivery of care (Seidler et al., 2018a).

Beyond formal help-seeking, this review also explored strategies men utilised to cope with anxiety symptoms. Overall, young men typically reverted to problem-based coping (e.g., confronting problems, searching for solutions, seeking information) while young women were more likely to rely on avoidant coping strategies (e.g., seeking emotional support, ruminating, discussing externally; Byrne, 2000; Garcia-Lopez et al., 2008). This finding is consistent with existing empirical research, generally suggesting men are more likely to confront problems, whereas women are more likely to seek external emotional support (Brems and Johnson, 1989; Kelly et al., 2008; Matud, 2004; Ptacek et al., 1994; Robichaud et al., 2003). In behavioural observation studies of boys and girls, boys were disproportionately encouraged by parents to confront stressful and fearful stimulants, whereas girls were more commonly comforted by parents when displaying a fearful or anxious response (Craske, 2003; McLean and Anderson, 2009; Stevenson-Hinde and Shouldice, 2013). Therefore, rather than immutable biological sex differences, researchers have postulated these differences in coping styles may reflect broader gender socialisation mechanisms whereby men and women are taught and reinforced overtime to cope and respond to stress and anxiety in gendered ways. Furthermore, when evaluating socialised gender roles and coping behaviour, individuals with higher levels of masculinity were more likely to employ problem-based coping, regardless of biological sex (Brems and Johnson, 1989; Dyson and Renk, 2006). This suggests a strong adherence to traditional masculine norms may impact expectant coping behaviours in men, prompting action-orientated, problem-based approaches in the face of elevated anxiety levels (Feng et al., 2019). In contrast, there may be a threshold, at which, the tendency to revert to problem-based coping exacerbates anxiety if solutions cannot be reached by men accustomed to self-remedy. Previous research evaluating stress and coping suggests problem-based coping may only be effective when stressors or situations are controllable or can be adjusted (Carver, 2011; Park et al., 2004). Therefore, employing alternate coping strategies (e.g., emotion-based, positive or meaning-focused coping) and utilising external resources such as networks of family and friends, and psychological supports, may also be important.

The experience of anxiety and the associated feelings of fear, powerless and weakness, are typically in direct opposition to socialised traditional masculine norms including courage, control and strength. This review extends upon this notion, with evidence of increased conformity to traditional masculine gender norms being associated with less severe anxiety symptoms for young men (Moscovitch et al., 2005; Pavlova and Kholmogorova, 2017). This has also been found in previous quantitative literature, particularly in studies that have utilised sex role measures such as Bem's Sex-Role Inventory (BSRI; Carter et al., 2011; Cosentino and Heilbrun, 1964; Erdwins et al., 1980). Included studies that built upon the index of specific masculine norms offered by the BSRI found toughness was considered protective (Bruch, 2007), whereas restricted emotionality and heterosexual presentation were risk factors for men's anxiety (Iwamoto et al., 2012; Jones, 1999; Pavlova and Kholmogorova, 2017). This review however highlights a dynamic and fluid concept of masculinity that can both help and heighten anxiety symptoms and disorders. Further to this, the relationship between anxiety and masculinity appears to function diversely at points along the continuum of men's adherence to masculine norms. Included studies found that high adherence to traditional masculine norms mediated the positive association between mental health literacy and help-seeking (Clark et al., 2020b) and reduced men's willingness to accept therapeutic help in the form of psychotherapy and/or medication (Berger et al., 2013; Clark et al., 2020b).

In the reviewed qualitative studies, a contradiction between masculinity and the experience of anxiety emerged. Men orientated to feelings of self-blame, failure and powerlessness when describing their anxiety, perpetuated by a perceived inability to adhere to traditional masculine norms (Drioli-Phillips et al., 2020a). Moreover, particularly for young, single men, gender role conflict increased levels of social anxiety (Yang et al., 2018). This sentiment of anxiety undermining men's embodiment of masculinity was similarly highlighted by Davies and Eagle (2010), suggesting young male counsellors reported considerable anxiety in how they would be perceived by other peers, prompting the employment of strategies to compensate for these anxious feelings such as: emphasising their masculine 'credit', and attempting to present the activity of peer counsellors as decidedly masculine. This may constitute a key point of difference in the content of concerns underlying men's anxiety in comparison to that of women. Past research has found women, in comparison to men, are more likely to ruminate and have higher levels of reported worry (Johnson and Whisman, 2013). Socialised gender norms may underlie and explain some of these differences, with worry typically identified as a stereotypically feminine trait (Robichaud et al., 2003). Robichaud et al. (2003) found that the content of worry for women and men is also different, with women more likely to worry about lack of confidence issues where as men reported higher levels of worry around financial and relationship concerns (Wood et al., 2000). In line with previous men's mental health literature masculinity may contribute to both the onset of these anxiety symptoms and increase distress as a result of experiencing symptoms (Galasinski, 2008; Ridge et al., 2011). In essence, anxiety and masculinity could emerge recursively to fuel and frame what men experienced. The impact of anxiety on masculinity was not only subjective, but socially conditioned and relational, with both men and women perceiving vignettes of men with anxiety as 'less manly' than those without anxiety (Gallegos et al., 2019). This may be due in part to limited public awareness surrounding anxiety disorders, specifically amongst men, contributing to a perceived stigma of anxiety not being a 'real' mental illness, or merely associated with common personality traits like shyness and introversion (Curcio and Corboy, 2020; Jorm and Wright, 2008). The higher formal diagnoses of anxiety amongst women also (perhaps inadvertently) signal anxiety as emasculating when embodied uncontrollably by men.

