The Signalling Model of Male Help-Seeking Behaviour

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Thesis Abstract

Research into male mental health help seeking has become an important focus in recent decades, due to increased awareness of men's mental health issues. Only a third of Australian men who met the diagnostic criteria for a common mental disorder sought professional help.

Existing theoretical models of male help seeking focus on masculinity as an inhibitive factor, potentially downplaying the influence of contextual factors. Theoretical models are also yet to incorporate contemporary definitions of masculinity and of help seeking. This thesis aims to identify theoretical limitations in the male help-seeking literature, and to develop and test a new theoretical model of male help seeking aimed at addressing these limitations.

The findings are presented in three articles intended for publication. The first is a critical review of the literature on male mental-health help seeking, which identifies theoretical limitations and presents a new model of male help seeking based on Signalling Theory.

The Signalling Model defines help seeking as an interaction between the man seeking help, the help provider, the behaviour itself, feedback from previous help seeking, and the environment. Properties of these five components and the interactions between them can affect the perceived benefits and costs of seeking help. The Model predicts a positive association between help seeking and the perceived benefits. The review collates existing evidence and determines that existing literature is consistent with the Signalling Model.

This thesis also aims to empirically test relationships predicted by the Model, across two papers, using large datasets. Consistent with the Model, the second paper (n = 2002) finds a positive relationship between ratings of the benefits of therapy and

both men's initial motivation to attend (β = .541, p < .001) and their attitudes towards future therapy (β = .826, p < .001). The relationship between three types of therapist behaviours, aimed at improving men's engagement, and men's attitudes towards future help seeking is mediated by men's ratings of the benefits of help seeking, explaining 64.2% of the variance, which is also consistent with the Signalling Model. The third paper, using data from the national Ten to Men study (n = 2071), found that bond with help providers is positively related to formal help seeking when distress is included in the model, which explains 3.3% of the variance. Another structural equation model revealed that distress, previous help seeking, and informal help seeking are all positively related to formal help seeking, altogether explaining 19.8% of the variance. These results are consistent with the Signalling Model and demonstrate that the Model can be applied to male help seeking to model complex relationships between a wide array of predictor variables.

The strengths of the thesis, including the robust samples, are discussed along with some limitations, including the lack of purpose-designed measures. Future research directions are suggested, including testing the full Model using purpose-designed measures. Clinical and policy implications are also discussed. Policy should adopt a holistic approach that optimises all components of the Model, rather than focusing solely on the man seeking help, to facilitate help seeking.

Thesis Declaration

I certify that this work contains no material which has been accepted for the award of any other degree or diploma in my name in any university or other tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text.

In addition, I certify that no part of this work will, in the future, be used in a submission in my name for any other degree or diploma in any university or other tertiary institution without the prior approval of the University of Adelaide and where applicable, any partner institution responsible for the joint award of this degree.

I give permission for the digital version of my thesis to be made available on the web, via the University's digital research repository, the Library Search and through web search engines, unless permission has been granted by the University to restrict access for a period of time.

I acknowledge the support I have received for my research through the provision of an Australian Government Research Training Program Scholarship.

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Chapter One: Introduction

1.1 Men's Mental Health and Help-Seeking Behaviour

1.1.1 Introduction

In recent years, there has been increasing focus researching men's help seeking for mental illness. Common mental illnesses, such as depression, anxiety, and suicidality, can severely diminish people's health, functioning, and quality of life (World Health Organization, 2017). Since there are effective psychotherapeutic and pharmacological treatments for these illnesses (see Cuijpers et al., 2011; Cuijpers et al., 2014; D'Anci et al., 2019; Hollon et al., 2002; Zalsman et al., 2016 for reviews), ensuring that men successfully access professional help for their psychological distress is an essential goal for improving men's mental health and wellbeing (Daraganova & Quinn, 2020; Gulliver et al., 2012). In Australia, the National Men's Health Strategy 2020–2030 (Department of Health, 2019) identified the need to better understand how men engage with the healthcare system and factors that can facilitate men's decisions to seek help.

1.1.2 Men's Mental Health

According to the latest global data on common mental illnesses, depressive disorders are the fourth largest global contributors to non-fatal losses in health, functioning, and quality of life, and anxiety disorders are the seventh largest (Institute for Health Metrics and Evaluation, 2020). Worldwide, an estimated 3.0% of men suffer from current depressive disorders and 2.9% of men suffer from current anxiety disorders. Depression and other mental illnesses are also associated with suicides (World Health Organization, 2017; Zalsman et al., 2016). Men are 1.8 times more

likely than women to die of suicide globally, and three times more likely to die of suicide than women in high-income countries (World Health Organization, 2019).

In Australia specifically, the 2020/21 National Survey of Mental Health and Wellbeing aimed to determine the prevalence and impact of affective, anxiety, and substance use disorders, and the rate of healthcare service utilisation (see Australian Bureau of Statistics, 2022e for details). The survey found that 18.0% of Australian men met the diagnostic criteria for at least one of these mental disorders in the previous 12 months, and 42.7% met the diagnostic criteria within their lifetime (Australian Bureau of Statistics, 2022g, 2022h). In Australia, there were 2,358 male suicides in 2021 — three times the number of female suicides — making suicide the 10th leading cause of death overall for Australian men (Australian Bureau of Statistics, 2022b), the leading cause of death for boys and men aged 15–44, and the third leading cause for men aged 45–54 (Australian Bureau of Statistics, 2022a). The 2007 National Survey of Mental Health and Wellbeing, found that 66.3% of the men who reported suicidal ideation and 73.0% of the men who reported making suicide plans met the diagnostic criteria for either an affective, anxiety, or substance use disorder within the previous 12-month period (Australian Bureau of Statistics, 2008), linking suicidality with mental illness.

Many effective treatments for these mental illnesses exist. Meta-analytic evidence demonstrates that psychological treatments, including cognitive behavioural therapy (CBT), interpersonal psychotherapy, and non-directive supportive therapy, among others, are effective for treating depression, with an overall moderate effect (Cohen's $d = 0.53$) when compared to control groups (Cuijpers et al., 2011). Similarly, meta-analysis of psychological treatments, including

CBT, applied relaxation, and biofeedback, found a large effect (Hedges' *g* = 0.84) of psychotherapy on treatment of anxiety compared to controls (Cuijpers et al., 2014). A recent systematic review demonstrated that CBT, compared to treatment-as-usual, and dialectical behaviour therapy, compared to wait-list controls, may be effective at reducing suicidal ideation, but not deaths by suicide (D'Anci et al., 2019). Systematic reviews have linked pharmacological treatments such as intravenous ketamine with reduced suicidal ideation (D'Anci et al., 2019), and lithium with reduced suicide deaths (D'Anci et al., 2019; Zalsman et al., 2016).

Seeking professional help is an important step in treating these mental illnesses, meaning that ensuring men's help seeking for psychological distress is *successful* — that is, it leads to acquisition of an effective treatment — is an essential goal for improving men's mental health and wellbeing (Daraganova & Quinn, 2020; Gulliver et al., 2012).

1.1.3 Male Help Seeking

Help seeking is an umbrella term that encompasses three distinct constructs from the literature: beliefs about, attitudes towards, and willingness to engage in help-seeking; intentions to seek help; and actual help-seeking behaviour (Gulliver et al., 2012). Help-seeking behaviour can be characterised as a behaviour intended to meet an individual's need for assistance in a positive way (i.e., rather than antisocial behaviour or substance abuse) (Rickwood et al., 2012). People can seek help from both formal (i.e., professional) sources, such as healthcare professionals, and informal (i.e., non-professional) sources, such as family or friends (Rickwood et al., 2012; Wenger, 2011). This thesis focuses particularly on help seeking for

psychological symptoms or distress, rather than help seeking for physical health issues.

Men appear less likely to seek help for psychological symptoms or distress than for physical health issues. In Australia, while 88.7% of men attend a physician at least once every year (Australian Bureau of Statistics, 2017), only 37.0% of men who met diagnostic criteria for a mental disorder in the previous 12-month period reported accessing services for a mental health problem within that period (Australian Bureau of Statistics, 2022j). This does represent an increase over the previous 13 years, where only 27.5% of men in that category sought help for mental health problems (Australian Bureau of Statistics, 2008). Overall, however, a minority of men seek professional help for mental health issues.

Men may prefer seeking help for psychological distress informally, from non-professional sources, rather than formally, from professional sources. For example, men view partners and friends as help providers (Smith et al., 2006). Ten to Men, a longitudinal study on the health of Australian men, found that most adult men (aged 18 years and above) reported being “likely” or “extremely likely” to seek help from an intimate partner (76.4%) or friend (61.7%) for a personal or emotional problem, however, only a minority reported the same for a doctor (31.8%) or a mental health professional (25.6%) (Daraganova & Quinn, 2020). A similar trend was detected among young men (aged 15–17 years), where a majority reported being “likely” or “extremely likely” to seek help from friends (71.8%) or parents (69.8%), while a minority reported the same for mental health professionals (29.7%) or doctors (21.8%) (Daraganova & Quinn, 2020). This suggests that men may be more likely to approach partners, friends, or family members when suffering psychological distress, rather than seeking formal help from healthcare providers.

Some evidence suggests that informal help seeking may act as a precursor to formal help seeking for men. For example, interviews of clinicians have found that men are commonly urged to seek help by female partners (Tudiver & Talbot, 1999) or even brought to a physician by their female partner (Seymour-Smith et al., 2002). Encouragement from someone they trust, which can include an informal source, such as a spouse, was the most cited facilitating factor in a review of the qualitative literature on men's help seeking (Hoy, 2012). A study of both men and women found that being prompted to seek help, most often from informal sources, was positively associated with both expectations about mental health services and attitudes towards help seeking (Vogel et al., 2007). Finally, a survey of Australian men found that 39.2% of men who sought help were encouraged by an informal source (Seidler, Wilson, Walton, et al., 2022). Overall, current evidence suggests that men are less likely to seek help for mental health issues than they are for medical issues, and that informal help seeking may be an important step in the help seeking process for some men.

1.1.4 Sex Differences in Help Seeking

The male help-seeking literature has focused on investigations of sex differences in rates of healthcare utilisation (Vogel & Heath, 2016). In their seminal paper, Addis and Mahalik (2003) collated empirical evidence of sex differences in help seeking, and argued that studies published from the 1970s to the 1990s consistently demonstrated that men accessed healthcare services less often than women. They also cited studies of psychiatric care that demonstrated the same trend (Addis & Mahalik, 2003). More recent national data also show that Australian men experiencing symptoms of a mental disorder are less likely to seek professional help

than women (37.0% versus 54.7%) (Australian Bureau of Statistics, 2022j). For informal help seeking, Addis and Mahalik (2003) cited a study showing that men were less likely than women to seek help informally. This conflicts with results from a study by Wendt and Shafer (2016), which found that men and women were equally likely to endorse informal help seeking. Overall, however, this trend in the literature has informed theoretical perspectives in the field.

1.2 Theoretical Models of Male Mental Health Help Seeking

A handful of theoretical models have been applied to mental health help-seeking behaviour, including the Theory of Planned Behaviour, the Prototype/Willingness Model, the Health Belief Model, and Andersen's Behavioural model (Gulliver et al., 2012; Vogel & Heath, 2016), however, none have been widely adopted (Gulliver et al., 2012). Given men's lower rates of help seeking compared to women, male help seeking is often explained using the Masculine Gender-Role Socialisation perspective (Vogel & Heath, 2016), which suggests that masculine norms, such as strength and self-reliance, conflict with help-seeking behaviour (Addis & Mahalik, 2003; Courtenay, 2000). This is arguably the dominant theoretical perspective in the male help-seeking literature (Vogel & Heath, 2016). Beyond these prominent help-seeking theories, one other theoretical model, the Access to Care model, has been referenced in conjunction with male mental health help seeking among students (Sagar-Ouriaghli et al., 2020). The following section describes these theoretical perspectives in relation to men's help seeking.

1.2.1 Masculine Gender-Role Socialisation

With data indicating that men are less likely to access healthcare, investigations into the effect of masculinity on help seeking have been a common focus in men's help seeking research (Hoy, 2012; Vogel & Heath, 2016). Masculine Gender-Role Socialisation refers to the idea that in many cultures men are socialised to be masculine — *as opposed to* being feminine — by being strong, stoic, and self-reliant, and that men refrain from seeking help because that would make them appear weak, emotional, and dependent, or, in other words, make them appear feminine (for example Addis & Mahalik, 2003; Courtenay, 2000; Mahalik et al., 2007; Möller-Leimkühler, 2002). Another seminal paper also argued that men refrain from seeking help as a way of constructing or demonstrating their masculinity (Courtenay, 2000). As such, the theoretical perspective that masculinity inhibits male help seeking has featured prominently in the literature (Hoy, 2012; Vogel & Heath, 2016).

Much of the literature falling under this paradigm measures masculinity using either the Conformity to Masculine Norms Inventory (CMNI), the Male Role Norms Inventory (MRNI), or the Gender Role Conflict Scale (GRCS) (O'Neil, 2012). Each is a self-report questionnaire measuring adherence to 'traditional masculine norms' (the CMNI and MRNI) or the stress induced by adherence to them (the GRCS) (Levant & Richmond, 2008; Mahalik et al., 2003; O'Neil, 2008). Although there is some variance, all three instruments largely agree on a common set of traditional masculine norms. Aggressive behaviour, self-reliance, promiscuity, and some misogynistic attitudes are all measured by both the CMNI and the MRNI; the CMNI and the GRCS both measure competitiveness, prioritising work, and a desire for power or control; all three instruments measure restrictive emotionality, homophobia

and a desire for status or achievement; and the CMNI uniquely measures risk-taking (Levant & Richmond, 2008; Mahalik et al., 2003; O'Neil, 2008).

The empirical evidence demonstrates a negative relationship between masculinity and help seeking, as predicted by the Masculine Gender-Role Socialisation paradigm. For example, an exhaustive review of the literature on the 'psychology of men', which synthesised 249 studies spanning approximately 30 years, found that masculinity, as measured by the CMNI, MRNI, or GRCS, was negatively related to both attitudes towards help seeking and help-seeking behaviour (O'Neil, 2012). In a meta-analysis of 74 papers (n = 19,453), Wong et al. (2017) found a moderate negative correlation between total CMNI score and attitudes towards psychological help seeking (r = –.31). Gerdes et al. (2018) conducted a content analysis of all 84 empirical studies (n = 30,408) using the MRNI and found small-to-moderate negative correlations (–.17 < r < –.71) between MRNI scores and various measures of help-seeking attitudes and intentions. O'Neil (2008) reviewed all 232 studies using the GRCS published in the previous 25 years. The review found that GRCS scores were significantly related to negative attitudes towards psychological help seeking in all but one of the 19 studies examining the relationship between Gender Role Conflict and attitudes towards psychological help seeking (O'Neil, 2008). Overall, the empirical evidence is largely consistent with the Masculine Gender-Role Socialisation paradigm that masculinity inhibits men's help seeking.

1.2.2 The Theory of Planned Behaviour

The Theory of Planned Behaviour (Ajzen, 1991) has also been applied to male help seeking. This Theory posits that help-seeking behaviour is the result of an

individual's intentions to seek help, which are themselves a product of attitudes towards help seeking, subjective norms (perceived social rewards and consequences of the behaviour), and perceived behavioural control (perception of the ease or difficulty of doing the behaviour) (Ajzen, 1991).

The Theory has been applied to help seeking numerous times, however its value in examining men's help seeking comes from linking masculinity to the precursors of behaviour, such as attitudes and norms (Vogel & Heath, 2016). A study by J. P. Smith et al. (2008) utilised the Theory of Planned Behaviour to build on previous research showing a negative relationship between adherence to traditional masculine norms and attitudes towards psychological help seeking. In this study, J. P. Smith et al. (2008) used a mediation model and found that attitudes towards help seeking fully mediated the effect of adherence to traditional masculine norms, measured by the MRNI, on intentions to seek help. The model explained 29.6% of the variance in men's intentions to seek help (J. P. Smith et al., 2008). Another study applied the Theory of Planned Behaviour to men's intentions to seek couples' therapy and found that two subscales of the CMNI (self-reliance and emotional control) were inversely related to help-seeking attitudes and subjective norms (Parnell & Hammer, 2018). Overall, this evidence supplements the Masculine Gender-Role Socialisation perspective by relating masculinity to help-seeking intentions, through attitudes and subjective norms.

1.2.3 The Prototype/Willingness Model

The Prototype/Willingness Model (Gerrard et al., 2008) extends the Theory of Planned Behaviour to include an additional pathway to help-seeking behaviour, which does not include attitudes and intentions. The second pathway is a

spontaneous or heuristic decision pathway to help-seeking behaviour, which does not involve deliberation, and includes two new constructs: prototype and willingness (Gerrard et al., 2008; Vogel & Heath, 2016). The prototype is a cognitive representation of the type of person who seeks help, and willingness describes one's willingness to perform help-seeking behaviour (Gerrard et al., 2008). The Model posits that one's prototype affects their willingness to perform the behaviour, and willingness and intentions function as independent predictors of help-seeking behaviour (Gerrard et al., 2008; Vogel & Heath, 2016). Furthermore, willingness is also affected by attitudes and subjective norms (Gerrard et al., 2008). van Lettow et al. (2016) conducted a meta-analysis of 80 studies (69 articles), published between 1990 and 2013, that used the Prototype/Willingness Model to examine either health-risk behaviours (e.g., drinking or smoking) or health-protective behaviours (e.g., exercise). This meta-analysis found small-to-moderate correlations ($.15 < r < .34$) between aspects of prototype and the health-related behaviours (van Lettow et al., 2016).

Although this Model has yet to be applied empirically to male help seeking specifically, Vogel and Heath (2016) suggest that future research might examine how an incongruence between men's prototype of help seekers and masculine gender norms might reduce men's likelihood of seeking help. Further, based on evidence that willingness is a stronger predictor of help-seeking behaviour than intentions among clinically depressed patients (Hammer & Vogel, 2013), Vogel and Heath (2016) suggest that the Prototype/Willingness Model may have greater predictive power when explaining male help seeking than the Theory of Planned Behaviour alone.

1.2.4 The Health Belief Model

The Health Belief Model (Rosenstock, 1966) attributes help-seeking behaviour to six factors related to the individual: (1) perceived susceptibility to a given health issue (concern about own health); (2) perceived threat from that health issue (concern over worsening symptoms); (3) perceived benefits of help seeking (e.g., alleviation of symptoms); (4) perceived costs of help seeking (e.g., risk of losing 'masculine' status); (5) perception of cues that motivate action (e.g., encouragement from friends or family); and (6) self-efficacy (confidence in one's ability to seek help) (Vogel & Heath, 2016). This Model has been applied extensively within health research (see Carpenter, 2010; Harrison et al., 1992; Janz & Becker, 1984 for reviews), primarily to explain health behaviours (Vogel & Heath, 2016).