4. Future directions

It is imperative future qualitative and quantitative research employ rigorous, well-designed, randomised and case-control methodologies to move beyond cross-sectional study designs that mark the highest level of empirical evidence within the field. Furthermore, future scholarship should extend beyond essentialising research that has previously led to homogenised assertions of the association between increased masculinity, coping strategies and reduced anxiety symptomology in men. Given this review provides preliminary evidence that men may exhibit unique constellations of anxiety symptoms, future researchers must ensure inductively derived insights to men's lived experiences to inform quantitative measurement scales to accurately itemize, capture, measure and reflect men's anxiety. For example, an increased understanding of men's presenting symptomology for depression (i.e., irritability, aggression, substance abuse) has led to the development of psychometric measures more reflective of men's externalizing symptoms, such as the Male Depression Risk Scale (MDRS-22; Rice et al., 2013, 2020a).

Within this systematic review, there was a sizeable absence of subjective lived experience research from the perspective of within-men studies. Therefore, our understanding of how men experience, seek-help and cope with anxiety is limited, without definitive answers from (or for) men themselves. Prioritising qualitative studies will help move the field beyond stereotypical biases or biological determinism, which has so far restrained the field of men's anxiety to a 'cul de sac' of sex differences ideologies (Seidler et al., 2018b). Scholarship within the field of men's depression similarly grew from a foundation of sex differences research which in retrospect laid an important foundation to then consider the gendered dimensions of men's depression. Of the included studies there was no qualitative investigation into men's description and perspective of their subjective experiences of anxiety symptoms and coping strategies. In comparison, more than 20 qualitative studies have been undertaken to identify and investigate men's experiences of depression (e.g., Apesoa-Varano et al., 2015; Chuick et al., 2009; Danielsson et al., 2011; Danielsson and Johansson, 2005; Emslie et al., 2006; Heifner, 1997). Future research surrounding men's anxiety should leverage the findings surrounding sex differences in anxiety disorders in a similar way to the field of men's depression. This would advance research to better understand the interplay between masculinity and anxiety, and to delineate the pathways between men's depression and suicide, and anxiety and suicide. Considering the association between men's anxiety and suicide is critically important to tailor upstream early intervention efforts, particularly given the high fatality rates of male suicide (Weiss et al., 2016). In addition, future research should consider how anxiety manifests and impacts men across diverse populations, including those who have and have not engaged with the mental health system. By first understanding broad effects of socialisation on the development and maintenance of anxiety on men, a more specific approach can be taken through within-males studies, allowing for meaningful change with at-risk minority population groups (e.g., racially diverse ethnic groups, LGBTQIA+ community, men with a disability) and amongst young men prioritising early intervention.

Previous studies reporting a negative correlation between masculinity and anxiety symptoms may be more reflective of traditional masculinity masking these anxious experiences, rather than the absence of anxiety itself (Palapattu et al., 2006). These considerations highlight important questions for men's mental health research to consider; on a continuum how can we tap masculinity as a protective factor to reduce the likelihood of anxiety symptoms and disorders, and protect men who through strongly aligning to stoicism and self-reliance are reticent to disclose and discuss anxiety? Moreover, under what conditions do variations along this continuum of masculinity function as both a catalyst, and barrier, for seeking and engaging in mental health care? Within this review, the masculine norm of toughness, served as a protective factor for men with anxiety, acting as a barrier against negative cognitive distortions in thinking (Bruch, 2007). This may in turn facilitate effective self-coping mechanisms and attitudes towards help-seeking. In comparison, rigid endorsement of emotional restiveness and heterosexual presentation appeared to be problematic, which may in turn deter

men from seeking help, or reduce their wiliness to discuss and disclose of their anxiety (Iwamoto et al., 2012; Jones, 1999; Pavlova and Kholmogorova, 2017). Further evaluation and exploration of which unique masculine norms, and in what contexts, may function as both helpful and potentially harmful in men's anxiety will be a useful future endeavour. In line with the work of Kiselica and Englar-Carlson (2010), researchers should prioritise exploring the positive aspects of masculinities in association with men's anxiety as a means to engage those at-risk, yet reluctant to seek help. Additionally, a growing body of evidence highlights the benefits of gender-sensitive interventions to support and engage young men experiencing mental ill-health (Rice et al., 2018a). These strategies include structured, transparent and goal-orientated interventions, language adaption (i.e., male-orientated metaphors) and building rapport and collaboration (Seidler et al., 2018a). Preliminary evidence for the gendered experience of anxiety, highlights the potential for gender sensitive interventions to bring about positive impacts for males with anxiety disorders. However, given the focused scope of this review, future systematic reviews and meta-analyses are needed to identify the broad remit of anxiety interventions for men. Developing research, clinical interventions and public health promotion from a strength-based perspective will empower and engage men and society more broadly, whilst destigmatising the legitimacy of men seeking help for anxiety.

Previous research suggests young men are more likely to conform to traditional masculine norms than older cohorts (Rice et al., 2011), and are less likely to seek formal psychological support (Clark et al., 2018a). Throughout this review, young men appeared to have a low awareness of anxiety disorders and did not believe seeking help would change these experiences (Clark et al., 2020a; Cotton et al., 2006). More worryingly through, in both experiencing and disclosing anxiety symptoms, young men perceived a cost to their masculinity and in turn expressed feelings of self-blame, failure and powerlessness (Clark et al., 2018a; Drioli-Phillips et al., 2020a). Importantly, while prevalence rates suggest young men are diagnosed with anxiety at a much lower rate than young women (World Health Organization, 2014a) they are also less likely to disclose these experiences, orienting to self-reliance and problem-based coping rather than transgressing traditional masculine norms. Therefore, future research should consider the unique factors and challenges facing young men with anxiety disorders to encourage early intervention and prevention in an attempt to avoid more complex mental health presentations if left untreated (McGorry et al., 2014). In addition, given young men are considered the most difficult of any group to engage in psychological treatment (Seidler et al., 2020), it follows that gender-specific clinical interventions and resources are crucial to further de-stigmatise men's anxiety and provide a tailored response to the needs of young men specifically.

5. Limitations

Several methodological limitations should be considered when interpreting the current findings. First, there was a lack of consistency and precision in the self-report anxiety measurement scales utilised across the included studies ($n = 15$ anxiety scales across $n = 20$ quantitative studies). Included studies utilised a range of different anxiety scales to measure broad diagnoses, or trait like symptoms, negating fluctuating and acute constructs of anxiety which may be just as prevalent (e.g., sudden panic, heightened arousal and agitation). Second, not all sub-types of anxiety disorders were evaluated or considered within the included studies. Social anxiety disorder and generalised anxiety disorders were the most commonly evaluated sub-types of anxiety disorders, whereas panic disorder, agoraphobia and phobias were not considered. Therefore, the findings of this review can hopefully be complimented by future research to include other sub-types of anxiety disorders, in particular panic disorder and agoraphobia. Lastly, the participants included in this study were primarily Caucasian students, with non-clinical anxiety, largely recruited through schools and not engaged with mental health services. Important demographic factors for men such as race, sexual orientation, income and occupation were therefore not widely considered but would inevitably interact with distinct experiences of anxiety and health care use. This broad review paves the way for future research with greater specificity to within-male population subgroups.

6. Conclusion

This systematic review provides a synthesis of men's experiences of anxiety, focusing on help-seeking, coping and the influence of masculinity. The intricacies of men's anxiety experiences have been largely overlooked within the mental health literature; however, this review paves the way for important future contributions of empirical research. Overall, anxiety commonly manifested as physical symptoms for men, and experiences of anxiety were both enduring and debilitating. Barriers such as a limited awareness of anxiety, reluctance, scepticism and fear of stigma negated men's willingness to seek help, instead opting for self-reliance. Men tended to engage with anxiety through problem-solving rather than avoiding or withdrawing from the stressor. These experiences were also influenced by socialised gender norms of masculinity, and this relationship between masculinity and men's anxiety reflects gendered risks and benefits. Men's anxiety research has important implications for clinical care and public mental health promotion, particularly given the global implications of COVID-19 which is likely to further invoke uncertainty and transition, potentially heightening men's anxiety risk. Additional nuanced research exploring men's experiences of anxiety is crucial to tailor clinical interventions and improve men's mental health outcomes and suicide prevention.