Harrison et al. (1992) conducted a meta-analysis of 17 studies (16 articles) that applied the Health Belief Model to adult samples, published before 1988. Carpenter (2010) also conducted a meta-analysis of 18 studies (n = 2,702) using the Health Belief Model, published between 1982 and 2007. Across these two meta-analyses, small-to-moderate correlations ($.05 < r < .30$) between Health Belief Model variables and health-related behaviours, such as drug use, dental care, flu vaccination, were detected (Carpenter, 2010; Harrison et al., 1992). Vogel and Heath (2016) suggest that future research might investigate how the six factors are related to masculinity or being male.

1.2.5 Andersen's Behavioural Model

Andersen's Behavioural Model identifies three key factors related to healthcare usage: (1) predisposing-related factors (factors that predispose, but do not cause, individuals to use healthcare); (2) enabling-related factors (factors that impede or

facilitate healthcare use); and (3) need-related factors (conditions that require treatment) (Andersen & Davidson, 2007). Furthermore, each of these factors can operate at either the individual level or the contextual level (e.g., provider-related and environmental factors) (Andersen & Davidson, 2007). Babitsch et al. (2012) conducted a systematic review of 16 studies, published between 1998 and 2011, that used this Model to examine general healthcare use. Predisposing factors that were related to healthcare use commonly included sociodemographic factors such as age, marital status, sex/gender, education, and ethnicity. Enabling factors related to healthcare use generally included sociodemographic factors such as income, health insurance, having a family doctor, and availability of medical facilities. Finally, need factors related to healthcare use typically included evaluated and self-perceived health status (Babitsch et al., 2012). Notably, being male is associated with lower rates of healthcare utilisation in these studies, which is consistent with epidemiological evidence and with the Masculine Gender-Role Socialisation paradigm.

Andersen's Behavioural Model has been applied specifically to Australian men's help seeking for distress and revealed some additional factors (see Corboy et al., 2011). Men's negative attitudes towards seeking professional help and adherence to traditional masculine norms both act as predisposing factors that may inhibit help-seeking behaviour (Corboy et al., 2011). Social support is an enabling factor that may, in some cases, inhibit help seeking by reducing distress, thereby reducing the need for professional help (Corboy et al., 2011). Alternatively, social support may facilitate help seeking, if men are encouraged to seek help by social sources (Corboy et al., 2011). This body of literature indicates that Andersen's

Behavioural Model and the Masculine Gender-Role Socialisation paradigm are compatible, in that masculinity or being male may moderate or mediate the relationships between certain predisposing, enabling, or need-related factors and help-seeking behaviour.

1.2.6 The Access to Care Model

The Access to Care Model (Gask et al., 2012) describes help seeking as a process with six key factors: (1) candidacy (one's eligibility for healthcare); (2) navigation (to a point of entry into the healthcare system); (3) appearance (attending health services); (4) categorisation/adjudication (professional judgements about interventions or services, e.g., diagnosis); (5) offer (of intervention or service); and (6) receipt/rejection (of the offer). When examining mental health help seeking among male students, Sagar-Ouriaghli et al. (2020) suggest that masculinity or being male might affect each of these six factors. Perhaps the key overlap between this Model and the Masculine Gender-Role Socialisation paradigm is in the candidacy stage. Men who adhere strongly to masculine norms may not perceive themselves as eligible for healthcare, when that healthcare conflicts with those masculine norms. That said, Sagar-Ouriaghli et al. (2020) provide initial evidence that male students experience difficulties at each of the other five stages, compared to female students.

1.3 Limitations of Current Theoretical Perspectives

Researchers have detailed three key limitations of the current theoretical perspectives within the male help-seeking literature. First, empirical studies and the dominant Masculine Gender-Role Socialisation perspective have been criticised for focusing too heavily on masculinity as an inhibitive factor (Hoy, 2012; Vogel & Heath,

2016), thus potentially downplaying the significance of contextual factors in men's help seeking (Affleck et al., 2018; Vogel & Heath, 2016). Second, the theoretical perspectives described above typically operationalise masculinity as a unitary or hegemonic concept (Seidler et al., 2016), which ignores contemporary view that there exists a plurality of masculinities embodied by different groups of men (Seidler, Rice, River, et al., 2018). Furthermore, contemporary theory suggesting that masculinity is socially constructed (Addis & Mahalik, 2003) has yet to be widely incorporated into the theoretical or empirical literature on men's help seeking. Finally, help seeking itself is often operationalised as a single, binary decision influenced by various factors, which is called the 'ballistic approach' (Wenger, 2011). Contemporary work suggests that research might be improved by conceptualising help seeking as a long-term process involving a dynamic, varied set of behaviours and a variety of help providers and outcomes (Wenger, 2011).

1.3.1 Focusing Heavily on Masculinity

Researchers have noted that that majority of the male help seeking literature focuses on the relationship between adherence to masculine norms and men's help seeking (Hoy, 2012; Wenger, 2011). Consequently, less attention is paid to the broader set of contextual factors that affect men's help seeking (Affleck et al., 2018; Vogel & Heath, 2016). Cultural (Nam et al., 2010) and social norms (O'Brien et al., 2005) are related to men's help seeking, as are previous experiences of help seeking (Seidler et al., 2020b), encouragement from friends or family (Hoy, 2012), and access-related factors, such as having insurance (Daraganova & Quinn, 2020), to name a few. Furthermore, Australian data indicated that men's most common reasons for dropping out of therapy were a lack of connection with the therapist and

feeling that therapy was not helping (Seidler, Wilson, Kealy, et al., 2021). The Masculine Gender-Role Socialisation paradigm does not take these kinds of factors into account. Similarly, the Theory of Planned Behaviour and the Prototype/Willingness Model investigate individual-related factors, rather than contextual factors. The Health Belief Model includes factors that are related to contextual factors, such as the perception of cues to seek help, or perceived benefits and costs, however, these factors are still ultimately measured at the individual-level. Andersen's Behavioural Model does account for environmental and provider-related factors (see Phillips et al., 1998 for a review), while the Access to Care Model focuses heavily on processes within the healthcare system, however these models are less prominent within the male help-seeking literature, compared to the Masculine Gender-Role Socialisation paradigm (Hoy, 2012; Vogel & Heath, 2016). Overall, while examining masculinity in relation to men's help seeking is an appropriate first step, there remains a need to include contextual factors and universal help-seeking processes when modelling men's help seeking (Affleck et al., 2018; Vogel & Heath, 2016).

1.3.2 Defining Masculinity as a Unitary Concept

In the quantitative literature on men's help seeking, masculinity is typically conceptualised as both a "unitary and stable construct" (Seidler et al., 2016, p. 115). Firstly, masculinity is described as unitary, meaning that the traditional masculine norms captured by the CMNI, MRNI, or GRCS, for example, represent a specific form of masculinity, characterised by aggression, restrictive emotionality, and pursuit of status, among other things (Levant & Richmond, 2008; Mahalik et al., 2003; O'Neil, 2008). Measuring masculinity in this way may produce an incomplete picture

of how masculinity manifests with respect to help seeking. For example, Kiselica and Englar-Carlson (2010) argue that this represents a deficit model of masculinity focused on dysfunctional aspects of the masculine gender role. Consequently, positive and beneficial aspects of masculinity identified in the qualitative literature (Hoy, 2012; Seidler et al., 2016) have, until recently, remained largely absent from the quantitative research (Hoy, 2012; Kiselica & Englar-Carlson, 2010; Seidler, Rice, River, et al., 2018). These positive facets of masculinity could be leveraged by mental health professionals to facilitate help-seeking behaviour and enhance therapeutic outcomes (Hoy, 2012; Kiselica & Englar-Carlson, 2010; Seidler et al., 2016; Seidler, Rice, River, et al., 2018). In addition, this set of traditional masculine norms represents only a single, hegemonic form of masculinity (Seidler, Rice, River, et al., 2018). Contemporary scholarship acknowledges the existence of a plurality of masculinities within any diverse population of men, however this concept has received limited attention within the empirical male help-seeking literature (see Seidler, Rice, River, et al., 2018).

Secondly, masculinity is typically operationalised as a trait variable, which is approximately stable in the short-term, and expressed to varying degrees across different social interactions, similar to a personality trait (Addis & Mahalik, 2003). This view has a limited capacity to explain why individual men might deviate from these masculine gender norms, under certain conditions (Addis & Mahalik, 2003). For example, men who strongly endorse traditional masculine norms may still seek help. An alternative conceptualisation, offered by the social constructionist perspective, posits that masculinity (or masculinities) is constructed within social interactions, rather than being an essential component of men (Addis & Mahalik, 2003; Courtenay, 2000). Thus, rather than being a trait, masculinity is considered an

emergent property of the interaction between each person within the interaction and the social environment in which the interaction takes place. Hence, a man may construct masculinity differently depending on the people he is interacting with, and the same group of men may construct masculinity differently in different social environments. Alternatively, men may select certain environments or social groups based on a preference for the norms that are typically constructed in those contexts. The social constructionist perspective is relevant to help-seeking behaviour because it has the power to explain why a man might deviate from his adherence to masculine gender norms and seek help in some circumstances (Addis & Mahalik, 2003).

This perspective has been used to investigate men's construction of hegemonic masculinity in many contexts, including in the navy and in the space industry (see Addis et al., 2016 for a review). In a study of men with physical disabilities, Gerschick and Miller (1995) found that these men adopted three different strategies to construct their own sense of masculinity. The first strategy, reformulation, described the tendency to redefine traditional masculine norms, such as control over one's life, in one's own terms, so that they remained capable of embodying that norm despite their disability. Reliance described the tendency to internalise and adhere to traditional masculine norms despite being less capable of effectively embodying them. Finally, rejection described the tendency to create and/or adhere to an alternative set of masculine norms, instead of traditional masculine norms. This strategy was characterised by a belief that traditional masculine norms were 'wrong' (Gerschick & Miller, 1995). Overall, this research shows that men can and do construct masculinity partly as a response to their own health. In the same vein, the

social constructionist perspective has been used to examine risky health behaviours and lower rates of help-seeking as constructions of masculinity (Addis et al., 2016).

Overall, investigating the effect of masculine gender norms on men's help seeking has defined the field to date (Hoy, 2012; Vogel & Heath, 2016; Wenger, 2011) and remains a feature of the models listed above that incorporate masculinity. However, defining masculinity as unitary and stable concept limits our theoretical understanding of the diverse and adaptive features of masculinity that might facilitate help seeking, and of the socially-constructed nature of masculinity. As such, theoretical understanding of male help seeking might be improved by operationalising masculinity as an adaptive, emergent phenomenon in future models.

1.3.3 Employing a 'Ballistic Approach' to Help Seeking

Help-seeking behaviour is often operationalised as a single decision between two opposing choices: to seek help, or to refrain (Wenger, 2011). For example, the 2020/21 National Survey of Mental Health and Wellbeing and the Ten to Men study both operationalised help-seeking behaviour as whether or not participants had visited doctors, psychologists, or other healthcare professionals in the previous 12-month period (Australian Bureau of Statistics, 2022e; Daraganova & Quinn, 2020). The prominent theoretical models listed above are all primarily concerned with identifying factors that predict this choice. This approach is known as the 'ballistic approach' because individuals are viewed similarly to projectiles fired towards the healthcare system, and various factors, such as age, class, or gender, determine whether or not they hit the target (Wenger, 2011). Of course, understanding the factors that influence men's initial pathways to the healthcare system is important, however, help seeking does not begin and end there (Wenger, 2011). There is a

need to understand how help seeking occurs and changes over the course of a given illness, in response to men's changing needs and opportunities for support across contexts (Wenger, 2011).

The 'Dynamic Approach' describes help seeking as an "ongoing, interactive process of decision making" (Wenger, 2011, p. 491) that includes varied arrays of behaviours, help providers, and short- and long-term outcomes. The Dynamic Approach aims to explain help-seeking over the course of an illness by considering multiple professional and non-professional sources of help, multiple types of help-seeking behaviours, and multiple outcomes from help seeking, with varying degrees of success, rather than focusing in on a single instance of help seeking (Wenger, 2011). Viewing help seeking as a long-term pattern of behaviours may be particularly useful when studying mental illness, as professional treatment generally involves many interactive clinical visits, which necessitate a range of help-seeking behaviours from attendance to emotional disclosure. In addition, the Dynamic Approach posits that help seeking is driven by a perceived need for help, meaning that men's interpretation of symptoms is what informs help-seeking decisions, rather than presence of symptoms alone (Wenger, 2011). Furthermore, the Dynamic Approach considers help seeking an interactive process between men and help providers. Finally, the Dynamic Approach states that help seeking is learned, suggesting that previous experiences of help seeking can inform one's future help-seeking behaviour (Wenger, 2011). Models consistent with the ballistic approach are prevalent in the literature (Wenger, 2011), however, this approach may not be best suited to investigating the changes in help-seeking behaviour over the course of mental illness. As such, theoretical understanding of men's help seeking might be improved by applying a theoretical model that utilises the Dynamic Approach.

1.4 Towards a New Theoretical Model

Existing theoretical and empirical approaches to male help seeking, while immensely valuable, have some theoretical limitations. First, masculinity remains a heavy focus within the models most commonly applied to male help seeking (Vogel & Heath, 2016; Wenger, 2011). Although the influence of masculinity is an important factor in men's help seeking, the focus on masculinity risks overshadowing the effects of contextual factors (Affleck et al., 2018; Vogel & Heath, 2016). Second, masculinity is typically operationalised as a unitary trait-like variable that inhibits help seeking (Seidler et al., 2016; Vogel & Heath, 2016). Contemporary perspectives, however, consider masculinity a diverse, adaptive, and emergent phenomenon (Addis & Mahalik, 2003; Kiselica & Englar-Carlson, 2010; Seidler, Rice, River, et al., 2018), that can potentially be leveraged to engage men in the help-seeking process (Hoy, 2012; Kiselica & Englar-Carlson, 2010; Seidler et al., 2016; Seidler, Rice, River, et al., 2018). Finally, help seeking itself is often examined using the ballistic approach, which aims to investigate factors that predict entry into the healthcare system (Wenger, 2011). While this approach has merits, it has a limited capacity to examine men's changing needs over the course of mental illness. The Dynamic Approach, which considers a variety of help seeking behaviours, sources, and outcomes over the course of the illness can be used to supplement the existing body of knowledge (Wenger, 2011). As such, a theoretical model that (a) broadens its focus beyond masculinity to include contextual factors; (b) views masculinity as an adaptive, diverse, and emergent property of social interactions; and (c) incorporates the Dynamic Approach to help seeking by considering the wider array of help seeking behaviours, sources, and outcomes over the course of the illness may serve to enhance our current understanding of male help-seeking behaviour.

1.4.1 Signalling Theory

Signalling Theory may offer an existing theoretical framework that could be used to model male help-seeking behaviour in accordance with the three conditions stated above. Signalling Theory is a branch of Game Theory that models communication as a strategic interaction between two parties — a 'signaller' and a 'receiver' (Figure 1.1). The signaller has either a high or low level of some internal 'quality' that the receiver cannot directly observe, such as a trait or a need. A 'signal' is any behaviour that transmits information about the signaller's quality level to the receiver (Figure 1.1) (Lachmann et al., 2001; Maynard Smith & Harper, 1995), and Signalling Theory states that receivers confer some benefit onto the signaller in response to a signal (Connelly et al., 2011; Maynard Smith & Harper, 1995). Furthermore, signallers are motivated to produce signals when the predicted benefits of the signalling behaviour outweigh the predicted costs — that is, signallers make strategic decisions about whether to signal or to refrain from signalling (Lachmann et al., 2001).

Signalling Theory has been applied to many areas of study, from economics and management to anthropology, evolutionary biology, and evolutionary psychology. For example, Spence (1973) applied Signalling Theory to labour markets, and posited that accreditation was a signal from job candidates to employers. Job candidates use their accreditation as a signal of their level of productivity. It benefits job candidates to acquire accreditation because they are more likely to be hired by employers. Signalling Theory has also been applied to a wide range of animal behaviours. In their review, Maynard Smith and Harper (1995) list sexual displays by males, warning colouration, camouflage, anglerfish lures, begging by offspring, and the dances of honeybees all as signals, along with many others. For example,

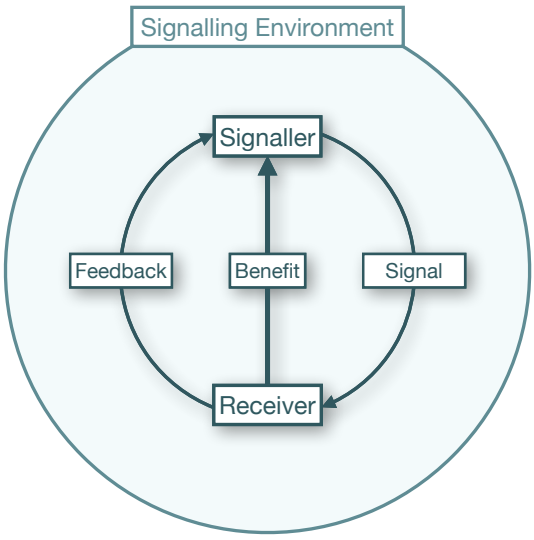
among a certain species of fruit fly, *Drosophila subobscura*, females will only mate with males who are able to face them for the entirety of a side-stepping dance. Males who successfully face the female during the dance signal their athletic ability to her. Signalling benefits the male by giving him the chance to mate. In the case of camouflage, a stick insect, for example, can signal to a predator that it is a stick, rather than an insect, and therefore will not be eaten. Anglerfish lures signal to their unfortunate prey that they are, in fact, an edible worm. Naturally, the anglerfish benefits from signalling by being able to feed. In anthropology, Signalling Theory has been used to explain food-sharing behaviour among hunter-gatherer tribes. Hunters share their kill beyond their immediate family in almost all mobile, foraging tribes (Stibbard-Hawkes, 2019). A large body of literature postulates that food-sharing is a signal from hunters to the other members of the tribe (see Stibbard-Hawkes, 2019 for a review). Although there is some debate over whether food-sharing behaviour signals 'hunting prowess' or 'pro-sociality', recent empirical evidence seems to support the latter. In this case, sharing their kill signals the hunter's pro-sociality, which benefits them by granting them a positive reputation (or saving them from attaining a negative one). Research shows that hunters who share food have better reputations and greater reproductive success (Stibbard-Hawkes, 2019).

In the management literature, Signalling Theory has been expanded to include 'feedback' and 'signalling environment' components (Figure 1.1) (see Connelly et al., 2011 for a review). The signaller can perceive how the receiver responded to their signal, which allows them to glean information about whether the receiver detected or correctly interpreted their signal, and how helpful (or not) that receiver's response was (Connelly et al., 2011). Thus, the receiver's response (or lack thereof) acts as a signal that transmits information back to the signaller. This transmission of

information from receiver to signaller is called ‘feedback’, and it allows the signaller to re-evaluate the benefits and costs of signalling, which affects their likelihood of signalling in the future (Connelly et al., 2011). The ‘signalling environment’ describes factors external to the signaller and the receiver that might affect the signalling process (Connelly et al., 2011). It is worth noting that, because the signalling process always occurs within the signalling environment, environmental factors can affect each of the other components in the model. In addition, Signalling Theory suggests that signalling behaviour occurs only as a product of the interaction between these five components. In other words, signalling behaviour is an emergent property of the interaction of these components.