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Krista Fisher: Conceptualization, Methodology, Data curation, Writing – original draft. **Zac E. Seidler:** Conceptualization, Validation, Writing – review & editing, Supervision. **Kylie King:** Writing – review & editing. **John L. Oliffe:** Writing – review & editing. **Simon M. Rice:** Conceptualization, Validation, Writing – review & editing, Supervision.

Declaration of Competing Interest

The authors declare that they have no competing interests.

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Supplementary materials

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References

Addis, M.E., 2008. Gender and depression in men. Clin. Psychol. 15, 153–168.
American Psychiatric Association, 2013. Diagnostic and statistical manual of mental disorders (DSM-5®), 5th ed.
Apesoa-Varano, E.C., Barker, J.C., Hinton, L., 2015. Shards of sorrow: older men's accounts of their depression experience. Soc. Sci. Med. 124, 1–8.
Auerbach, R.P., Richardt, S., Kertz, S., Eberhart, N.K., 2012. Cognitive vulnerability, stress generation, and anxiety: symptom clusters and gender differences. Int. J. Cogn. Ther. 5, 50–66.
Barlow, D.H., Allen, L.B., Choate, M.L., 2004. Toward a unified treatment for emotional disorders. Behav. Ther. 35, 205–230.

Barlow, D.H., Farchione, T.J., Bullis, J.R., Gallagher, M.W., Murray-Latin, H., Sauer-Zavala, S., Bentley, K.H., Thompson-Hollands, J., Conklin, L.R., Boswell, J.F., 2017. The unified protocol for transdiagnostic treatment of emotional disorders compared with diagnosis-specific protocols for anxiety disorders: a randomized clinical trial. JAMA Psychiatry 74, 875–884.
Baxter, A., Scott, K., Vos, T., Whiteford, H., 2013. Global prevalence of anxiety disorders: a systematic review and meta-regression. Psychol. Med. 43, 897.
Baxter, A., Vos, T., Scott, K., Ferrari, A., Whiteford, H., 2014. The global burden of anxiety disorders in 2010. Psychol. Med. 44, 2363.
Beesdo, K., Knappe, S., Pine, D.S., 2009. Anxiety and anxiety disorders in children and adolescents: developmental issues and implications for DSM-V. Psychiatric Clin. 32, 483–524.
Bender, P., Reinholdt-Dunne, M., Esbjorn, B., Pons, F., 2012. Emotion dysregulation and anxiety in children and adolescents: gender differences. Pers. Individ. Dif. 53, 284–288.
Berger, J.L., Addis, M.E., Green, J.D., Mackowiak, C., Goldberg, V., 2013. Men's reactions to mental health labels, forms of help-seeking, and sources of help-seeking advice. Psychol. Men. Masc. 14, 433–443.
Bourdon, K.H., Boyd, J.H., Rae, D.S., Burns, B.J., Thompson, J.W., Locke, B.Z., 1988. Gender differences in phobias: results of the ECA community survey. J. Anxiety Disord. 2, 227–241.
Brems, C., Johnson, M.E., 1989. Problem-solving appraisal and coping style: the influence of sex-role orientation and gender. J. Psychol. 123, 187–194.
Brownhill, S., Wilhelm, K., Barclay, L., Parker, G., 2002. Detecting depression in men: a matter of guesswork. Int. J. Mens Health 1, 259–280.
Bruch, M.A., 2007. Cognitive bias in men's processing of negative social information: the role of social anxiety, toughness as a masculine role norm, and their interaction. Cognit. Ther. Res. 31, 273–289.
Byrne, B., 2000. Relationships between anxiety, fear, self-esteem, and coping strategies in adolescence. Adolescence 35, 201–215.
Carter, R., Silverman, W.K., Jaccard, J., 2011. Sex variations in youth anxiety symptoms: effects of pubertal development and gender role orientation. J. Clin. Child. Adolesc. Psychol. 40, 730–741.
Carver, C.S., 2011. Coping, The Handbook of Stress Science: Biology, Psychology, and Health. Springer Publishing Company, New York, NY, US, pp. 221–229.
Cavanagh, A., Wilson, C.J., Caputi, P., Kavanagh, D.J., 2016. Symptom endorsement in men versus women with a diagnosis of depression: a differential item functioning approach. Int. J. Soc. Psychiatry 62, 549–559.
Chuick, C.D., Greenfeld, J.M., Greenberg, S.T., Shepard, S.J., Cochran, S.V., Haley, J.T., 2009. A qualitative investigation of depression in men. Psychol. Men. Masc. 10, 302.
Clark, L.H., Hudson, J.L., Dunstan, D.A., Clark, G.I., 2018a. Barriers and facilitating factors to help-seeking for symptoms of clinical anxiety in adolescent males. Aust. J. Psychol. 70, 225–234.
Clark, L.H., Hudson, J.L., Dunstan, D.A., Clark, G.I., 2018b. Capturing the attitudes of adolescent males' towards computerised mental health help-seeking. Aust. Psychol. 53, 416–426.
Clark, L.H., Hudson, J.L., Haider, T., 2020a. Anxiety specific mental health stigma and help-seeking in adolescent males. J. Child Fam. Stud. 29, 1970–1981.
Clark, L.H., Hudson, J.L., Rapee, R.M., Grasby, K.L., 2020b. Investigating the impact of masculinity on the relationship between anxiety specific mental health literacy and mental health help-seeking in adolescent males. J. Anxiety Disord., 102292
Connell, R.W., Messerschmidt, J.W., 2005. Hegemonic masculinity: rethinking the concept. Gender Soc. 19, 829–859.
Cosentino, F., Heilbrun Jr., A.B., 1964. Anxiety correlates of sex-role identity in college students. Psychol. Rep. 14, 729–730.
Costello, E.J., Egger, H.L., Angold, A., 2004. Phobic and Anxiety Disorders in Children and Adolescents. Oxford University Press, New York.
Cotton, S.M., Wright, A., Harris, M.G., Jorm, A.F., McGorry, P.D., 2006. Influence of gender on mental health literacy in young Australians. Aust. N. Z. J. Psychiatry 40, 790–796.
Craske, M.G., 2003. Origins of Phobias and Anxiety Disorders: Why More Women Than Men? Elsevier Science, Oxford.
Critical Appraisal Skills Programme, 2018. CASP Qualitative Checklist.
Curcio, C., Corboy, D., 2020. Stigma and anxiety disorders: a systematic review. Stigma Health 5, 125.
Danielsson, U., Bengs, C., Samuelsson, E., Johansson, E.E., 2011. My greatest dream is to be normal": the impact of gender on the depression narratives of young Swedish men and women. Qual. Health Res. 21, 612–624.
Danielsson, U., Johansson, E.E., 2005. Beyond weeping and crying: a gender analysis of expressions of depression. Scand. J. Prim. Health Care. 23, 171–177.
Darmstadt, G.L., Heise, L., Gupta, G.R., Henry, S., Cislaghi, B., Greene, M.E., Hawkes, S., Hay, K., Heymann, J., Klugman, J., 2019. Why now for a Series on gender equality, norms, and health? Lancet North Am. Ed. 393, 2374–2377.
Davies, N., Eagle, G., 2010. Young men as peer counsellors: what's under the overcoat? J. Psychol. Afr. 20, 569–580.
de Anda, D., Bradley, M., Collada, C., Dunn, L., Kubota, J., Hollister, V., Miltenberger, J., Pulley, J., Susskind, A., Thompson, L.A., Wadsworth, T., 1997. A study of stress, stressors, and coping strategies among middle school adolescents. Soc. Work. Educ. 19, 87–98.
Dowbiggin, I.R., 2009. High anxieties: the social construction of anxiety disorders. Can. J. Psychiatry 54, 429–436.
Drioli-Phillips, P.G., Oxlad, M., Feo, R., Scholz, B., LeCouteur, A., 2020a. I feel abused by my own mind": themes of control in men's online accounts of living with anxiety. Qual. Health Res. 30, 2118–2131.
Drioli-Phillips, P.G., Oxlad, M., LeCouteur, A., Feo, R., Scholz, B., 2020b. Men's talk about anxiety online: constructing an authentically anxious identity allows help-seeking. Psychol. Men Masc. 22, 77–87.
Duchesne, S., Ratelle, C.F., 2016. Patterns of anxiety symptoms during adolescence: gender differences and sociomotivational factors. J. Appl. Dev. Psychol. 46, 41–50.
Dyson, R., Renk, K., 2006. Freshmen adaptation to university life: depressive symptoms, stress, and coping. J. Clin. Psychol. 62, 1231–1244.
Emslie, C., Ridge, D., Ziebland, S., Hunt, K., 2006. Men's accounts of depression: reconstructing or resisting hegemonic masculinity? Soc. Sci. Med. 62, 2246–2257.
Erdwins, C., Small, A.C., Gross, R., 1980. The relationship of sex role to self-concept. J. Clin. Psychol. 36, 111–115.
Fehm, L., Beesdo, K., Jacobi, F., Fiedler, A., 2008. Social anxiety disorder above and below the diagnostic threshold: prevalence, comorbidity and impairment in the general population. Soc. Psychiatry Psychiatr. Epidemiol. 43, 257–265.
Feng, H., Xiu, L., Ren, Y., 2019. The effect of sex and gender role orientation on coping among americans and chinese: does" secure" matter? China Media Res. 15.
Galasinski, D., 2008. Men's Discourses of Depression. Palgrave Macmillan, London.
Gallegos, J.M., Vescio, T.K., Shields, S.A., 2019. Perceived morality determines the acceptability of stereotypic feminine emotional displays in men. Psychol. Men Mascul. 20, 623–636.