Figure 1.1

Signalling Theory Components



1.4.2 Applying Signalling Theory to Model Male Help-Seeking Behaviour

Signalling Theory can be applied to male help-seeking behaviour. In a Signalling Model of Male Help-Seeking Behaviour (Figure 1.2), the man suffering

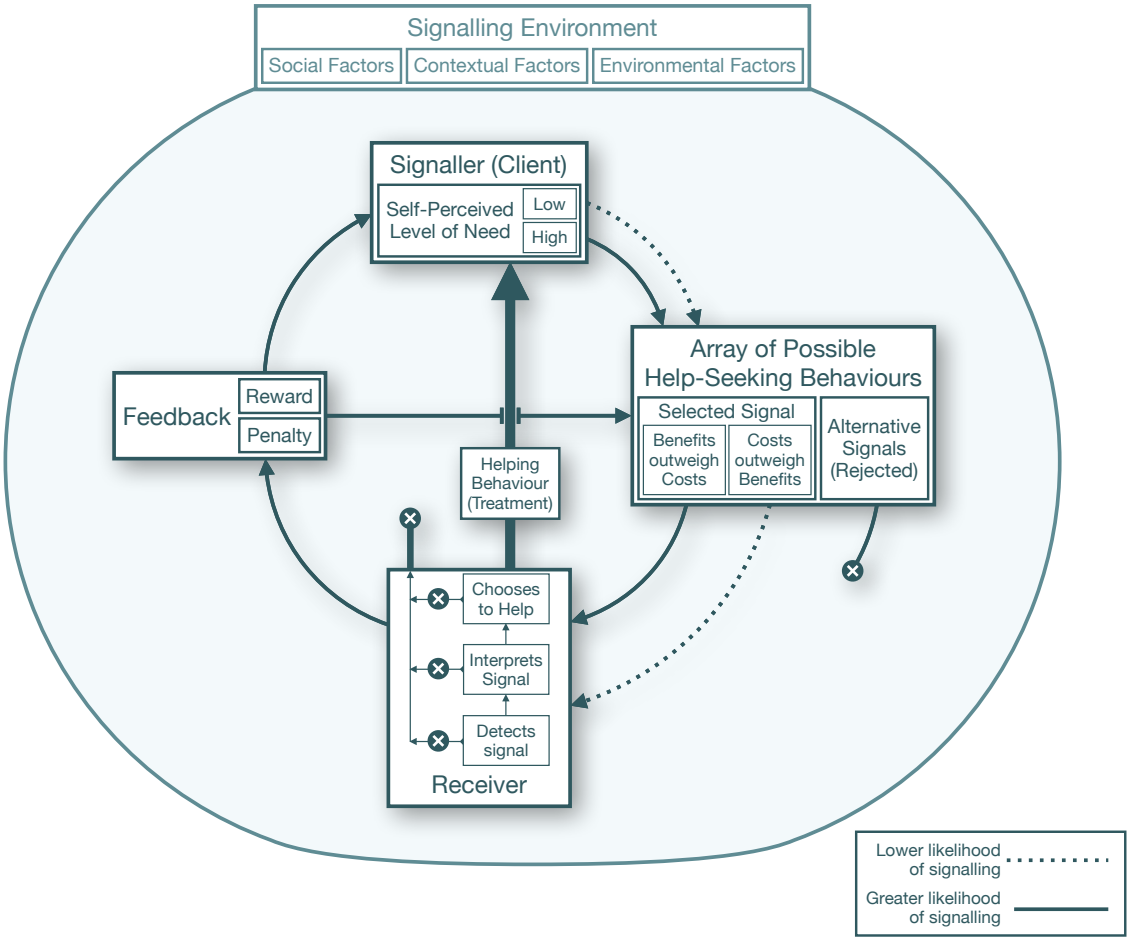
psychological distress is the signaller, help-seeking behaviours are the signals, and anyone capable of receiving the signal, such as family, friends, or healthcare providers, is a receiver. Through feedback, the man can evaluate the receiver's response to his signal and use that information to inform any future help-seeking behaviour. Finally, the signalling environment, in a psychological context, encompasses the environmental, social, or contextual factors that affect signalling. Signalling, in this case, is considered successful when it elicits effective helping behaviour, or psychological treatment, from the receiver.

This Model can potentially meet the three conditions mentioned previously. First, the Model clearly broadens its focus beyond the masculinity of the signaller and incorporates contextual factors. Properties of the signaller, such as adherence to masculine norms, represent only one component of the Model. Additionally, the Model incorporates contextual factors as properties of the signal, the receiver, the feedback, and the environment. Second, the Model focuses on the interaction between the signaller, signal, receiver, feedback, and environment, and thus can incorporate masculinity as an emergent property of that interaction, in keeping with the social constructionist view of masculinity. Furthermore, the Model itself makes no prescriptions about the nature of masculinity, and thus diverse and adaptive (and maladaptive) masculinities can simply be included as another factor that affects the benefits and costs of signalling. Third, the Model is consistent with the Dynamic Approach to help seeking. The Model includes the wide array of possible help-seeking behaviours, receivers, and environments. Furthermore, the Model is cyclical, meaning that it can be applied to long-term patterns of help-seeking behaviour, over the course of a given illness. Finally, Andersen's Behavioural Model includes need-related factors as predictors of help-seeking behaviour, and the Dynamic Approach

states that help seeking is initiated by a perceived need. Since need or perceived need can be categorised as an internal quality that can only be observed by signalling, as described by Signalling Theory, this Signalling Model could potentially be used to supplement exiting theoretical perspectives on male help-seeking behaviour.

Figure 1.2

Detailed Diagram of the Signalling Model of Male Help-Seeking Behaviour



1.4.3 Note on the Internal Quality being Signalled

For this thesis, it is important to define the internal quality being signalled, according to two conditions. First, it must fulfil the definition of an internal quality, and second, it must predict help-seeking behaviours — that is behaviours intended to meet an individual's need for assistance in a positive way, and not destructive or unintentional behaviours (Rickwood et al., 2012). One might assume that psychological distress is the internal quality that men signal, and while it is true that distress can be an internal quality, a signalling model built around distress would include many signals that fall outside the definition of help-seeking behaviour. For example, substance abuse may function as a signal of distress, but such destructive behaviours are not classified as a help-seeking behaviours according to the definition stated above, even though a receiver may respond to substance abuse by providing help. Similarly, symptoms of a mental illness would function as a viable signal of the psychological distress associated with that illness, however, symptoms are not intentional help-seeking behaviours, even if they elicit help from a receiver. Furthermore, distress may not be the best predictor of behaviour, given that the relationship will likely be moderated by the individual's resilience.

Given this, one might define 'need for help' as the internal quality being signalled, as it incorporates both distress and resilience. Furthermore, behaviours that successfully signal a 'need for help' are more likely to resemble conventional help-seeking behaviours, unlike signals of 'distress'. However, such a model might still include unintentional behaviours that signal a need for help, which would fall outside the definition of help-seeking behaviour used in this thesis.

Because the aim of this work is to develop a holistic theoretical view of the help-seeking process, behaviours that are unintentional or destructive fall outside

the scope of this thesis. As a result, the Signalling Model conceptualised herein defines the internal quality as 'self-perceived level of need for help'. Self-perception is a necessary element for two reasons. First, because, under adequate signalling conditions, self-perceived need is likely to produce intentional, positive help-seeking behaviours, unlike 'distress' or 'need for help'. Second, because it is possible for a man to misperceive his own level of need by, for example, normalising his symptoms (Galdas et al., 2005). In that case, the man would seek help according to his perceived level of need rather than his true level of need. Hence, the Signalling Model described in this thesis is congruent with the Dynamic Approach, in that help-seeking is initiated by a self-perceived need for help. The Model is also consistent with existing literature on mental health literacy, in that greater knowledge of mental illness symptoms, which facilitates perceiving a need for help, is associated with a greater likelihood of help seeking (Bonabi et al., 2016; Jorm, 2012; Wei et al., 2015; Xu et al., 2018).

1.4.4 Note on Terminology Used in This Thesis

It is worth distinguishing between the terms 'Signalling Theory' and 'Signalling Model' used throughout this thesis. The term 'theory' describes a broad set of principles that explain a particular phenomenon, while the term 'model' describes a simplified view of that phenomenon, and refers to components, properties of those components, and relationships between those components (Fried, 2020; Nilsen, 2020). For this thesis, 'Signalling Theory' refers to the theoretical framework describing a strategic interaction between a signaller and receiver and the predictions generated by that theory, while the term 'Signalling Model' or 'Model'

refers to the application of those theoretical principles and predictions to the specific context of male help-seeking behaviour.

1.5 Aims and Objectives

1.5.1 Aim

This thesis aims to (1) critically review the existing literature on male help-seeking behaviour to identify theoretical gaps and limitations in our current models of men's help-seeking behaviour for mental illness, and (2) develop and test a new theoretical model of male help-seeking behaviour that seeks to address these gaps and limitations.

1.5.2 Objectives

The objectives of this thesis are to:

1. develop a theoretical model of male help seeking that can generate novel, testable hypotheses for future research;
2. broaden the theoretical focus beyond masculinity alone;
3. conceptualise help seeking as a long-term pattern of behaviours, and as a process involving friends, family, community members, and healthcare providers, rather than just the person seeking help; and
4. suggest how researchers, clinicians, and policy makers can implement this model to improve best practice for engaging men in psychological treatment.

1.6 Mode of Thesis Presentation

This thesis is presented in a publication format (Adelaide Graduate Centre, 2020), consisting of both written narrative and works intended for publication. Three chapters (Chapters Three to Five), on the development and testing of a new theoretical framework for understanding male help-seeking behaviour, are presented in manuscript form. These chapters are book ended by introduction, methods, and discussion chapters presented in narrative format. I am the primary author on each paper, and my supervisors are co-authors.

1.7 Overview of Thesis Structure

1.7.1 Chapter One: Introduction

The first chapter introduces the main issues and theoretical concepts discussed throughout the thesis. Aims, objectives, and the overall structure of the thesis are also outlined.

1.7.2 Chapter Two: Methods and Exegesis

The second chapter describes the methodology adopted in all publications included in the thesis, including the rationale and execution of those methodologies. This chapter also serves as an exegesis of all publications included in the thesis.

1.7.3 Chapter Three: Critical Review

Chapter Three is a critical review of the existing male help-seeking literature that proposes a theoretical model of male help seeking based on Signalling Theory. Hypotheses are generated from the Signalling Model, and existing evidence that supports those hypotheses is reviewed.

1.7.4 Chapter Four: Men in Mind Study

Chapter Four is an empirical study examining the effects of men's perceptions of the benefits of therapy on their initial motivation to attend and their attitude towards future therapy. This study also examines the relationship between therapist behaviour and men's attitude towards future therapy, which is predicted to be mediated by men's perceptions of the benefits of therapy.

1.7.5 Chapter Five: Ten to Men Study

Chapter Five uses data from the Ten to Men study to examine the relationship between distress and both formal and informal help seeking. Across four multivariate models, mediators of these relationships including bond with both formal and informal receivers, previous help seeking, informal help seeking, and ability to find health-related information are tested.

1.7.6 Chapter Six: Discussion

The sixth and final chapter serves as a discussion of the thesis. This chapter includes a summary of the thesis, a discussion of the strength and limitations of the work, reflections on the significance of the thesis, and commentary on the research, clinical, and policy implications.

Chapter Two: Methods and Exegesis

2.1 Thesis Methodological Aims and Chapter Structure

This chapter serves as a critical explanation of all methodologies employed within this thesis, with reference to the aims of each paper. The chapter is divided into two sections: one describing and examining the methodology of the review paper, and one describing and examining the methodologies of the two subsequent quantitative studies, as the methodologies employed in both studies are similar.

2.2 Regarding the Use of Sex-Related and Gender-Related Terminology

The American Psychological Association recommends clearly distinguishing between terms referring to sex and to gender, such that publications remain inclusive, and free of bias (American Psychological Association, 2020). This principle has been followed to the best of the author's ability throughout the thesis.

As this is a relatively new principle in academic writing, much of the existing male help-seeking literature conflates sex-related and gender-related terminology. For example, the literature refers to sex when citing empirical data from male participants, but then refers to gender when explaining their behaviour through masculine socialisation and gender roles. Furthermore, terms that might refer to either sex (e.g., 'males') or gender (e.g., 'men') are used interchangeably. Generally, term 'male' is used as an adjective (i.e., 'male help-seeking'), and the terms 'man' or 'men' are used as nouns (i.e., when referring to groups of participants).

As such, separating sex-related and gender-related concepts when reviewing this body of literature (i.e., in Chapter 3) is not always possible and may lead to erroneous interpretations. In keeping with the American Psychological Association

recommendations, the author has opted to use ‘male’ as an adjective and ‘men’ as a noun (American Psychological Association, 2020).

The author does, however, acknowledge that the conflation of sex and gender is a limitation of this body of literature and looks forward to the adoption of more precise and inclusive language in future research. Furthermore, the author emphasises that the Signalling Model developed in this paper is not exclusive to any group based on sex or gender, it is only framed as a model of ‘male’ help-seeking behaviour because it is positioned within the broader body of male help-seeking literature and developed specifically to address some of the limitations of that literature.

For the empirical studies (Chapters 4 and 5), participants were included in the studies if they identified as male, allowing for the inclusion of transgender men. As per the American Psychological Association recommendations, information about the gender identity of sample participants is described in both empirical studies (American Psychological Association, 2020).

2.3 Review Paper Methodology

2.3.1 Critical Review Rationale, Overview, and Strengths and Limitations

After preliminary reading of seminal papers and reviews within the male help-seeking literature, several consistent properties of male help seeking were identified. Firstly, men consistently describe various personal, social, and emotional costs of help seeking as barriers to seeking help, such as the fear of being stigmatised (Hoy, 2012; Seidler et al., 2016). Furthermore, in some cases, men delay help seeking, even after recognising symptoms, until those symptoms become severe (Galdas et al., 2005; Seidler et al., 2016). Several studies have also demonstrated that men

perceive traditional therapy as effeminate and are more likely to endorse alternative ‘masculine’ therapies (Robertson & Fitzgerald, 1992; Wisch et al., 1995). In addition, cues from close friends or family are a common facilitator of male help seeking (Vogel & Heath, 2016). Finally, therapist behaviours can have a negative impact on men, making them less likely to seek help in the future (Kiselica & Englar-Carlson, 2010; Seidler et al., 2020b). These properties indicated that Signalling Theory may provide an appropriate conceptual framework for modelling male help-seeking behaviour and warranted conducting a formal review of the literature.

The author decided to conduct a critical review (see Grant & Booth, 2009), as this type of review seeks to derive a theoretical model from the review of existing literature. A critical review “includes a degree of analysis and conceptual innovation” (Grant & Booth, 2009, p. 93), beyond merely describing the existing literature. The search strategy for a critical review involves identifying and including significant works in the field, rather than searching systematically or comprehensively. Included literature usually does not undergo any formal quality appraisal. Literature can be synthesised in narrative format, or against a conceptual or theoretical framework. The included literature is analysed according to its conceptual relevance to the theoretical model in question (Grant & Booth, 2009).

The strength of a critical review lies in its mapping of existing evidence onto a new or updated theoretical model (Grant & Booth, 2009). This conceptual innovation can illuminate new research avenues, generate novel hypotheses, and suggest new practical applications for the field of study. Further, critical reviews collate a broad array of literature, and thus may identify new links between existing evidence or concepts previously viewed as unrelated. Critical reviews may also produce novel

interpretations of existing evidence (Grant & Booth, 2009). For these reasons, the author chose to conduct a critical review.

Critical reviews do, however, have some limitations. The key limitation is the lack of systematicity compared to other review types (Grant & Booth, 2009). Critical reviews lack a systematic, comprehensive search strategy, a formal quality assessment of the included literature, and a structured method of synthesising the literature, as these elements are difficult to implement when the review process is directed by a conceptual model. As such, critical reviews, like traditional narrative literature reviews, are subject to the interpretive biases of the authors. Hence, critical reviews should be understood as a theoretical "starting point" (Grant & Booth, 2009, p. 97), rather than a final verdict.

2.3.2 Critical Review Aims and Structure

After choosing to conduct a critical review, the author formulated the aims of the review, which were to:

1. identify conceptual gaps and limitations in the theoretical perspectives commonly applied to men's psychological help-seeking behaviour;
2. address these gaps and limitations by outlining a more complete model of male psychological help-seeking behaviour based on Signalling Theory;
3. determine the extent to which the existing evidence supports a Signalling Model of Male Help-Seeking Behaviour; and
4. discuss the theoretical, clinical, and research implications of a Signalling Model of Male Help-Seeking Behaviour.

To achieve the aims, the review paper was divided into five major sections. The first served as the introduction. The second was an overview and critique of the

theoretical perspectives applied within the male help-seeking literature. The third section outlined the Signalling Model of Male Help-Seeking Behaviour. The fourth section served as the critical review itself. This section was subdivided into seven predictions generated by the Signalling Model, and literature relevant to each prediction was reviewed therein. The final section included a discussion of the theoretical, clinical, and research implications of a Signalling Model.

2.3.3 Review Methodology

The second section of the review paper provided an overview and critique of the theoretical perspectives applied within the male help-seeking literature. Reviews in the field were found by searching PsycINFO, PubMed, Embase, and Scopus for articles including ‘male help seeking’, ‘masculinity’, ‘mental health’, and ‘review’ in the abstracts, keywords, or titles. Existing theoretical papers were found by searching the same databases for articles including ‘male help seeking’, ‘masculinity’, ‘mental health’, and ‘theory’ in the abstracts, keywords, or titles. Backwards reference searching through Google Scholar and the University of Adelaide Library Search was also used to identify theoretical papers and seminal works in the field.

For the section describing the Signalling Model, a similar procedure was used when searching for papers on Signalling Theory, however search terms included ‘Signalling Theory’ and ‘review’. Signalling Theory was then applied to male help seeking to create the Signalling Model of Male Help-Seeking Behaviour. The relationships between the man seeking help, help-seeking behaviour, and the help provider resemble the theorised relationships between the signaller, signal, and receiver. As such the man seeking help was defined as the signaller, help-seeking

behaviour was defined as the signal, and the help provider was defined as the receiver. Because a signal transmits information about an internal, unobservable quality of the signaller, such as a trait or a need (Lachmann et al., 2001; Maynard Smith & Harper, 1995), perceived level of need was defined as the quality being signalled. This led to the first prediction generated by the Model: that quality level, or perceived need, would be positively related to help-seeking behaviour. Signalling Theory states that signals have benefits and costs associated with their production, and that signallers are motivated to produce signals when the predicted benefits of the signalling behaviour outweigh the predicted costs (Connelly et al., 2011; Lachmann et al., 2001; Maynard Smith & Harper, 1995). This generated three more predictions: first, that help-seeking would be incentivised by perceived signal benefits; second, that help-seeking would be disincentivised by perceived signal costs; and third, that men would be motivated to seek help when the perceived benefits outweighed the perceived costs, and motivated to refrain when the perceived costs outweighed the perceived benefits. The management literature describes receivers as responsible for detecting, interpreting, and responding to signals (Connelly et al., 2011). As such, detecting, interpreting, and responding correctly (i.e., providing help) to a help-seeking signal were predicted to be essential to successful help-seeking. The management literature also describes the receiver's response to a signal as feedback that affects the signaller's future signalling (Connelly et al., 2011). This gives rise to the sixth prediction of the Signalling Model: that feedback will affect the likelihood of men's future help-seeking. Finally, properties of the signalling environment can affect the signalling process (Connelly et al., 2011). Thus, the final prediction was that environmental factors can affect the help-seeking process.