Garcia-Lopez, L.-.J., Ingles, C.J., Garcia-Fernandez, J.M., 2008. Exploring the relevance of gender and age differences in the assessment of social fears in adolescence. Soc. Behav. Personal. 36, 385–390.
Haller, H., Cramer, H., Lauche, R., Gass, F., Dobos, G.J., 2014. The prevalence and burden of subthreshold generalized anxiety disorder: a systematic review. BMC Psychiatry 14, 128.
Hannes, K., 2011. Chapter 4: critical appraisal of qualitative research. in: Noyes, J., Booth, A., Hannes, K., Harden, A., Harris, J., Lewin, S., Lockwood, C. (Eds.). Supplementary Guidance for Inclusion of Qualitative Research in Cochrane Systematic Reviews of Interventions. Cochrane Collaboration Qualitative Methods Group, 1 ed.
Harris, M.G., Diminic, S., Reavley, N., Baxter, A., Pirkis, J., Whiteford, H.A., 2015. Males' mental health disadvantage: an estimation of gender-specific changes in service utilisation for mental and substance use disorders in Australia. Aust. N. Z. J. Psychiatry 49, 821–832.
Hay, K., McDougal, L., Percival, V., Henry, S., Klugman, J., Wurie, H., Raven, J., Shabalala, F., Fielding-Miller, R., Dey, A., 2019. Disrupting gender norms in health systems: making the case for change. Lancet North Am. Ed. 393, 2535–2549.
Heifner, C., 1997. The male experience of depression. Perspect. Psychiatr. Care 33, 10–18.
Iwamoto, D.K., Gordon, D.M., Oliveros, A., Perez-Cabello, M., Brabham, T., Lanza, A., Dyson, W., 2012. The role of masculine norms and informal support on mental health in incarcerated men. Psychol. Men. Masc. 13, 283–293.
Johnson, D.P., Whisman, M.A., 2013. Gender differences in rumination: a meta-analysis. Pers. Individ. Dif. 55, 367–374.
Jones, D.A., 1999. Gender role conflict, coping, and psychological distress in gay men. Diss. Abstr. Int. 59, 4468.
Jorm, A.F., Wright, A., 2008. Influences on young people's stigmatising attitudes towards peers with mental disorders: national survey of young Australians and their parents. Br. J. Psychiatry 192, 144–149.
Kelly, M.M., Tyrka, A.R., Price, L.H., Carpenter, L.L., 2008. Sex differences in the use of coping strategies: predictors of anxiety and depressive symptoms. Depress. Anxiety 25, 839–846.
Kessler, R.C., Ruscio, A.M., Shear, K., Wittchen, H.U., 2010. Epidemiology of anxiety disorders. Curr. Top. Behav. Neurosci. 2, 21–35.
Kierski, W., 2014. Anxiety experiences of male psychotherapists: a hermeneutic phenomenological study. Counsel. Psychother. Res. 14, 111–118.
Kiselica, M.S., Englar-Carlson, M., 2010. Identifying, affirming, and building upon male strengths: the positive psychology/positive masculinity model of psychotherapy with boys and men. Psychotherapy 47, 276.
Lefebvre, C., Glanville, J., Briscoe, S., Littlewood, A., Marshall, C., Metzendorf, M.I., Noel-Storr, A., Rader, T., Shokraneh, F., Thomas, J., 2019. Searching for and selecting studies. Cochrane Handb. System. Rev. Intervent. 67–107.
Ma, L.-.L., Wang, Y.-.Y., Yang, Z.-.H., Huang, D., Weng, H., Zeng, .X..-T., 2020. Methodological quality (risk of bias) assessment tools for primary and secondary medical studies: what are they and which is better? Mil. Med. Res. 7, 1–11.
Maddock, A., Hevey, D., Eidenmueller, K., 2017. Mindfulness training as a clinical intervention with homeless adults: a pilot study. Int. J. Ment. Health Addict. 15, 529–544.
Martin, L.A., Neighbors, H.W., Griffith, D.M., 2013. The experience of symptoms of depression in men vs women: analysis of the National Comorbidity Survey Replication. JAMA Psychiatry 70, 1100–1106.
Matud, M.P., 2004. Gender differences in stress and coping styles. Pers. Individ. Dif. 37, 1401–1415.
Mauvais-Jarvis, F., Merz, N.B., Barnes, P.J., Brinton, R.D., Carrero, J.-.J., DeMeo, D.L., De Vries, G.J., Epperson, C.N., Govindan, R., Klein, S.L., 2020. Sex and gender: modifiers of health, disease, and medicine. Lancet North Am. Ed. 396, 565–582.
McDermott, R.C., Schwartz, J.P., Rislin, J.L., 2016. Men's Mental health: A biopsychosocial Critique. American Psychological Association.
McGorry, P.D., Goldstone, S.D., Parker, A.G., Rickwood, D.J., Hickie, I.B., 2014. Cultures for mental health care of young people: an Australian blueprint for reform. Lancet Psychiatry 1, 559–568.
McLean, C.P., Anderson, E.R., 2009. Brave men and timid women? A review of the gender differences in fear and anxiety. Clin. Psychol. Rev. 29, 496–505.