For the critical review section, literature searching followed a similar procedure as the previous sections. PsycINFO, PubMed, Embase, and Scopus were searched, with search terms tailored for each of the seven predictions. For example, the first prediction was that “The signaller’s level of need for help is positively related to their help-seeking behaviour”. For this prediction, ‘level of need’ and ‘perceived need’ were included as search terms. All evidence related to this prediction was collected under a single heading in the final manuscript. This process was repeated for each prediction, and backwards reference searching was used throughout. Although not used as a strict criterion for inclusion, papers describing mental health help seeking among male-only cohorts were the primary focus of this review process. Where such papers were unavailable, papers describing medical help seeking or papers that described gender effects in the results were included based on their conceptual contribution.

Appraisal and synthesis were guided by the seven predictions. No formal quality assessment was conducted, as the aim of the critical review relates to the conceptual contribution of the included literature, rather than on quality assessment (Grant & Booth, 2009). The literature was synthesised in conceptual format (Grant & Booth, 2009), corresponding with each of the seven predictions.

2.3.4 Critical Summary of Review Findings

The review aimed to critique the theoretical perspectives commonly applied to men’s psychological help-seeking behaviour. This was achieved by first noting that existing literature often refers to men’s lower rates of help seeking, compared to women, and, as a result, often suggests that traditional masculine norms conflict with help-seeking behaviour, causing men’s reluctance to seek help. The review then

highlights exiting critiques of a theoretical approach focused on sex differences. Furthermore, the review cites critiques of the operationalisation of both masculinity and help seeking within the quantitative literature. The review argues for the advantages of a theoretical model developed in response to these critiques and suggests that Signalling Theory could be used as a framework for such a model.

Next, the review aimed to outline a model of male psychological help-seeking behaviour based on Signalling Theory, that addresses the limitations noted in the previous section. This was achieved by applying contemporary Signalling Theory principles from the Evolutionary Biology, Economics, and Management literatures to male help-seeking behaviour. This Model was used to generate the seven predictions that informed the critical review section.

The third aim was to determine the extent to which the literature supports the Signalling Model. This was achieved by conducting a critical review of evidence supporting each of the seven predictions. The review found evidence to provide preliminary support for each of the seven predictions, and therefore argues that the Signalling Model may serve as an appropriate theoretical framework for modelling male help seeking. It should be noted that a systematic or exhaustive review of the literature was beyond the scope of the stated research aims. For example, take the final prediction, that help seeking is affected by properties of the signalling environment. There are many environmental factors that may affect help seeking. Parsing out which of these factors do versus do not affect help seeking was not the goal of this study. Rather, the aim of the study was to determine whether there were environmental factors that affected help seeking, in order to determine the extent to which a model based on Signalling Theory is applicable to male help seeking. Rather than being an exhaustive review of the literature, this paper highlights the evidence

that suggests that male help seeking resembles the signalling process. In fact, given the broad nature of the Signalling Model, a systematic or exhaustive review may be impractical. Instead, a suggestion for future research is to conduct systematic reviews of individual components of the Model (e.g., a systematic review of environmental factors affecting male help seeking), or even to conduct systematic reviews of individual factors within each component (e.g., a systematic review of the effect of cultural norms on male help seeking).

The final aim of the paper was to discuss the theoretical, clinical, and research implications of the Signalling Model. These implications are considered in the context of the existing male help seeking literature. The review paper highlights the need for future research to test the Signalling Model, and the predicted relationships between components of the Model, directly. The subsequent quantitative studies were undertaken to achieve that aim.

2.4 Quantitative Studies

2.4.1 Aims and Rationale

The two subsequent quantitative studies aimed to empirically test the Signalling Model, using large existing datasets. Using existing datasets was preferable to conducting a first-hand study for two reasons. Firstly, the datasets available to the author had much larger sample sizes than the author was able to recruit. Secondly, the sampling frames of the available datasets were more robust than any that the author was able to implement within the context of a PhD. The disadvantage of using existing datasets was that the included measures are not purpose-designed to test the Signalling Model directly. As such, not all of the components described by the Signalling Model are captured by any single dataset, and a holistic empirical test of

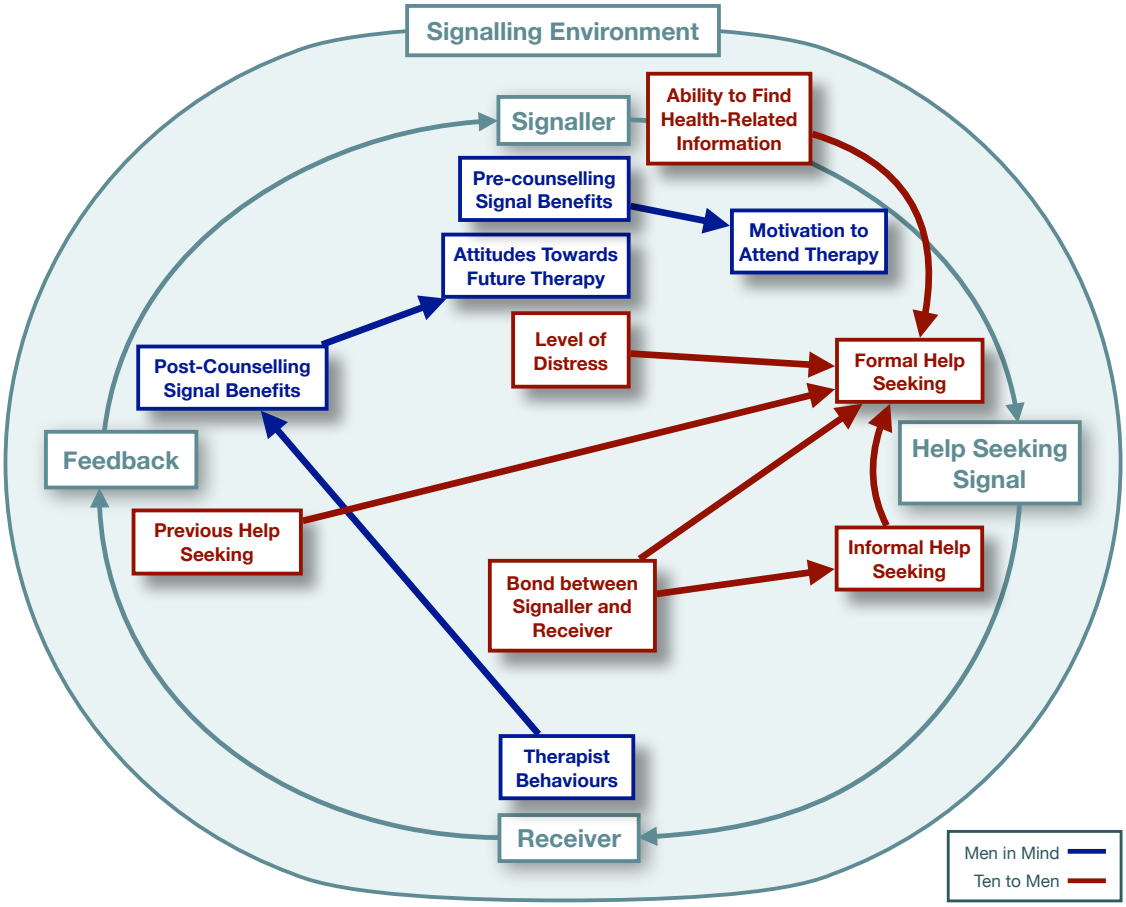
the Signalling Model could not be undertaken. For this reason, the goal across both studies was to test as many components of the Signalling Model as possible.

The two datasets were chosen such that each component of the Signalling Model could be tested by at least one study. The first study, referred to throughout as the Men in Mind study, examined factors within the signaller, receiver, and feedback components of the Model, and a factor that spans both the signaller and signal components: initial motivation to attend therapy. The second study, the Ten to Men study, tested factors related to the signaller, signal, and feedback components, as well as a factors that span the signaller and receiver components — bond between signaller and receiver — and the signaller and environment components — ability to find health-related information. Note that together, both studies test relationships between factors that cover all five components of the Signalling Model (see Figure 2.1).

While both studies test the Signalling Model, they each had separate research aims. The Men in Mind dataset included variables related to the signaller, perceived and evaluated signal benefits, receiver, and feedback components. These variables allowed for an analysis of the effect of perceived signal benefits on initial motivation to seek help, the effect of evaluated signal benefits on attitudes towards future help seeking, and an analysis of the pathway from receiver behaviours to attitudes towards future help seeking through the feedback mechanism. Testing these relationships became the aim of the Men in Mind study.

Figure 2.1

Diagram of Signalling Model Components Including Constructs and Relationships Tested in Quantitative Studies



Note. Components of Signalling Model are shown in light blue. Constructs measured by datasets are grouped under the appropriate components, and the arrows represent the hypothesised relationships tested. Dark blue is used for constructs and relationships captured by the Men in Mind dataset, while red is used for those captured by the Ten to Men dataset. Between the two datasets, relationships between all five of the components of the Model were able to be tested. Some constructs (such as 'bond between signaller and receiver') may span more than one component and are positioned accordingly.

The Ten to Men dataset included factors related to the signaller, signal, and feedback components, namely distress, help-seeking behaviour, and previous and informal help seeking, respectively. The dataset also included factors that span more than one component. For example, bond — feelings of trust and attachment (Bordin, 1979) — with receivers spans the signaller and receiver components, and ability to find health-related information spans the signaller and environment components. As such, the aim of the Ten to Men study was to test the multivariate pathways between the Signalling Model components. The signaller-signal-receiver pathway was tested by modelling distress, bond, and help seeking together across two structural equation models, for both formal and informal help seeking. The feedback-signaller-signal pathway was modelled using distress, previous help seeking, informal help seeking, and formal help seeking. Finally, the environment-signaller-signal pathway included distress, ability to find health-related information, and formal help seeking.

2.4.2 Men in Mind Dataset

The first of the quantitative studies used data from an online survey of approximately 2,000 Australian men, conducted in 2020 (Seidler, Wilson, Oliffe, et al., 2021). Men over the age of 16 were recruited via the Movember Facebook page. Movember is the leading men's health charity worldwide, and it funds research into men's mental health, suicide prevention, and prostate cancer and testicular cancer (Movember, 2021). Advertisements were targeted more towards men living in rural or remote areas (Seidler, Wilson, Oliffe, et al., 2021). Men below the age of 25 and above the age of 61 were underrepresented during the initial recruitment stage, and advertisements were subsequently targeted more towards those groups (Seidler, Wilson, Walton, et al., 2022). The final sample analysed for this thesis included 2,002

male-identifying participants. The survey was approved by Psychology, Health and Applied Sciences Human Ethics Sub-Committee of The University of Melbourne (ID: 1956099) (Seidler, Wilson, Walton, et al., 2022). The survey gathered data on men's experiences in therapy, including their initial motivation to attend and willingness to return in the future, their ratings of satisfaction with therapy and perceived helpfulness of therapy, and their therapist's implementation of 13 different 'microskills', hypothesised to improve men's engagement with therapy. Sociodemographic variables and depression symptom severity were also measured. Other measures, beyond the scope of this thesis, have been separately used to investigate men's pathways to accessing mental health services (Seidler, Wilson, Walton, et al., 2022), men's therapist gender preferences and their effects on satisfaction with therapy (Seidler, Wilson, Kealy, et al., 2022), and men's reasons for dropping out of therapy (Seidler, Wilson, Kealy, et al., 2021).

2.4.3 Ten to Men Dataset

The second quantitative study used data from the Ten to Men study. The Ten to Men study is a longitudinal, Australian survey on the health of men and boys (Bandara et al., 2021). The survey has three key aims: to investigate key determinants of male health; to investigate the health behaviours, risk factors, life transitions, and socioeconomic environments of men and boys that pertain to health and wellbeing; and to identify potential policies that may improve male health and wellbeing in Australia (Bandara et al., 2021). To date, data have been collected across six topics (wellbeing and mental health, use of health services, health-related behaviours, health status, health knowledge, and social determinants), in three separate waves (2013-14, 2015-16, and 2020-21) (Bandara et al., 2021). The project

was started by the University of Melbourne, and, since 2017, has been overseen by the Australian Institute of Family Studies. The study is funded by the Australian Government Department of Health.

Recruitment followed a stratified, multi-stage, cluster random sampling procedure, with oversampling of men and boys from regional areas (Bandara et al., 2021; Currier et al., 2016). This procedure was selected due to its higher response rate (42.3%) during piloting compared to other recruitment methods (Currier et al., 2016). The Australian Statistical Geographic Standards (ASGS) divides the country into Statistical Areas (SA1s) that each include an average of 400 people (Currier et al., 2016). SA1s across Australia were randomly selected (although see exceptions in Currier et al., 2016) and recruiters attempted to contact every household in each SA1. To be included in the study, participants needed to be men and boys aged 10–55 during this initial recruitment phase, Australian citizens or permanent residents, and fluent in English (Bandara et al., 2021). Over 100,000 Australian households were approached, over 80,000 of those were contacted, and over 30,000 of those remained eligible. In total, over 45,000 men and boys were eligible for participation, and over 16,000 of those participated in the Wave 1. The study was approved by the University of Melbourne Human Research Ethics Committee, and informed consent was given by participants prior to participation in the study (Bandara et al., 2021).

Of the three completed waves, Wave 3 includes the most variables relevant to the Signalling Model, many of which were not measured at Waves 1 and 2. These include the bond between men and their healthcare providers, the level of emotional support men have from their social group, and the ease with which men can learn about the formal help-seeking process. Sociodemographic variables and depression and anxiety symptom severity are also measured. The dataset also includes a

measure of men's help-seeking behaviour for personal or emotional problems, across all three waves. As such, help-seeking behaviours measured at Wave 3 are used as the outcome variable, and help-seeking behaviours measured in Waves 1 and 2 is used as a measure of previous help-seeking behaviour. As such, the final sample analysed for this thesis included 2,071 participants sampled at Wave 3.

Recently, data from Ten to Men have been used to produce a report detailing the social connectedness of Australian men and factors and health-related outcomes associated with greater social connectedness (Quinn et al., 2021). Furthermore, since 2020, peer-reviewed studies utilising the Ten to Men data have examined the relationships between discrimination and mental health-related outcomes (Balakrishnan et al., 2022; Haregu et al., 2022) and masculinity and mental health-related outcomes (Van Doorn et al., 2021). Risk-taking behaviour in suicidal men has also been studied (Armstrong et al., 2020). Other publications have examined sexual functioning (Bollier et al., 2019), the link between socioeconomic disadvantage and substance use (Currier et al., 2021), and the link between occupation and men's health literacy (Milner et al., 2020).

2.4.4 Materials and Data Analysis

RStudio, version 4.0.2 (Posit Software, 2022) was used to extract variables of interest from each dataset and compute additional variables. The hypotheses for both studies were tested using linear regressions, mediation analyses, and structural equation modelling. JASP, version 0.16.1.0 (JASP Team, 2022) was used for all data analysis.

The format of the Men in Mind survey forced responses to all items from participants, meaning there was no missing data. The Ten to Men study, however,

allowed participants to refrain from answering items. As such, participants with incomplete responses on the measures of interest were excluded from the analysis. Almost 8,000 participants completed Wave 3, but only around 2,000 participants had complete responses on all measures of interest. Originally, the author had intended to include CMNI scores as a predictor variable related to the signaller in the analysis, however so few participants completed the CMNI section of the survey that this would have negated the advantages of accessing a large dataset. Had CMNI scores been included, the number of respondents would have dropped from around 2,000 to around 200 participants. As such, CMNI scores were not included in the analysis. The Ten to Men study also included a vast number of variables, which, in many cases, differed across waves. While the additional data are useful, selecting which variables to include and which wave(s) to access presented a significant practical challenge. Wave 3 was selected because it included more variables relevant to the Signalling Model than any other wave, reducing the practical complexity involved in the data extraction process.

2.4.5 Methodological Strengths and Limitations

Both datasets have similar strengths and limitations. A strength of both datasets is their large sample size (approximately 2,000 participants each). The Men in Mind study utilised a self-selected sample, and one cannot assume that the sample is representative of the total population of male help-seekers or of men with psychological distress, although the researchers did recruit more heavily among underrepresented groups. Furthermore, participants who did not attend therapy were given a different questionnaire to complete, and thus this study lacks a true comparison group. Any contrast between these groups in perceived signal benefits

and costs is likely to yield important findings. Alternatively, the Ten to Men study used a cluster random sampling design. Although not a true random sample, this methodology approaches a random sampling procedure while making some exceptions for practicality. As such, the Ten to Men sample is perhaps as representative a sample of Australian men and boys that can pragmatically be recruited. However, help-seeking behaviour was only measured among participants who reported having a personal, emotional, or behavioural problem, and only that subset of participants could be included in the analysis. As such, the final sample lacks a comparison group, and cannot be assumed to represent the true population of Australian men. Furthermore, there are key similarities and differences between the demographic characteristics of both samples and those of the general population of Australian men. More detailed analyses of the demographic characteristics are undertaken in the relevant chapters, and specific conclusions about the representativeness of each sample are made. In response to the limitations in sampling methods discussed here, however, future research into the Signalling Model should rely primarily on representative samples that include help-seekers and non-help-seekers alike.

These datasets were not purpose-designed to test the Signalling Model. As such, the measures included did not always conform strongly to the concepts described by the Signalling Model. For example, the Men in Mind study measured signal benefits as ratings of satisfaction with and helpfulness of therapy, but there may be other signal benefits not captured by those measures, such as the effectiveness of therapy, or the alleviation of symptoms. In addition, the study did not measure overall signal costs in a similar way, instead only measuring costs to participants' masculinity. Furthermore, not all components of the Signalling Model

were measured by each dataset. The Men in Mind study measured factors related to the signaller, receiver, and feedback, without measuring environmental factors or factors related to the signal itself, such as attitudes towards therapy. Alternatively, the Ten to Men study included measures from all components except the signaller. As such, these two studies only serve as preliminary tests of certain aspects of the Signalling Model. Future research should aim to test bespoke measures of all components of the Signalling Model in a single comprehensive study. These two studies serve only as a preliminary test of some aspects of the Model, rather than a comprehensive test, and hence call for supplementation with future research.

Chapter Three: Critical Review

Statement of Authorship

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Overall Percentage (%)	70%		
Certification	This paper reports on original research I conducted during the period of my Higher Degree by Research candidature and is not subject to any obligations or contractual agreements with a third party that would constrain its inclusion in this thesis. I am the primary author of this paper.		
Signature		Date	7th June 2023

Co-Author Contributions

By signing the Statement of Authorship, each author certifies that:

i. the candidate's stated contribution to the publication is accurate (as detailed above);

ii. permission is granted for the candidate in include the publication in the thesis; and

iii. the sum of all co-author contributions is equal to 100% less the candidate's stated contribution.

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Towards a Signalling Model of Male Help-Seeking Behaviour: A Critical Review of Male Help Seeking and a Novel Application of Existing Theory

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Abstract

Male help seeking has received increasing attention, however, there is no consensus on a theoretical model that can incorporate the wide array of facilitators and barriers identified in the empirical literature. This paper is the first to apply Signalling Theory to male help seeking to advance theoretical understanding, and generate new, testable hypotheses. The Signalling Model of Male Help-Seeking Behaviour incorporates the man seeking help as well as the help-seeking behaviours available, the help providers and their feedback, and the environment in which the help seeking occurs. The Model posits that men will seek help when the predicted benefits of doing so outweigh the predicted costs and will choose to refrain otherwise. Existing qualitative and quantitative evidence within the men's help-seeking literature published between 1992 and 2022 is reviewed and found to provide initial support for the predictions generated by the Model. The most important implication of the Signalling Model is the conceptualisation of help seeking as an emergent property of the interaction between the signaller and the receiver, the signals and feedback produced, and the signalling environment. Future research should aim to prospectively test the Signalling Model.

Keywords

Male help seeking; Signalling Theory; Men's mental health; Critical review; Masculinity

Clinical Impact Statement

The review addresses the applied clinical question of how to better understand male mental health help seeking including attendance and engagement with therapy. The

primary findings of the paper are that Signalling Theory, which takes account of factors such as the man's perceptions of benefits and costs of seeking help, might be usefully integrated into the everyday practice of clinicians working with men experiencing common mental health problems. The key conclusions and implications are that men will engage with therapy when the benefits of doing so outweigh the costs, and that properties of the client, clinician, therapy, and the clinical environment can all affect those benefits and costs. For research, the next steps are to empirically test the Signalling Model and the predictions it generates, and for clinical practice, the next steps are to focus on optimising factors beyond just the client, to better engage men in therapy.

1 Introduction

Mental illness in male populations is a significant public health issue. In 2019, depressive disorders were the fourth largest global contributors to non-fatal losses in health, functioning, and quality of life among men, and anxiety disorders were the seventh largest (Institute for Health Metrics and Evaluation, 2020). In that year, anxiety and depressive disorders affected an estimated 3.0% and 2.9% of men worldwide, respectively (Institute for Health Metrics and Evaluation, 2020). Depression is also a strong contributing factor to attempted and completed suicide (World Health Organization, 2017), and over 500,000 men die by suicide annually (World Health Organization, 2019). Given the availability of effective psychotherapeutic and pharmacological treatments for these illnesses (see Cuijpers et al., 2011; Cuijpers et al., 2014; D'Anci et al., 2019 for reviews), improving men's engagement with professional help services is crucial for improving outcomes (Daraganova & Quinn, 2020; Gulliver et al., 2012).

Help seeking is an umbrella term that encompasses self-reported beliefs about, attitudes towards, and willingness to seek help for health and mental health issues; self-reported intentions to seek help; and self-reported or observed help-seeking behaviour (Gulliver et al., 2012). Help-seeking behaviour itself is defined as behaviour intended to meet an individual's need for assistance in a positive way (Rickwood et al., 2012). A distinction is made between seeking help from formal (i.e., professional) and informal (i.e., non-professional) sources (Wenger, 2011). As such, some examples of help seeking include accessing healthcare or psychiatric services, or discussing issues with or seeking advice from friends and family. Empirical evidence often finds that men seek formal help at lower rates than women (Addis & Mahalik, 2003; Galdas, 2009). As such, research on male help-seeking behaviour

has focused on the influence of masculinity (Hoy, 2012), which is typically operationalised as the internalised beliefs that result from Masculine Gender-Role Socialisation (Addis & Mahalik, 2003; O'Neil, 2012). This body of research posits that men are socialised to be masculine — *as opposed to* being feminine — by being strong, stoic, and self-reliant (Addis & Mahalik, 2003), and that this socialisation causes men to refrain from seeking help for fear of appearing weak, emotional, and dependent, or appearing feminine (for example, Addis & Mahalik, 2003; Courtenay, 2000; Mahalik et al., 2007; Möller-Leimkühler, 2002).

This research typically examines the correlation between men's 'adherence to traditional masculine norms', such as self-reliance and emotional control, and men's help-seeking attitudes or behaviours (Galdas, 2009). While correlational evidence supports an inverse relationship between adherence to traditional masculine norms and men's help seeking (Gerdes et al., 2018; O'Neil, 2008, 2012; Wong et al., 2017), this body of research fails to capture the adaptive and complex nature of masculinity described in the qualitative research in particular (Galdas, 2009; Seidler et al., 2016). Additionally, this perspective only explains why men might refrain from seeking help, rather than examining how positive aspects of masculinity can be used to successfully engage men in treatment (Hoy, 2012; Kiselica & Englar-Carlson, 2010; Seidler et al., 2016; Seidler, Rice, River, et al., 2018).

There is a lack of consensus on a single theoretical model of help-seeking (Gulliver et al., 2012), and theories applied to male help seeking tend to focus on predicting a single decision to seek professional help or to refrain (Wenger, 2011). Contemporary work suggests that research into help seeking could be supplemented by examining the vast arrays of help seeking behaviours, sources, and outcomes over the course of an illness (Wenger, 2011). As such, there is a need to develop a

theoretical framework that can address these limitations, thereby enhancing our current understanding of male help seeking. In that vein, this paper aims to:

1. identify conceptual gaps and limitations in the theoretical perspectives commonly applied to men's psychological help-seeking behaviour;
2. address these gaps and limitations by outlining a more complete theoretical model of male psychological help-seeking behaviour;
3. determine the extent to which the existing evidence supports this new model; and
4. discuss the theoretical, clinical, and research implications of this new model of male help-seeking behaviour.

Given the breadth of the existing literature on male help seeking, this review is focused on male help-seeking from professional healthcare providers for psychological symptoms, rather than medical issues. However, medical help-seeking literature is presented when the psychological help-seeking literature is limited.

2 Theoretical Gaps in the Current Understanding of Male Help Seeking

Early research found that men were less likely to seek help for both medical and psychological issues compared to women (see Addis & Mahalik, 2003 for a review). More recently, in the Australian context, the 2020/21 National Survey of Mental Health and Wellbeing found that, of the Australians experiencing symptoms of a mental disorder in the previous 12 months, men were less likely to seek professional help than women (37.0% versus 54.7%) (Australian Bureau of Statistics, 2022j). This pattern of sex differences is consistent throughout the international literature, and hence, masculinity remains a major focus of male help-seeking research (Hoy, 2012; Vogel & Heath, 2016). Masculinity, in relation to help

seeking, is often measured by the Conformity to Masculine Norms Inventory (CMNI), the Male Role Norms Inventory (MRNI), and the Gender Role Conflict Scale (GRCS) (see Gerdes et al., 2018; O'Neil, 2008, 2012; Wong et al., 2017 for reviews). Each of these self-report questionnaires measure adherence to a common set of theorised, traditional masculine norms, including, but not limited to, a desire for power or control, self-reliance, and restrictive emotionality (Levant & Richmond, 2008; Mahalik et al., 2003; O'Neil, 2008). Reviews and meta-analyses have reported significant associations between masculinity (as measured by the CMNI, MRNI, and GRCS) and poorer help-seeking attitudes (see Gerdes et al., 2018; O'Neil, 2008, 2012; Wong et al., 2017). Furthermore, the Masculine Gender-Role Socialisation perspective remains the dominant theoretical perspective within the empirical literature (Hoy, 2012; Vogel & Heath, 2016).

2.1 Lack of Explanatory Power

A limitation of relying on masculinity as a predictor of male help seeking is that alone it lacks explanatory power. The influence of adherence to masculine norms on men's psychological help seeking, as measured by the CMNI, is rather weak, explaining only 9.6% of the variance in help seeking attitudes according to a meta-analysis of 74 papers (n = 19,453) (Wong et al., 2017). Similarly, a content analysis of the 84 existing empirical studies (n = 30,408) using the MRNI found nine studies that detected a significant inverse relationship between MRNI scores and measures of help-seeking attitudes and intentions (Gerdes et al., 2018). Of those studies, eight reported small effect sizes (2.9% < R^2 < 23.0%), and only one reported a moderate effect (R^2 = 50.4%) (Gerdes et al., 2018). Furthermore, a systematic review of 37 qualitative, quantitative, and mixed-methods studies (n = 8,146) that examined the

role of masculinity in men's help-seeking for depression concluded that the results consistently demonstrated small effects of masculinity on help seeking. Finally, a large Australian study (*n* = 9,205) found that men with moderate or high conformity to masculine norms were only around 13% and 12% less likely than low-conforming men, respectively, to have visited their general practitioner (GP) in the previous 12 months (Daraganova & Quinn, 2020). Arguably, the heavy focus on masculinity may have detracted from other contextual factors beyond masculine norm adherence that influence male help-seeking behaviour (Affleck et al., 2018; Vogel & Heath, 2016). For example, in the aforementioned Australian study, having at least one physical health condition, having private health insurance, and not being from a culturally and linguistically diverse background were all stronger predictors of men's GP attendance than low conformity to masculine norms (Daraganova & Quinn, 2020). Conceptual understanding of male help seeking might be improved by trying to model the effect that masculinity may have on help seeking within a broader context of other explanatory variables (Affleck et al., 2018; Vogel & Heath, 2016).

2.2 Defining Masculinity as a Hegemonic, Trait-Like Concept

In the quantitative literature, masculinity is operationalised as a trait-like variable that inhibits help seeking, which gives rise to three limitations. First, conceptualising masculinity as a factor that *only* inhibits help seeking fails to capture the complexity described by qualitative studies, which suggest that masculinity can also facilitate help seeking and engagement (Hoy, 2012; Kiselica & Englar-Carlson, 2010; Seidler et al., 2016). For example, the Positive Psychology/Positive Masculinity framework and the associated case study illustrate how clinicians can leverage a client's positive masculine ideals to improve engagement with therapy

(Kiselica & Englar-Carlson, 2010). In addition, men sometimes frame their help seeking in terms of fulfilling a masculine ideal, such as maintaining a masculine job, being a protector or provider or member of a team, or being a competent sexual partner (O'Brien et al., 2005). Furthermore, re-establishing a masculine identity can be an important part of men's recovery from depression (Emslie et al., 2006). Overall, this evidence suggests that masculinity might facilitate some aspects of the help seeking process.

Second, when measuring masculinity as adherence to traditional masculine norms, only a single, hegemonic form of masculinity is captured (Seidler, Rice, River, et al., 2018). Contemporary scholarship instead conceptualises hegemonic masculinity as one of many masculinities existing in a given society, which reflect the diversity in cultures and experiences among men of that society (Seidler, Rice, River, et al., 2018). Limited effort has been dedicated to including diverse masculinities into theoretical models of male help seeking, although this represents an important direction for future research (see Seidler, Rice, River, et al., 2018).

Third, the perspective that masculinity functions as a trait variable — adherence to traditional masculine norms — has a limited capacity to explain why men deviate from those norms under certain circumstances, as is the case with help seeking (Addis & Mahalik, 2003). The social constructionist perspective offers an alternative conceptualisation of masculinity that can address these limitations. According to the social constructionist perspective, masculinity is constructed within social interactions, rather than being an essential component of men (Addis & Mahalik, 2003; Courtenay, 2000). In other words, masculinity is an emergent property of the interaction between each person within the interaction and the relevant contextual factors. A social constructionist perspective has the power to explain why the same

man might seek help in some circumstances but not others (Addis & Mahalik, 2003). Moving beyond a trait-based conceptualisation of masculinity will allow researchers to examine how masculinity manifests in particular help-seeking contexts, as well as how masculinity can be beneficial into the help-seeking process, under certain circumstances, and how diverse masculinities can be constructed, given the appropriate conditions.

2.3 Employing a 'Ballistic Approach' to Help Seeking

The typical conceptualisation of help-seeking behaviour in the quantitative literature is also limited. Help-seeking behaviour is typically operationalised as a single dichotomous choice between either seeking professional help, or refraining (Wenger, 2011). This is considered a 'ballistic approach', whereby individuals are similar to projectiles 'fired' towards the healthcare system and various factors, such as age, socioeconomic status, or gender, predict whether or not they hit the target (Wenger, 2011). The ballistic approach is primarily concerned with cataloguing factors that predict the outcome of the initial professional help-seeking decision. However, this approach risks oversimplifying the broader help-seeking processes that both lead to and follow from that decision.

Alternatively, the 'Dynamic Approach' describes help seeking as an "ongoing, interactive process of decision making" (Wenger, 2011, p. 491) that includes vast arrays of help-seeking behaviours, sources, and short- and long-term outcomes (Wenger, 2011). This approach is better suited to help seeking for mental illness because professional treatments generally involve recurring interactions (i.e., multiple appointments) that necessitate a range of help-seeking behaviours from attendance to emotional disclosure. Additionally, the Dynamic Approach

acknowledges the difficulties men may have engaging effectively with healthcare services (Seidler, Rice, River, et al., 2018; Wenger, 2011). Finally, this approach takes a longitudinal rather than a cross-sectional view of help seeking, and can incorporate the influence of positive or negative experiences on future help-seeking behaviour (Wenger, 2011). As such, the Dynamic Approach to conceptualising help seeking may be able to supplement current theoretical understanding of men's help-seeking behaviour.

In light of these limitations, a new theoretical model of male help seeking that (a) incorporates a broad range of explanatory factors beyond masculinity, (b) views masculinity as an adaptive, diverse, and emergent property of social interactions, and (c) incorporates the Dynamic Approach to help seeking by considering the wider array of help seeking behaviours, sources, and outcomes over the course of the illness may serve to enhance our current understanding of men's help-seeking behaviour for mental illness. Such a model may be able to account for instances where adherence to masculine norms may not correlate strongly with help-seeking behaviour, and thus may have more explanatory power than some existing models. Furthermore, such a model allows for the possibility that masculinity might be leveraged to improve men's engagement with health services, and recognises that effective help seeking, particularly for mental illnesses, goes beyond accessing professional care.

3 Applying Signalling Theory to Male Help-Seeking Behaviour

3.1 Signalling Theory

Signalling Theory provides an existing theoretical framework that can potentially model male help-seeking behaviour in this manner. Signalling Theory was

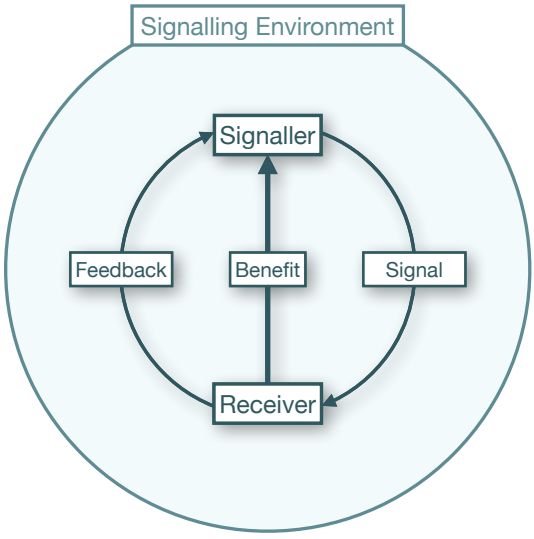
developed in economics (see Spence, 1973), and applied to evolutionary biology soon after (see Zahavi, 1975). Since then, it has also been applied to other fields including management and evolutionary anthropology (see Connelly et al., 2011; Stibbard-Hawkes, 2019 for reviews). Signalling Theory models communication as a strategic interaction between two parties: a *signaller* and a *receiver* (see Figure 3.1; Table 3.1). Signallers produce *signals*, which are behaviours that transmit information to the receiver about some internal property of the signaller (Lachmann et al., 2001; Maynard Smith & Harper, 1995). Help seeking involves communication between the man and, for example, a healthcare professional, by way of help-seeking behaviours. Hence, the relationship between the man seeking help, help-seeking behaviour, and the help provider resembles the relationship between the signaller, signal, and receiver.

Help-seeking behaviours reveal information about an internal property of the signaller to the receiver. For the Signalling Model defined in this paper, the internal property must specifically predict help-seeking behaviours, rather than other unintentional or destructive behaviours, like substance abuse, that could still elicit help. As such, rather than defining the internal property as 'distress' or 'need for help', which could produce unintentional or destructive behaviours, the internal property defined in this Model is 'self-perceived level of need for help'. The element of self-perception is necessary, as self-perceived need is likely to produce intentional, positive help-seeking behaviours, unlike 'distress' or 'need'. Also, it is possible for a man to misperceive his own level of need by, for example, normalising his symptoms (Galdas et al., 2005), suggesting that help-seeking behaviour is related to men's perceived level of need rather than their true level of need.

Signals have benefits and costs associated with their production (Connelly et al., 2011; Maynard Smith & Harper, 1995). The male help-seeking literature has extensively catalogued facilitators of help seeking, such as encouragement from trusted friends or family members, and barriers to help seeking, such as social stigma (see Hoy, 2012; Macdonald et al., 2022; Wenger, 2011; Yousaf et al., 2015 for reviews), which resemble signal benefits and costs. Finally, Signalling Theory states that signallers are motivated to signal only when the perceived signal benefits outweigh the perceived signal costs (Lachmann et al., 2001). Men have been found to delay help seeking until symptoms become severe (Galdas et al., 2005; Seidler et al., 2016; J. A. Smith et al., 2008), suggesting a threshold where the perceived benefits of help seeking begin to exceed the perceived costs.

Figure 3.1

Basic Signalling Theory Diagram



3.2 Components of the Signalling Model of Male Help-Seeking Behaviour

In the context of help seeking, the man seeking help is the signaller, and anyone capable of providing help, such as family, friends, or healthcare providers, is a receiver. Help-seeking behaviours are signals by definition, because they transmit information about the signaller's self-perceived need for help, an internal property, to the receiver. Signalling Theory states that a signaller's likelihood of producing a signal is positively related to the level of the internal property being signalled (Connelly et al., 2011; Maynard Smith & Harper, 1995). In this case, that suggests that men with a greater self-perceived need for help are more likely to seek help than men with a lower self-perceived need. Furthermore, because any behaviour that transmits that information can be a signal, there can be a wide array of different help-seeking signals that could all transmit this information, which is consistent with the Dynamic Approach to help seeking (Wenger, 2011). Signalling Theory also states that signallers are incentivised to signal when they believe receivers will respond beneficially to the signal in question (Connelly et al., 2011; Maynard Smith & Harper, 1995), in this case, by providing effective help or treatment. The benefits accrued by signalling are called *signal benefits*.