McLean, C.P., Asnaani, A., Litz, B.T., Hofmann, S.G., 2011. Gender differences in anxiety disorders: prevalence, course of illness, comorbidity and burden of illness. J. Psychiatr. Res. 45, 1027–1035.
Merikangas, K.R., He, J.P., Burstein, M., Swendsen, J., Avenevoli, S., Case, B., Georgiades, K., Heaton, L., Swanson, S., Olfson, M., 2011. Service utilization for lifetime mental disorders in US adolescents: results of the National Comorbidity Survey–Adolescent Supplement (NCS-A). J. Am. Acad. Child Adolesc. Psychiatry 50, 32–45.
Moher, D., Liberati, A., Tetzlaff, J., Altman, D.G., Group, P., 2009. Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement. PLoS Med. 6, e1000097.
Moscovitch, D.A., Hofmann, S.G., Litz, B.T., 2005. The impact of self-construals on social anxiety: a gender-specific interaction. Pers. Individ. Dif. 38, 659–672.
National Health Medical Research Council, 2009. NHMRC Additional Levels of Evidence and Grades For Recommendations For Developers of Guidelines. NHMRC, Canberra.
National Heart Lung and Blood Institute, 2018. NIH Study Quality Assessment Tools.
Palapattu, A.G., Kingery, J.N., Ginsburg, G.S., 2006. Gender role orientation and anxiety symptoms among African american adolescents. .J Abnorm. Child Psychol. 34, 441–449.
Park, C.L., Armeli, S., Tennen, H., 2004. The daily stress and coping process and alcohol use among college students. J. Stud. Alcohol. 65, 126–135.
Pavlova, T.S., Kholmogorova, A.B., 2017. Psychological factors of social anxiety in Russian adolescents. Psychol. Russia 10, 179–191.
Ptacek, J.T., Smith, R.E., Dodge, K.L., 1994. Gender differences in coping with stress: when stressor and appraisals do not differ. Pers. Soc. Psychol. Bull. 20, 421–430.
Ren, L., Yang, Z., Wang, Y., Cui, L.B., Jin, Y., Ma, Z., Zhang, Q., Wu, Z., Wang, H.N., Yang, Q., 2020. The relations among worry, meta-worry, intolerance of uncertainty and attentional bias for threat in men at high risk for generalized anxiety disorder: a network analysis. BMC Psychiatry 20, 1–11.
Rice, S.M., Fallon, B., Bambling, M., 2011. Men and depression: the impact of masculine role norms throughout the lifespan. Educ. Dev. Psychol. 28, 133.
Rice, S.M., Fallon, B.J., Aucote, H.M., Möller-Leimkühler, A.M., 2013. Development and preliminary validation of the male depression risk scale: furthering the assessment of depression in men. J. Affect. Disord. 151, 950–958.
Rice, S.M., Kealy, D., Seidler, Z.E., Oliffe, J.L., Levant, R.F., Ogrodniczuk, J.S., 2020a. Male-type and prototypal depression trajectories for men experiencing mental health problems. Int. J. Environ. Res. Public Health 17, 7322.
Rice, S.M., O'Bree, B., Wilson, M., McEnery, C., Lim, M.H., Hamilton, M., Gleeson, J., Bendall, S., D'Alfonso, S., Russon, P., Valentine, L., Cagliarini, D., Howell, S., Miles, C., Pearson, M., Nicholls, L., Garland, N., Mullen, E., McGorry, P.D., Alvarez-Jimenez, M., 2020b. Leveraging the social network for treatment of social anxiety: pilot study of a youth-specific digital intervention with a focus on engagement of young men. Internet Intervent. 20, 100323.
Rice, S.M., Ogrodniczuk, J.S., Kealy, D., Seidler, Z.E., Dhillon, H.M., Oliffe, J.L., 2019. Validity of the Male Depression Risk Scale in a representative Canadian sample: sensitivity and specificity in identifying men with recent suicide attempt. J. Mental Health 28, 132–140.
Rice, S.M., Purcell, R., McGorry, P.D., 2018a. Adolescent and young adult male mental health: transforming system failures into proactive models of engagement. J. Adolesc. Health 62, S9–S17.