Signals may also have *costs* associated with their production (Connelly et al., 2011; Lachmann et al., 2001; Maynard Smith & Harper, 1995). These might range from the risk of ridicule or embarrassment to the financial cost of professional treatment. Signalling is described as strategic because signallers are motivated to signal when the predicted signal benefits outweigh the predicted signal costs, and motivated to refrain when the predicted costs outweigh the predicted benefits (Lachmann et al., 2001).

Receivers play an essential role in the signalling process. For signalling to be successful, the receiver must be attentive to the signal in question, detect the signal and correctly interpret it as a call for help, and respond to the signal by providing effective help (Connelly et al., 2011).

After producing the signal, the signaller can observe and evaluate the receiver's response. This transmission of information about the receiver's response from receiver to signaller is called *feedback*, and feedback allows a signaller to re-evaluate the costs and benefits of producing a given signal (Connelly et al., 2011). For example, feedback can tell the signaller whether the receiver detected the signal, and if so, whether they responded effectively to it or not (Connelly et al., 2011). Just as signallers accrue benefits or costs by producing a signal, feedback can impose benefits or costs on the signaller in return (Connelly et al., 2011). To avoid confusion, the benefits imposed through feedback will be described herein as *rewards*, and the costs imposed through feedback will be described as *penalties*. Rewards are benefits imposed by the receiver, which increase the likelihood of future signalling behaviour, while penalties are costs imposed by the receiver, which decrease the likelihood of future signalling behaviour (Connelly et al., 2011). To illustrate the distinction between benefits and costs and rewards and penalties, consider the following example: risk of ridicule may act as a perceived signal cost, which decreases the signaller's likelihood of signalling initially, however, if the receiver does, in fact, ridicule the signaller in response, this acts as a penalty, which reduces the likelihood that the signaller will signal in the future. Hence, signal benefits and costs affect the likelihood of producing the initial or current signal, while rewards and penalties affect the likelihood of producing future signals.

Table 3.1

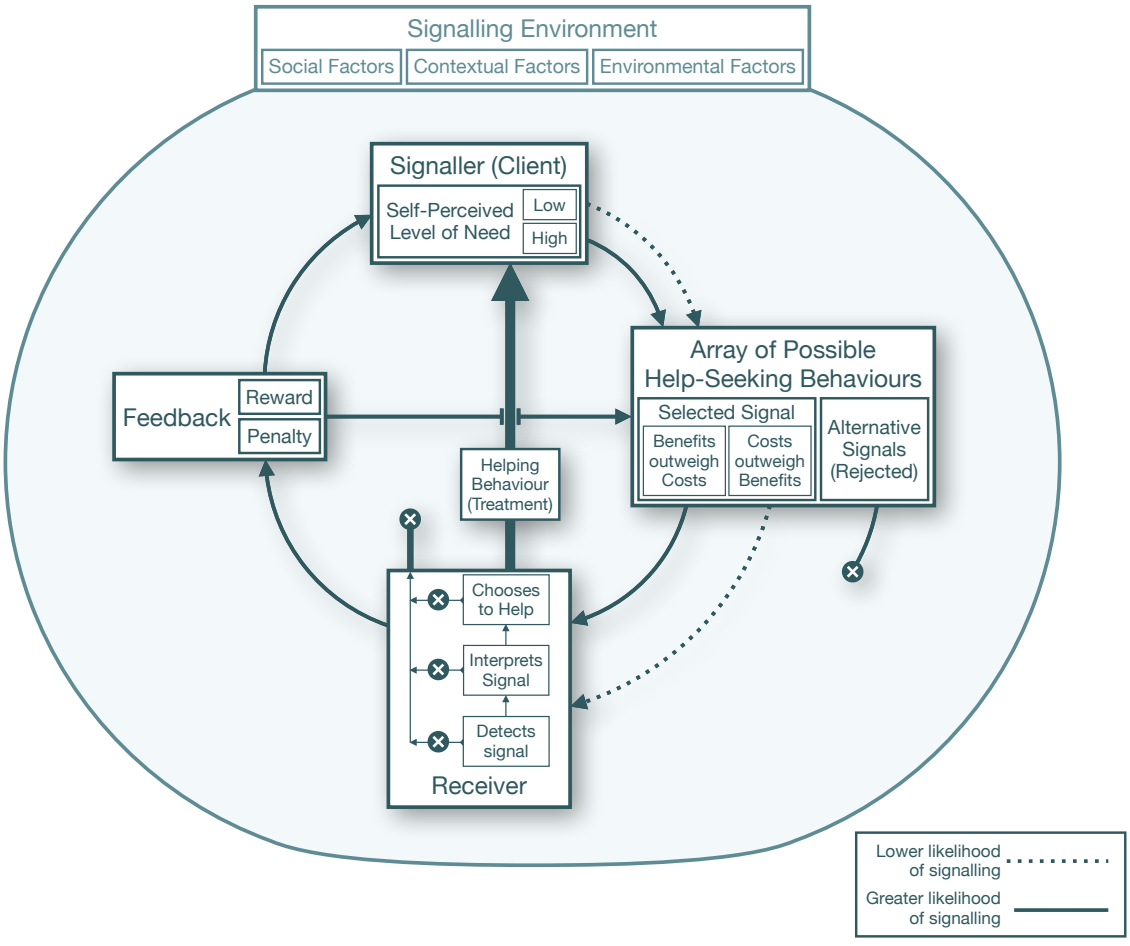
Clarification of Key Terms

Signaller	The man who produces the help-seeking signal. In clinical settings, the client is the signaller.
Self-perceived level of need for help	The signaller transmits information about their self-perceived level of need for help via the signal. Self-perceived level of need is positively related to signalling behaviour.
Signal	The help-seeking behaviour in question, which transmits information to the receiver. In clinical settings, the signal may be any engagement with therapy. In interpersonal settings, the signal may be confiding in a friend.
Signal Benefits	Any predicted benefits the signaller might accrue as a result of signalling, including, for example, the benefits of treatment.
Signal Costs	Any predicted cost the signaller might accrue as a result of signalling, such as any risks or negative consequences.
Receiver	The person the help-seeking behaviour is directed to, and the person who, ideally, provides help. In clinical settings, the clinician is the receiver.
Feedback	Information the signaller gathers about the receiver's response to the signal. Feedback is used to re-evaluate signal benefits and costs and affects future help seeking.
Rewards	Feedback that increases the likelihood of future help-seeking behaviour.
Penalties	Feedback that decreases the likelihood of future help-seeking behaviour.
Signalling Environment	Includes factors external to the signaller, signal, receiver, and feedback components that affect signalling. Examples include social or cultural norms.

The *signalling environment* describes factors external to the signaller and the receiver that might affect the signalling process (Connelly et al., 2011). In the context of help-seeking, each signalling environment includes unique social and contextual factors that can affect signalling, ranging from broad cultural norms to immediate social cues. Properties of the signalling environment can affect every other component of the model, and changes to the signalling environment can influence the signalling process. The model of Signalling Theory applied to male help-seeking is presented in Figure 3.2.

Figure 3.2

Detailed Diagram of the Signalling Model of Male Help-Seeking Behaviour



3.3 Predictions Generated by the Signalling Model

As outlined above, Signalling Theory describes a series of testable predictions that apply to all forms of signalling. The Signalling Model of Male Help-Seeking Behaviour applies Signalling Theory to the specific case of male help seeking, and therefore the Model includes the following set of predictions:

1. The signaller's self-perceived level of need for help is positively related to their help-seeking behaviour.
2. There are benefits associated with seeking help, which incentivise signalling.
3. There are costs associated with seeking help, which disincentivise signalling.
4. Men are more likely to signal for help when they believe that the benefits of help seeking outweigh the costs, and more likely to refrain when they believe that the costs outweigh the benefits.
5. Help seeking is only successful when receivers correctly detect, interpret, and respond effectively to men's help-seeking signals.
6. Feedback will influence the signaller's likelihood of future help-seeking behaviour.
7. Signalling behaviour can be affected by environmental factors.

The following section reviews the male help-seeking literature to assess the extent to which the existing evidence provides support for these predictions, and therefore, for a Signalling Model of Male Help-Seeking Behaviour.

4 Evidence for a Signalling Model of Male Help-Seeking Behaviour

4.1 The Signaller's Self-Perceived Level of Need for Help is Positively Related to Their Help-Seeking Behaviour

Empirical evidence supports the proposition that men's self-perceived level of need is positively related to their help-seeking behaviour. Results from the European Study of the Epidemiology of Mental Disorders (ESEMeD) project found that men who reported a need for psychological treatment were more likely to access healthcare services than those who did not report a need for treatment (Codony et al., 2009). Similarly, among American college students, male students who reported a need for psychological help were four times more likely to access treatment than male students who did not (Downs & Eisenberg, 2012). A longitudinal study found that higher 'need for treatment' scores at baseline, among male participants, predicted psychological help-seeking behaviour in the subsequent six-month period (Bonabi et al., 2016). Furthermore, two studies found that the most frequent reason, among male participants, for *refraining* from seeking professional help for suicidality was not perceiving a need for treatment (Czyz et al., 2013; Freedenthal & Stiffman, 2007). As the Signalling Model predicts, men with a high self-perceived level of need signal more than men with a low self-perceived level of need.

4.2 There Are Benefits Associated with Seeking Help, Which Incentivise Signalling

In the context of help seeking, *signal benefits* describe the help provided by the receiver, along with any other benefits the signaller accrues as a result of signalling. Empirical research has demonstrated the effectiveness of, for example, Cognitive Behavioural Therapy in treating depression, anxiety, and suicidality in men (see

Cochran & Rabinowitz, 2003; Cuijpers et al., 2011; Cuijpers et al., 2014; D'Anci et al., 2019 for reviews). However, Signalling Theory focuses more on men's *perceptions* of the benefits of seeking help. O'Brien et al. (2005) found that men endorsed help-seeking behaviour when they perceived it as a way of maintaining their masculinity, such as in early intervention for sexual health problems. Firefighters described help seeking as necessary for maintaining their health and their masculine role as firefighters (O'Brien et al., 2005). Some men also described their desire to provide for their wives as a motivation to seek help (O'Brien et al., 2005). As such, maintaining one's role as sexual partner, provider, or firefighter, is considered a signal benefit that incentivises help seeking. Additionally, a review found that help-seeking interventions that illustrated the benefits of help seeking appeared to improve men's attitudes towards seeking help and their intentions to seek help (Sagar-Ouriaghli et al., 2019), although the authors were unable to identify which elements of the interventions caused the improvements. Taken together, this evidence is consistent with the Signalling Model and demonstrates that there may be benefits to seeking help, that men may perceive benefits to seeking help, and that those perceived benefits may incentivise help seeking among men.

Signal benefits may differ based on the relationship between the signaller and receiver. For example, research suggests that men prefer discussing psychological distress with their mothers or a female partner over male friends, religious leaders, or doctors (Seidler et al., 2016). Also, men who reported a stronger relationship with their family doctor were more likely to endorse psychotherapeutic and pharmacological treatments for depression (Kealy et al., 2019). *Bond* refers to the level of trust and attachment between the client and clinician (Bordin, 1979), and this evidence suggests that perceived signal benefits may be positively related to that

bond. In addition, men's reported bond with their therapist is positively correlated with their reported treatment helpfulness (Cusack et al., 2006), suggesting that signal benefits are also related to the bond between signaller and receiver. Bond is a component of the therapeutic alliance and is thought to be instrumental in the therapeutic process (Bordin, 1979). As such, Bordin (1979) suggests that treatment effectiveness, or the signal benefit, is positively related to the strength of the bond between therapist and client. As such, a strong bond may incentivise signalling behaviour, as it correlates with greater signal benefits. Conversely, a weaker bond between signaller and receiver appears to inhibit help seeking. Men described disconnected and cold relationships with healthcare providers as a reason they felt unable to completely disclose their problems (Coles et al., 2010). They also said they would have felt more able to disclose their distress if they had built a stronger relationship with their doctor (Coles et al., 2010). A systematic review identified the absence of a strong rapport between patients and healthcare professionals as a barrier to medical help-seeking by men (Yousaf et al., 2015). Finally, a weak bond between the client and therapist was found to be the most common reason for men to discontinue therapy (Seidler, Wilson, Kealy, et al., 2021). Altogether, this evidence suggests that the bond between signaller and receiver is positively related to the perceived and evaluated signal benefits. Rather than being a signal benefit per se, bond may be an important factor that can enhance or facilitate signalling.

4.3 There Are Costs Associated with Seeking Help, Which Disincentivise Signalling

A *signal cost* refers to any perceived costs required to produce the signal itself, any risk incurred through signalling, or any other cost imposed on the signaller in

response to producing the signal. Much of the male help-seeking research identifies signal costs in the form of barriers to men's help seeking. One such cost is social stigma, the fear of being judged negatively by others. A meta-ethnography found that men most commonly identified social stigma as a barrier to seeking help for psychological distress (Hoy, 2012). Qualitative evidence also shows that men conceal their distress because they are worried about being judged negatively, particularly by other men (Hoy, 2012; Seidler et al., 2016), and for failing to live up to the masculine ideals of strength and self-reliance (Cleary, 2012; Johnson et al., 2012). This evidence indicates that the risk of social stigma acts as a signal cost for men, and may reduce the likelihood of help seeking, in accordance with the Signalling Model.

Undesired emotions can also act as signal costs. For example, men have described a sense of fear and anxiety about the perceived vulnerability and loss of control associated with seeking help (Yousaf et al., 2015). Some men viewed these fears and the fear of finding out they were ill as risks so significant that they outweighed the benefits of seeking help. Some men refrained from signalling until their symptoms became unbearable or they required emergency services (Yousaf et al., 2015). When describing his refusal to attend counselling, one man said: "I'm scared of knowing what's really my problem (…) I'm scared of who I really am" (Johnson et al., 2012, p. 354). Embarrassment has also been identified as a signal cost. Men who were not embarrassed to attend their GP for a mental health issue were 6.87 times more likely to have visited their GP for a mental health issue than those who were embarrassed (Doherty & Kartalova-O'Doherty, 2010). This evidence is consistent with the Signalling Model, in that negative emotions associated with help seeking act as signal costs.

Another cost to seeking help is the perceived need for men to focus on or disclose their emotions during therapy. Evidence has shown that men perceive traditional therapy as effeminate because it involves emotional disclosure, and they are therefore less likely to access those services (Seidler et al., 2016). Non-traditional therapies that align more with traditional masculine norms have received greater endorsement than traditional therapies among men with high GRCS scores (Robertson & Fitzgerald, 1992). The same study found no difference in endorsement of traditional and non-traditional therapies among men with low GRCS scores (Robertson & Fitzgerald, 1992). Wisch et al. (1995) also found that men with high GRCS scores reported more positive attitudes towards therapy after viewing 'cognition-focused' therapy compared to 'emotion-focused' therapy. The focus on emotions appears to act as a signal cost for many men, while focusing on cognitions, for example, may not. Taken together, this evidence suggests that men may be wary of sending signals they perceive as costly, which is consistent with Signalling Theory.

4.4 Men Are More Likely to Seek Help When They Believe That the Benefits of Help Seeking Outweigh the Costs, and More Likely to Refrain When They Believe That the Costs Outweigh the Benefits

The Signalling Model predicts a threshold where the perceived benefits of signalling begin to outweigh the perceived costs, and the likelihood of signalling greatly increases. Though this concept has received little attention, some evidence supports this prediction. For example, men have reported seeking medical or psychological help only when symptoms become severe enough that they feel they cannot manage them on their own (Seidler et al., 2016; J. A. Smith et al., 2008). In accordance with Signalling Theory, this evidence suggests that, when symptoms are

manageable, men perceive the costs of help seeking as outweighing the benefits, and they refrain from signalling.

4.5 Help Seeking is Only Successful When Receivers Correctly Detect, Interpret, and Respond Effectively to Men's Help-Seeking Signals

Men may not always receive effective help or treatment after signalling. It is possible for the signalling process to breakdown if the receiver fails to detect, correctly interpret, or provide effective help in response to the signal. Depression in men, for example, may go undetected even though they have sought professional help. A large study demonstrated that doctors were 48% less likely to detect depression in male patients with probable major depression compared to female patients with probable major depression (Borowsky et al., 2000). Diagnostic instruments themselves may also contribute to these breakdowns in the help seeking process. Men with depression may experience atypical symptoms that are not detected by traditional diagnostic instruments (Rice et al., 2013; Zajac et al., 2022). As such, men who signal may still be misdiagnosed and receive ineffective help. In a cohort of men who met the diagnostic criteria for depression on at least one of two measures (one assessing prototypical symptoms of depression and one assessing male-specific symptoms), 28.5% were *only* detected using the male-specific measure (Zajac et al., 2022). Finally, clinicians themselves may hold biases that can lead to signal breakdowns. A small body of literature has found that clinicians' GRCS scores are inversely correlated with their willingness to treat non-conforming or sexual minority male clients (O'Neil, 2012). Altogether, this evidence supports the hypothesis that receivers must detect, correctly interpret, and respond effectively to signallers in order to facilitate help seeking.

4.6 Feedback Will Influence the Signaller's Likelihood of Future Help-Seeking Behaviour

The Signalling Model predicts a relationship between feedback and future help-seeking behaviour. According to the Model, rewards increase the likelihood of future help-seeking behaviour, while penalties decrease that likelihood. Among men with current or recent experiences of therapy, ratings of treatment effectiveness were positively correlated with intentions to seek help in the future for both personal-emotional problems and suicidal thoughts (Cusack et al., 2006). This suggests that effective treatment may function as a reward. Alternatively, men with mental health disorders have described how negative experiences involving disrespectful and even hostile treatment by healthcare providers was "followed by avoidance of health care settings" (Strike et al., 2006, p. 33). Similarly, a case illustration described a man who sought help for family problems, however, after a negative experience with his previous therapist, he was extremely reluctant to continue counselling (Kiselica & Englar-Carlson, 2010). In addition, men's dissatisfaction with previous therapy was positively correlated to their doubt about the effectiveness of therapy, which, in turn, was inversely correlated to their willingness to disclose psychological distress to one's doctor (Seidler et al., 2020b). Altogether, this evidence supports the Signalling Model prediction that feedback affects future help seeking.

4.7 Signalling Behaviour is Affected by Environmental Factors

The literature demonstrates that men's help seeking can be affected by factors external to both the signaller and receiver. Cultural norms, for example, may influence help seeking. A meta-analysis found that men's help-seeking behaviour was more strongly inhibited, relative to women's, by Asian cultural norms compared

to Western cultural norms (Nam et al., 2010). Social norms might also affect male help seeking. For example, firefighters described their peers as supportive of help-seeking behaviour, which may explain the positive attitudes towards help seeking among that group (O'Brien et al., 2005). Similarly, (Hoy, 2012) reported that the most common facilitator of help-seeking behaviour was having a good relationship with someone who encouraged help seeking. Altogether, social and cultural norms represent a factor of the signalling environment that can facilitate or inhibit help seeking. Altogether, this evidence supports the Signalling Model prediction that environmental factors external to the signaller and the receiver can affect the signalling process.

5 Discussion

This review aimed to apply Signalling Theory to male help-seeking behaviour in order to address some of the theoretical gaps in the current understanding of male help seeking. Signalling Theory was chosen for this purpose because the relationship between the man seeking help, the help-seeking behaviour itself, and the help provider resembles the relationship between signaller, signal, and receiver. Furthermore, help-seeking behaviour has associated benefits and costs that appeared to play the same role as signal benefits and costs. Once Signalling Theory was applied to male help seeking, several predictions were generated from the resultant Model, and this review sought to collate existing evidence that was consistent with those predictions. This paper reviews quantitative and qualitative evidence across a broad domain and has identified existing evidence that supports the Signalling Model's utility in explaining male help-seeking behaviour. Specifically, existing evidence that supports each prediction generated by the Model was found,

and properties of each component of the Model was shown to be related to men's help-seeking behaviour.

5.1 Theoretical Implications

The Signalling Model has the potential to provide a novel theoretical framework that covers a broad range of empirical literature on male help seeking. Such a framework offers a potentially robust theoretical foundation that could drive future research. In addition, the Signalling Model of male help seeking goes towards addressing the theoretical gaps identified previously. The Model can incorporate a wide range of contextual factors beyond masculinity that have been shown to affect men's help seeking. Furthermore, the Model can incorporate adaptive, diverse, and socially constructed forms of masculinity and can model help seeking in accordance with the Dynamic Approach.

The Signalling Model is consistent with previous theoretical perspectives that explain why adherence to traditional masculine norms inhibits male help seeking. Some help-seeking signals, such as participating in traditional therapy, may conflict with masculine norms, and may be considered costly by some men. The Signalling Model, however, broadens this perspective by allowing for a social constructionist perspective of masculinity. The Model theorises that signal costs are also affected by the receiver, by feedback from previous experiences of help seeking, and by environmental factors, rather than by the signaller alone. Thus, the signal costs related to masculinity are an emergent property of the interaction between all components of the Model, rather than a product of the signaller alone. In addition, the Model avoids describing masculinity or aspects of masculinity as only inhibitive of help seeking. Instead, the Model suggests that the key to resolving some of the

challenges with men's help seeking relies on resolving conflicts between the signaller's adherence to masculine norms and the other components of the system and facilitating the construction of adaptive masculinities that can enhance the help seeking process.

Furthermore, allowing for different signals, receivers, and environments, incorporating the feedback component, and recognising the cyclical nature of the signalling process are all consistent with the Dynamic Approach to help seeking (Wenger, 2011). Help seeking is operationalised as an ongoing, varied pattern of behaviours that can involve formal and informal help providers and a range of outcomes, rather than being reduced to a single decision between choosing to seek help or to refrain. This represents an under-utilised approach that could improve our understanding of the help-seeking process (Wenger, 2011).

It is possible that Signalling Theory could be applied to female help-seeking behaviour, or general help-seeking behaviour more broadly. This represents an avenue of theoretical development for future research, provided that the Signalling Model of Male Help-Seeking Behaviour proves to have empirical utility. To develop the Signalling Model to include women and/or people who are gender non-conforming, such variants of the Model will likely need to account for different sets of benefits and costs between gender groups. For example, costs related to masculinity may not apply to other groups. Similarly, to develop such variants of the Model, the literature should be reviewed to determine whether patterns of help seeking by females or gender non-conforming people are consistent with Signalling Theory.

5.2 Clinical Implications

The Signalling Model of Male Help-Seeking Behaviour has implications for clinical practice. The most important of these is the characterisation of successful help seeking as an emergent property of the interaction between the signaller and receiver, their signals and feedback, and the environment in which signalling occurs. These components are part of every help-seeking interaction, and facilitating successful male help seeking in clinical settings requires optimising all components of the Model, not just the man. For example, researchers have called for therapists to be formally trained in evidence-based techniques for engaging male clients in therapy (Seidler, Wilson, Trail, et al., 2021). Regarding the signalling environment, many clinical recommendations direct receivers to construct a more gender-sensitive signalling environment for their male clients (see Seidler, Rice, Ogrodniczuk, et al., 2018 for a review), hypothesising that clinical environments that are more accepting of masculine norms or more familiar to men will facilitate more effective help seeking. Furthermore, the Model shows that clinicians play an active role in the signalling process by attending to, detecting, interpreting, and responding to men's help-seeking signals, by transmitting feedback, and through their part in constructing the signalling environment.

The Signalling Model also centres the interaction between the client and the clinician as the avenue for help seeking and represents the cyclical nature of therapeutic interactions as the signal and feedback pathways. As such, the Model reflects the importance of the therapeutic alliance between client and clinician. Researchers have recommended that therapists address male clients' expectations at the commencement of therapy, in order to foster a healthy bond and decrease the likelihood of the client discontinuing the therapy (Seidler, Wilson, Kealy, et al., 2021).

In the same vein, clinicians have called for therapists to acknowledge and value their male clients' strengths, such as fatherhood, courage, and cooperation, to strengthen their bond with the client and improve their engagement with therapy (Kiselica & Englar-Carlson, 2010).

Finally, the Signalling Model provides a nuanced and empathetic understanding of why clients might be averse to recounting certain events, expressing certain emotions, or attending therapy altogether: those particular signals are too costly. Clinicians who encounter this issue might focus on promoting or eliciting signals that their male clients consider to be less costly. For example, encouraging men to express themselves using action-oriented language rather than emotion-oriented language may reduce the perceived cost of signalling (Seidler, Rice, Ogrodniczuk, et al., 2018). Alternatively, providing social cues to male clients, such as asking questions, to indicate that it is acceptable for them to signal, may lower signalling costs.

5.3 Research Implications

The Signalling Model has the ability to generate testable hypotheses about male help-seeking behaviour. As such, the Model provides researchers with a theoretical framework potentially capable of identifying pathways for constructive future research in the field. Such research is needed to produce effective and practical clinical recommendations for improving men's engagement with therapy and male help seeking overall.

Application of the Signalling Model illustrates the gaps in the help-seeking literature, and highlights avenues for future research. The majority of the empirical research has focused on elements of the signaller and the signal, particularly on the

signaller's adherence to masculine norms (Hoy, 2012; Vogel & Heath, 2016), the perceived costs of signalling (see Hoy, 2012; Yousaf et al., 2015 for reviews), and, more recently, the perceived benefits or facilitating factors (see Hoy, 2012 for a review). Furthermore, the empirical literature has typically restricted the definition of help seeking to traditional help-seeking signals (Wenger, 2011), such as formal help seeking or emotional disclosure, which men may perceive as costly. Though much of the literature has described men's adherence to traditional masculine norms as a barrier to producing these traditional help-seeking signals, a smaller portion of the literature has investigated alternative help-seeking signals that men might prefer to send (see Seidler, Rice, River, et al., 2018 for examples), or environmental factors or receiver behaviours (see Seidler, Rice, Ogrodniczuk, et al., 2018 for a review) that facilitate help-seeking signals.

The receiver, feedback, and environment components of the Signalling Model are under-researched areas that would benefit from further investigation. Investigation into the qualities of the therapist that facilitate a strong therapeutic bond with their male clients, or what constitutes positive and negative feedback for men is particularly needed. Research into signal breakdowns, including any biases clinicians may have against male clients, is also limited (O'Neil, 2012). Empirical research on the signalling environment is scant. The effects of social and cultural factors remain an under-researched area within the psychology of men generally (O'Neil, 2012) and within the male help seeking literature. Future research might explore how different receivers and environments can affect the benefits and costs of male signalling.

Given the preliminary evidentiary support for the Signalling Model demonstrated by this review, where existing literature was fit to the Model in a

retrospective manner, a clear aim of future research should be to prospectively test the validity of the full Model. Such research will involve building on existing qualitative studies that identify facilitators and barriers (benefits and costs) of help seeking, examining the degrees to which men perceive these factors as beneficial or costly, and correlating those perceptions with men's help-seeking behaviour. Empirical investigation of the hypothesised mediating role of benefits and costs is also a priority. As stated, bond may affect signal benefits and costs. Therefore, incorporating study of bond and its effect on the signalling process also represents a valid direction for future research. Shifting the focus of empirical studies from trait-based masculinity to benefits and costs resulting from the interaction of masculinity with other external factors also represents a new direction in empirical research. Another important test of the Model will involve shifting the focus beyond the signaller and examining how properties of the signal, receiver, feedback, and environment affect help seeking.

If the Model holds, an appropriate progression would be to include concepts from the wider signalling literature to refine the Model and generate new insights into help-seeking behaviour. For example, studies might examine the effects of signal strength, or noise and signal distortion (see Connelly et al., 2011) on the success of help seeking. Such research may begin by conceptualising the bond between signaller and receiver as a factor that possibly improves signal strength or reduces noise, or that acts to maintain the signal over the long term.

6 Conclusion

The quantitative literature on male help seeking has been criticised for focusing heavily on masculinity as an explanatory factor and relying on oversimplified

conceptualisations of masculinity and help seeking. This review aimed to outline a novel Signalling Model of Male Help-Seeking Behaviour that collated a broad range of explanatory factors and employed more elaborate conceptualisations of masculinity and help seeking than those typically employed by quantitative studies. Further, this review aimed to determine the extent to which this Model was supported by the existing literature. Evidence was found to support each prediction generated by the Signalling Model, demonstrating that the Model can be applied to male psychological help-seeking behaviour. The Model has the capacity to advance understanding in the field, identify gaps in the current literature, and illuminate avenues for future research. Most importantly, however, the Signalling Model describes help seeking as an emergent property of the interaction between the signaller and the receiver, the signals and feedback produced, and the signalling environment. This underscores the importance of facilitating help seeking at the level of this interaction, rather than at the level of the signaller.

Chapter Four: Men in Mind Paper

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Co-Author Contributions

By signing the Statement of Authorship, each author certifies that:

i. the candidate's stated contribution to the publication is accurate (as detailed above);

ii. permission is granted for the candidate in include the publication in the thesis; and

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The Effect of Therapy Benefits and Therapist Behaviours on Male Help Seeking: Testing Pathways Using a New Theory of Male Help Seeking

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Abstract

Background: The Signalling Model of Male Help-Seeking Behaviour aims to incorporate disparate explanatory variables into a cohesive framework and describes male help seeking as an ongoing interaction between the individual and the healthcare system. This study aimed to examine multivariate relationships between men's ratings of therapy benefits, their initial motivation to seek help and attitudes towards future help seeking, and the influence of therapist behaviours.

Method: Data from a cross-sectional Australian survey were used to test three Signalling Model predictions: (a) positive relationships between men's ratings of perceived signal benefits and their initial motivation to attend therapy, (b) positive relationships between evaluated signal benefits and attitudes towards future therapy, and (c) the relationships between therapist behaviours and men's attitudes towards future therapy mediated by evaluated signal benefits.

Results: Perceived signal benefits were positively associated with men's initial motivation to attend (β = .541, p < .001), and evaluated signal benefits were positively associated with their attitudes towards future therapy (β = .826, p < .001). Evaluated signal benefits fully mediated the relationship between rapport building by the therapist and attitudes towards future therapy, and partially mediated the relationship between the therapist tailoring their language and attitudes towards future therapy. Clarifying the structure of therapy did not explain any unique variance but was related to both building rapport and tailoring language scores, and the total multivariate model explained 64.2% of the variance in men's attitudes towards future therapy.

Conclusion: These results are consistent with the Signalling Model and indicate that signaller-related and treatment-related factors influence men's help-seeking

behaviour in multivariate models. Specifically, perceptions of help-seeking benefits are related to motivation to seek help and attitudes towards future help seeking, whilst therapist behaviours relate to men's evaluation of therapy which is, in turn, related to attitudes towards future help seeking. Future research should test the Signalling Model with bespoke measures of signalling concepts.

1 Introduction

Worldwide, an estimated 3.0% and 2.9% of men experience from anxiety or depressive disorders every year (Institute for Health Metrics and Evaluation, 2020). These disorders are among the largest global contributors to non-fatal losses in health, functioning, and quality of life in men. Furthermore, over 500,000 men die by suicide annually comprising the majority of suicide deaths worldwide (World Health Organization, 2019). Mental health disorders are associated with increased risk of suicide (World Health Organization, 2017). However, in countries such as the US, UK, and Australia, men with mental health issues are less likely to seek help than women with mental health issues to seek professional help (Australian Bureau of Statistics, 2022j; Lubian et al., 2016; National Alliance on Mental Illness, 2023).

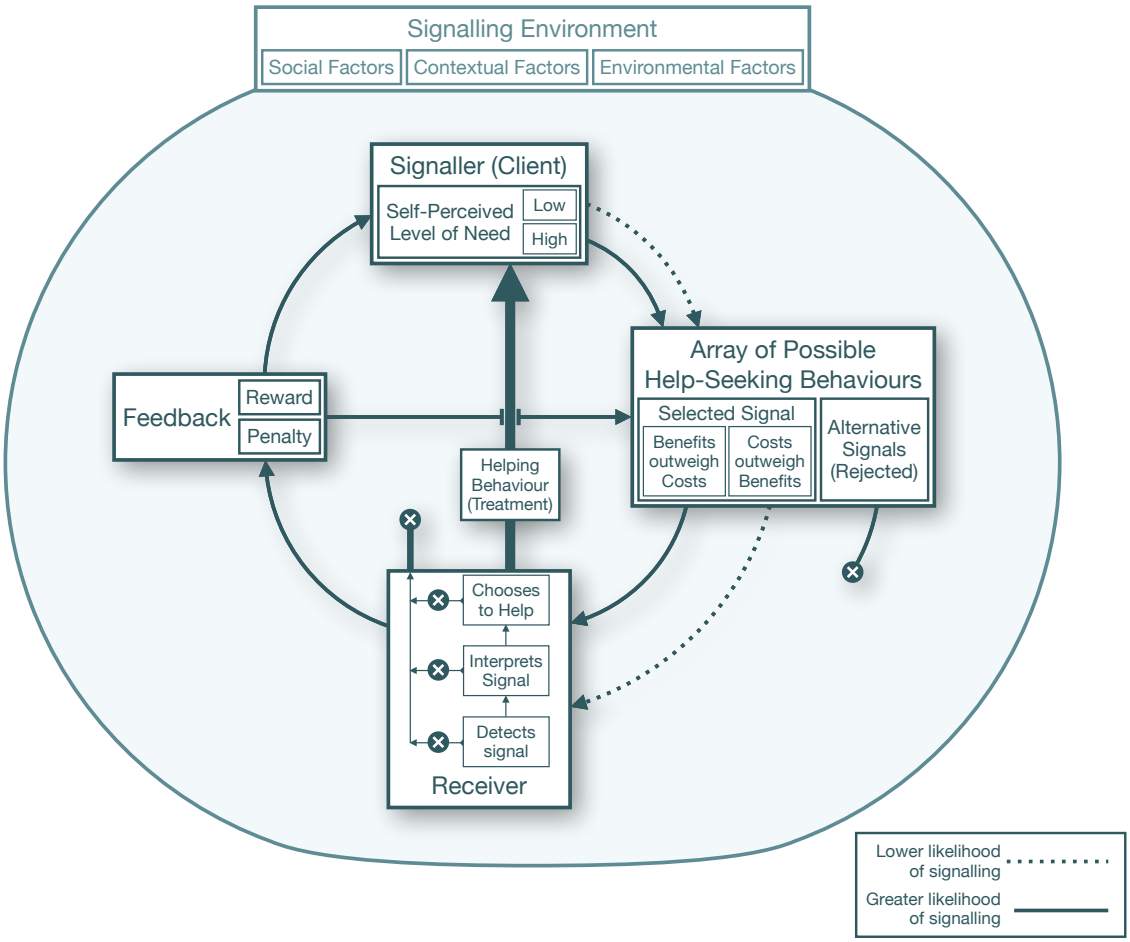
A broad range of barriers and facilitators have been examined to improve understanding of male help seeking behaviour and ultimately, facilitate access (Wenger, 2011). However, there remains no consensus on a theoretical model capable of unifying these factors (Gulliver et al., 2012). Reviews of the male help-seeking literature have noted that theoretical explanations tend to focus on traditional masculine norms as an inhibitive factor (Hoy, 2012; Vogel & Heath, 2016). While adherence to traditional masculine norms appears to inhibit male help seeking (Hoy, 2012; Seidler et al., 2016), meta-analysis demonstrates that its overall influence is relatively small (Wong et al., 2017). Around 25% to 50% of men who do seek help drop out of treatment prematurely (Seidler, Rice, River, et al., 2018; Seidler, Wilson, Kealy, et al., 2021), and around 60% to 70% of men who die by suicide in Canada and the USA had sought professional help in the previous 12 months (Oliffe et al., 2019). These men overcame any initial reticence to seeking professional help but still discontinued treatment, which suggests that treatment-related factors may affect

male help-seeking behaviour (Seidler, Rice, River, et al., 2018), independent of factors related to the help seeker, such as adherence to masculine norms. Including factors related to the help seeker and contextual factors together in a comprehensive theoretical model represents a step forward in the field (Vogel & Heath, 2016; Wenger, 2011).

The Signalling Model of Male Help-Seeking Behaviour was developed to address this gap in the literature. The Model (Figure 4.1) conceptualises male help seeking as an interaction between the man (the *signaller*) and the healthcare provider (the *receiver*). The Model also states that help-seeking behaviours (*signals*), such as attending therapy, have benefits and costs associated with their production, and that signallers are motivated to seek help only when the benefits outweigh the costs. The Model includes a feedback component, which describes the receiver's response to the signaller's help seeking. The signaller's evaluation of the feedback is used to re-assess the benefits and costs of future signalling. If the feedback is perceived as beneficial, the benefits and costs are re-evaluated more favourably, and motivation to seek help in the future is increased. The signalling environment describes factors external to the signaller, signal, receiver, and feedback components that affect help seeking, such as cultural norms.

Figure 4.1

Diagram of the Signalling Model



Existing research has established links between contextual factors and help seeking. For example, perceived benefits of help seeking, such as alleviating symptoms or maintaining a masculine identity, are positively related to men's endorsement of help seeking (O'Brien et al., 2005; Sagar-Ouriaghli et al., 2019). Previous experiences of help seeking that are perceived as beneficial facilitate future help seeking (Cusack et al., 2006), while previous experiences perceived as costly inhibit future help seeking (Kiselica & Englar-Carlson, 2010; Seidler et al., 2020b; Strike et al., 2006). Features of treatment have also been associated with men's

engagement in therapy (see Seidler, Rice, Ogrodniczuk, et al., 2018 for a review). The Signalling Model, however, embodies a new theoretical perspective of male help seeking that can be used to examine associations between signaller-related factors and treatment-related factors in a single, unified theoretical model. The Model, however, is yet to be empirically tested. As such, this study aims to empirically test some of the core relationships predicted by the Model.