Rice, S.M., Telford, N.R., Rickwood, D.J., Parker, A.G., 2018b. Young men's access to community-based mental health care: qualitative analysis of barriers and facilitators. J. Mental Health 27, 59–65.
Ridge, D., Emslie, C., White, A., 2011. Understanding how men experience, express and cope with mental distress: where next? Sociol. Health Illn. 33, 145–159.
Robichaud, M., Dugas, M.J., Conway, M., 2003. Gender differences in worry and associated cognitive-behavioral variables. J. Anxiety Disord. 17, 501–516.
Rogers, J.P., Chesney, E., Oliver, D., Pollak, T.A., McGuire, P., Fusar-Poli, P., Zandi, M.S., Lewis, G., David, A.S., 2020. Psychiatric and neuropsychiatric presentations associated with severe coronavirus infections: a systematic review and meta-analysis with comparison to the COVID-19 pandemic. Lancet Psychiatry 7, 611–627.
Seidler, Z.E., Dawes, A.J., Rice, S.M., Oliffe, J.L., Dhillon, H.M., 2016. The role of masculinity in men's help-seeking for depression: a systematic review. Clin. Psychol. Rev. 49, 106–118.
Seidler, Z.E., Rice, S.M., Dhillon, H.M., Cotton, S.M., Telford, N.R., McEachran, J., Rickwood, D.J., 2020. Patterns of youth mental health service use and discontinuation: population data from Australia's headspace model of care. Psychiatr. Serv. 71, 1104–1113.
Seidler, Z.E., Rice, S.M., Ogrodniczuk, J.S., Oliffe, J.L., Dhillon, H.M., 2018a. Engaging men in psychological treatment: a scoping review. Am. J. Men's Health 12, 1882–1900.
Seidler, Z.E., Rice, S.M., River, J., Oliffe, J.L., Dhillon, H.M., 2018b. Men's mental health services: the case for a masculinities model. J. Men's Stud. 26, 92–104.
Stevenson-Hinde, J., Shouldice, A., 2013. Wariness to Strangers: A Behavior Systems Perspective. Psychology Press, New York and London.
Weiss, S., Muzik, M., Deligiannidis, K., Ammerman, R., Guille, C., 2016. Gender differences in suicidal risk factors among individuals with mood disorders. J. Depress. Anxiety 5, 1–7.
Whittle, E.L., Fogarty, A.S., Tugendrajch, S., Player, M.J., Christensen, H., Wilhelm, K., Hadzi-Pavlovic, D., Proudfoot, J., 2015. Men, depression, and coping: are we on the right path? Psychol. Men Mascul. 16, 426–438.
Wong, Y.J., Ho, M.H.R., Wang, S.Y., Miller, I., 2017. Meta-analyses of the relationship between conformity to masculine norms and mental health-related outcomes. J. Couns. Psychol. 64, 80.
Wood, W.J., Conway, M., Dugas, M.J., 2000. Perceived worry and gender differences: do people perceive women as worrying more than men?. In: Poster session presented at the annual meeting of the Canadian Psychological Association. Ottawa, Canada.
World Health Organization, 2014a. Health for the world's adolescents: a second chance in the second decade: summary. World Health Organization.
World Health Organization, 2014b. Preventing suicide: a global imperative. World Health Organization.
World Health Organization, 2017. Depression and Other Common Mental Disorders: Global Health Estimates. World Health Organization.
World Health Organization, 2020. COVID-19 Disrupting Mental Health Services in Most Countries. WHO Survey.
Yang, X., Lau, J.T.F., Wang, Z., Ma, Y.L., Lau, M.C.M., 2018. The mediation roles of discrepancy stress and self-esteem between masculine role discrepancy and mental health problems. J. Affect. Disord. 235, 513–520.
Yap, M.B., Mackinnon, A., Reavley, N., Jorm, A.F., 2014. The measurement properties of stigmatizing attitudes towards mental disorders: results from two community surveys. Int. J. Methods Psychiatr. Res. 23, 49–61.