1.1 The Current Study

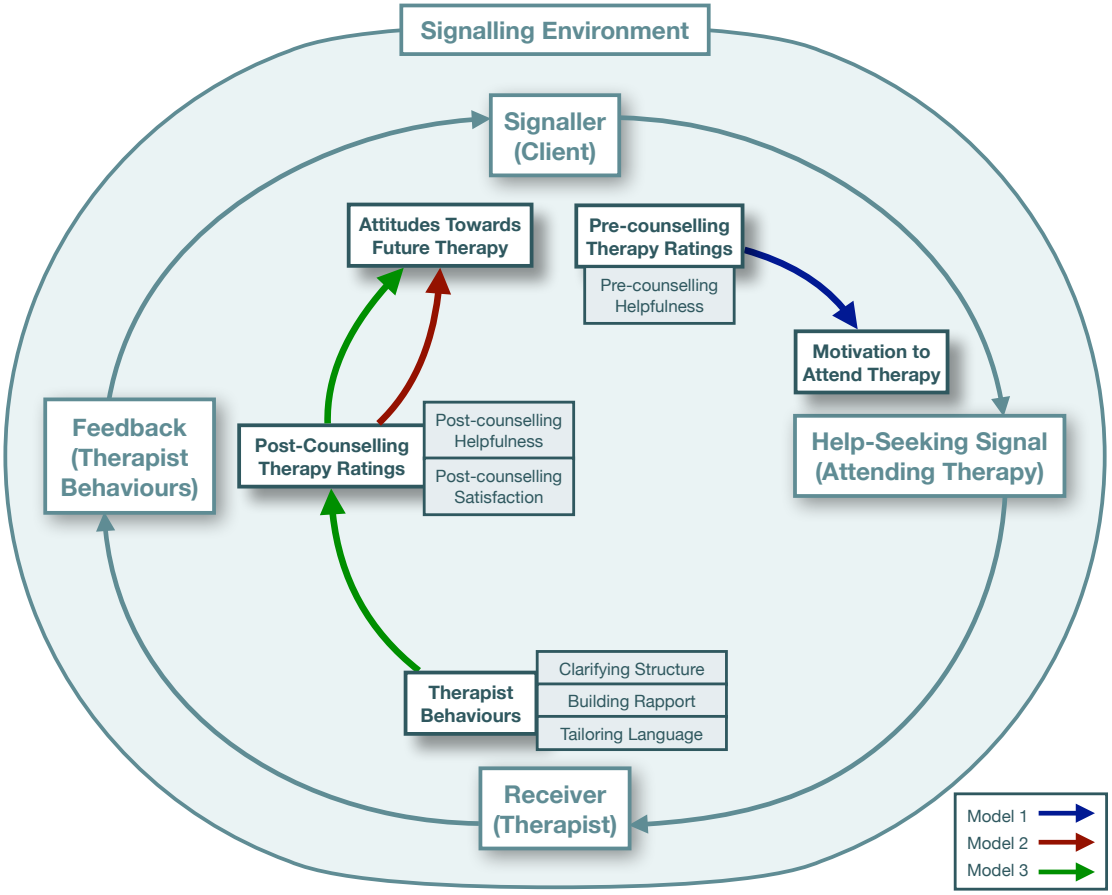
This study examines three relationships described by the Signalling Model, across three models. The first model examines the relationship between men's motivation to seek help and the perceived benefits of help seeking. It is hypothesised that men's pre-counselling ratings of therapy benefits, a measure of perceived signal benefits, will be positively associated with their initial motivation to attend therapy. The second and third models represent the feedback component of the Signalling Model, which posits that receiver behaviour can affect the signaller's evaluation of the signal benefits, which can, in turn, affect future help seeking. The second model includes the signaller's evaluation of the signal benefits and their attitude towards future help seeking. For this model, it is hypothesised that there will be a positive relationship between men's post-counselling (i.e., evaluated) ratings of therapy benefits and their attitudes towards future therapy.

The third model includes receiver (i.e., therapist) behaviours along with the signaller's evaluation of the signal benefits and their attitude towards future help seeking. This model includes three categories of therapist behaviour recommended to improve men's engagement in therapy (see Seidler, Rice, Ogrodniczuk, et al., 2018). The categories were established by reviewing clinical recommendations for

engaging male clients in therapy and conducting a thematic analysis of the findings (see Seidler, Rice, Ogrodniczuk, et al., 2018). The categories are: clarifying the structure of therapy; building rapport and fostering a collaborative relationship; and tailoring language to suit male clients. Clarifying the structure of therapy involves discussing treatment at the outset, and is thought to reduce men's ambivalence towards therapy (Seidler, Rice, Ogrodniczuk, et al., 2018). This process can include setting goals in order to maintain clients' motivation. Building a strong rapport with male clients is also thought to reduce men's ambivalence, and fostering a collaborative, equal, and reciprocal relationship is thought to better reflect the male norm of independence than the traditional, paternalistic, client-clinician dynamic (Seidler, Rice, Ogrodniczuk, et al., 2018). Finally, tailoring language to better reflect male-oriented communication styles and masculine norms, such as being action oriented, is thought to better engage male clients and encourage communication on their part (Seidler, Rice, Ogrodniczuk, et al., 2018). In accordance with the Signalling Model, it is hypothesised that the relationship between these three therapist behaviours and men's attitude towards future help seeking will be mediated by their evaluation of the signal benefits, in the form of their post-counselling ratings of therapy benefits. Figure 4.2 positions each model and hypothesis within the Signalling Model itself.

Figure 4.2

Diagram of Signalling Model (Light Blue) Including Constructs and Measures (Dark Blue), and Hypothesised Relationships (Arrows)



2 Methods

2.1 Data Source

This study utilises data on selected measures from a cross-sectional survey of Australian men's experiences of therapy (for full survey details, see Seidler, Wilson, Walton, et al., 2022). The survey was approved by the Psychology, Health and Applied Sciences Human Ethics Sub-Committee of The University of Melbourne (ID:

1956099). Only participants who identified as male (i.e., cisgender and transgender men) were included in this study.

2.2 Participants and Procedure

Australian men 16+ years were recruited between March and May 2020 to participate in an online survey about their most recent experience of counselling (Seidler, Wilson, Oliffe, et al., 2021). The survey was advertised on the Movember Facebook page with the text: “Have you ever had counselling or therapy? If you can spare 15 min, we’d love to hear from you so we can improve therapy for men”. Following initial recruitment, advertisements targeted men living in rural and remote areas and men younger than 25 and older than 61 years, as these demographics were initially underrepresented (Seidler, Wilson, Walton, et al., 2022).

The survey was conducted in Qualtrics (Qualtrics, 2020). After completing sociodemographic items, participants were asked “Have you ever been in counselling?”. Those who answered “No” to this item completed an alternative survey to those who answered “Yes”. Only data from participants who answered “Yes” were investigated in this paper. Upon completion, participants were given the opportunity to participate in a draw for one of 50 AUD$100 gift vouchers.

2.3 Measures

2.3.1 Sociodemographic Variables

Participants provided data on their age and gender identity. Possible responses for gender identity included: “Male” and “Other”, wherein participants could enter their own response. These responses were then coded into two additional categories: “Transgender male” and “Nonbinary”. A binary variable for male-

identifying participants was computed, where “1” indicated the participant identified as male and “0” indicated the participant did not.

2.3.2 Psychological Distress

Psychological distress was measured with the 9-item Patient Health Questionnaire (PHQ-9; Kroenke et al., 2001). The PHQ-9 assesses symptoms corresponding to diagnostic criteria for depressive disorders in the DSM-IV (American Psychiatric Association, 1994). Each item assesses the two-week frequency of participants’ depressive symptoms (e.g., “Little interest or pleasure in doing things”) on a 4-point Likert scale from 0 (not at all) to 3 (nearly every day). Higher total scores indicate a higher level of current symptoms. The internal consistency of the PHQ-9 scale among this sample was strong (α = .91).

2.3.3 Previous Experience of Therapy

Participants’ previous experience of therapy was assessed with the item: “Was/is this your first experience?”. A “Yes” response indicated that the participant’s most recent experience of counselling was their first experience, while participants who responded “No” had attended counselling prior to their most recent experience. A binary variable for previous experience of therapy was also computed, wherein “1” indicated previous experience with therapy and “0” indicated no previous experience, prior to participants’ most recent experience.

2.3.4 Initial Motivation to Attend Therapy

Participants retrospectively reported their initial motivation to attend therapy on a single item: “Before you started counselling, how motivated were you to attend?”.

This item was assessed on a 5-point Likert scale from 1 (not at all) to 5 (extremely). Higher scores represented greater initial motivation to attend therapy.

2.3.5 Attitudes Towards Future Therapy

Participants' attitudes towards future therapy were measured with a single item: "If you had the opportunity, how willing would you be to return to see your counsellor for further counselling?". This was answered on a 5-point Likert scale from 1 (not at all) to 5 (extremely). Higher scores indicated a more positive attitude towards attending therapy in the future.

2.3.6 Perceived Signal Benefits

Pre-counselling ratings of therapy benefits were retrospectively measured with the item: "Before you started counselling, to what extent did you think it would help?" This item was scored on a 5-point Likert scale from 1 (not at all) to 5 (extremely). The pre-counselling ratings of therapy benefits is operationalised in this study as a measure of perceived signal benefits, with higher scores indicating greater perceived signal benefits.

2.3.7 Evaluated Signal Benefits

Post-counselling ratings of therapy benefits were assessed using two items: "How helpful was your most recent experience of counselling?", and "How satisfied were you with the counselling?". Each item was scored on a 5-point Likert scale from 1 (not at all) to 5 (extremely). These items are operationalised as indicators of signal benefits evaluated after feedback, with higher scores on each representing greater evaluated signal benefits. To avoid any potential multicollinearity, a single measure of

evaluated signal benefits was calculated by averaging the post-counselling helpfulness and satisfaction scores.

2.3.8 Therapist Behaviours

The authors of the survey created a 13-item questionnaire, with each item representing a therapist behaviour that conformed to one of the three categories identified by thematic analysis (see Seidler, Rice, Ogrodniczuk, et al., 2018). Participants were asked whether their therapist had displayed any of these behaviours (see Appendix: Table S1) during their most recent experience of counselling using the question: “How useful was each of the following in helping you settle in to counselling”. Each item was assessed on a 5-point Likert scale from 1 (not at all) to 5 (extremely), with an option (didn’t happen) indicating that the therapist did not display that behaviour. Six items related to clarifying the structure of therapy (e.g., “The counsellor explained the structure of counselling and how long it would take”), five related to building rapport and a collaborative relationship (e.g., “The counsellor talked about me seeking help in positive terms”), and two related to tailoring language to better suit male clients (e.g., “The counsellor used language I could understand (no jargon)”).

The 13 therapist behaviour variables were used to compute three composite scores, representing the total number of therapist behaviours related to clarifying structure, building rapport, and tailoring language, respectively. First, a binary variable for each therapist behaviour was computed, where “1” indicated the behaviour had been displayed by the therapist (Likert scale ratings of 1-5), and “0” indicated it had not been displayed (“Didn’t Happen” option). This binary approach was utilised as the construct being represented was receiver behaviour, rather than

the signaller's evaluation of that behaviour (i.e., the Likert scale ratings). Next, three total scores for each class of therapist behaviour were calculated by adding the newly-created binary variables together (see Supplementary data Table S1). "Clarifying structure" scores ranged from 0 to 5, "building rapport" scores ranged from 0 to 6, and "tailoring language" scores ranged from 0 to 2.

2.4 Data Extraction and Analysis

The variables used in this study were extracted from the raw data file using RStudio version 4.0.2 (Posit Software, 2022). Psychological distress, initial motivation to attend therapy, attitudes towards future therapy, and perceived signal benefits were all extracted directly from the raw data file.

The initial sample included 2,127 participants. Using RStudio (Posit Software, 2022), participants who did not identify as male (n = 8) and participants who completed the alternative survey (n = 110) were excluded from the dataset. Standardised scores were computed for each variable, and the Cronbach's alpha for the PHQ-9 items were calculated before exporting the final dataset.

All data analyses were conducted using JASP, version 0.16.1.0 (JASP Team, 2022). JASP automatically coded all categorical variables as "ordinal" variables, and all continuous variables as "scale" variables. The "Descriptives" function was used to obtain the sample characteristics. All hypotheses were tested using either the "Correlation", "Linear Regression", or "Structural Equation Modelling" functions, with default settings.

Extraneous variables are those other than the variables of interest, but which have an effect on the outcome variable (Burns & Dobson, 1981). To separate the effect of extraneous variables on the outcome variable from the effect of the predictor

variables, extraneous variables should be controlled for (Price et al., 2015). As such, for the regressions, age, psychological distress, and previous experience of therapy were included as controls whenever they were correlated ($p < .05$) with the outcome variable.

To test the first model, a linear regression was run with perceived signal benefits entered as a predictor and initial motivation to attend therapy entered as the outcome. Age, psychological distress, and previous experience of therapy were controlled for by entering them as predictors and adding them to the null model, which, in JASP, is equivalent to entering them in step 1 of a hierarchical regression and entering perceived signal benefits in step 2.

To test the second model, another linear regression was run with evaluated signal benefits entered as the predictor and attitudes towards future therapy were entered as the outcome. Psychological distress and previous experience of therapy were both included as control variables.

For the third model, the prerequisites of the mediation were evaluated by examining the relevant correlations between the three therapist behaviour variables, the evaluated signal benefits, and the attitudes towards future therapy scores. Structural equation modelling was used to test the hypothesis. The three therapist behaviour variables were specified as predictors of both evaluated signal benefits and attitudes towards future therapy, and evaluated signal benefits were specified as a predictor of attitudes towards future therapy. Coefficients for alpha, beta, direct, and indirect paths were also specified, as were coefficients for total effects. Finally, covariances between the three therapist behaviour variables were specified.

3 Results

The current sample included 2,002 participants, aged 16–85 years (*M* = 43.8 years; *SD* = 15.3). The age distribution of the sample resembles that of the general Australian male population, when the 16–85 year cut-off is factored in (*M* = 45.2 years; *SD* = 19.4) (Australian Bureau of Statistics, 2022i). Most participants identified as cisgender male (99.6%; 0.5% transgender male), and heterosexual (72.5%), although the Australian Bureau of Statistics does not collect data on gender identity or sexual orientation (Australian Bureau of Statistics, 2022f). Demographic characteristics of the sample compared with the general Australian male population are displayed in Table 4.1.

Table 4.1

Sociodemographic Characteristics of the Participants in Men in Mind Study, Compared to the General Australian Male Population

Demographic Characteristic	*n*	%	% of Australian Males
Aboriginal or Torres Strait Islander[1]			
No	2036	98.3	96.1
Aboriginal only	31	1.5	3.5
Torres Strait Islander only	2	0.1	0.2
Both	2	0.1	0.2
Relationship Status[2]			
Single/Never Married	535	26.7	27.7
Married/De Facto/Partnered	1,165	58.2	59.4
Separated/Divorced	266	13.3	10.6
Widowed	29	1.4	2.3
Other	7	0.3	-
Current Residence[3]			
Metropolitan	1,210	60.4	72.2*

Regional	643	32.1	25.9*
Rural or Remote	149	7.4	1.9*
Current Employment Status[4]			
Employed Full Time	956	47.8	47.8
Employed Part Time	166	8.3	15.4
Employed Casually	202	10.1	-
Unemployed, Looking for Work	173	8.6	3.9
Unemployed, Not Looking for Work	113	5.6	-
Retired	218	10.9	-
Student	174	8.7	-
Income Range[4]			
$0–$49,999	903	45.1	50.3
$50,000–$99,999	654	32.7	31.2
$100,000–$149,999	309	15.4	10.6
>$150,000	136	6.8	7.8

Note. N = 2002 for each variable. [1](Australian Bureau of Statistics, 2023a). [2](Australian Bureau of Statistics, 2022c). [3](Australian Bureau of Statistics, 2023b). *Percentages are based on male and female estimates. [4](Australian Bureau of Statistics, 2022d).

Almost three in four participants reported having attended counselling prior to their most recent experience (72.4%; 27.6% first experience of counselling). The mean PHQ-9 score was 10.1 (*SD* = 6.9; *range* = 0–27; *median* = 9), which represents moderate depressive symptom severity (Kroenke et al., 2001). Mean scores for initial motivation to attend therapy, attitudes towards future therapy, and perceived and evaluated signal benefits were all slightly above the midpoint of the scale (Table 4.2). Mean scores for the three therapist behaviour variables approached the high end of each scale, with over 80% of participants reported having experienced each of these.

Table 4.2

Descriptive Statistics for Main Variables

Variable	*M*	*SD*	*Median*	*Range*
Initial Motivation to Attend Therapy	3.4	1.3	3	1–5[1]
Attitude Towards Future therapy	3.8	1.5	4	1–5[2]
Perceived Signal Benefits	3.1	1.1	3	1–5[3]
Evaluated Signal Benefits	3.7	1.3	4	1–5[3]
Therapist Behaviours: Clarifying the Structure of Therapy to Client	4.3	1.2	5	0–5[4]
Therapist Behaviours: Building Rapport and Collaborative Relationship to Client	5.5	1.1	6	0–6[4]
Therapist Behaviours: Tailoring Language to Better Suit Male Clients	1.9	0.4	2	0–2[4]

Note. N = 2002 for each variable. [1]Higher scores indicate greater motivation to attend. [2]Higher scores indicate more positive attitude towards future therapy. [3]Higher scores indicate more positive ratings of signal benefits. [4]Higher scores indicate greater likelihood of receiving this type of therapist behaviour.

For the first model, it was predicted that perceived signal benefits would be positively associated with initial motivation to attend therapy. Linear regression found that perceived signal benefits were positively related to initial motivation to attend therapy (β = .541; t = 29.360; p < .001), after controlling for age, psychological distress, and previous experiences of therapy, which supported the hypothesis. Perceived signal benefits explained 28.7% ($F_{Change}(4, 1997) = 252.009$; p < .001) of the variance in participants' initial motivation to attend counselling, after including the control variables.

For the second model, evaluated signal benefits were hypothesised to be positively related to attitudes towards future therapy. Linear regression detected a positive relationship between evaluated signal benefits and attitudes towards future

therapy (β = .826; t = 60.659; p < .001), after controlling for psychological distress and previous experiences of therapy, which supported the hypothesis. Evaluated signal benefits explained 63.7% ($F_{Change}(3, 1998) = 1258.674$; p < .001) of the variance in attitudes towards future therapy, after including the control variables.

Prior to testing the third model, correlations between the three therapist behaviours and the mediator, evaluated signal benefits, and between the mediator and attitudes towards future therapy were used to evaluate the prerequisites for mediation. All correlations were significant (Table 4.3).

Table 4.3

Pairwise Correlations Between Therapist Behaviour Variables, Evaluated Signal Benefits, and Attitudes Towards Future Therapy

Pairwise Correlation	*r*	*p*
Clarifying Structure Scores – Building Rapport Scores	0.64	< .001
Clarifying Structure Scores – Tailoring Language Scores	0.39	< .001
Building Rapport Scores – Tailoring Language Scores	0.50	< .001
Clarifying Structure Scores – Evaluated Signal Benefits	0.28	< .001
Building Rapport Scores – Evaluated Signal Benefits	0.40	< .001
Tailoring Language Scores – Evaluated Signal Benefits	0.26	< .001
Evaluated Signal Benefits – Attitudes Towards Future Therapy	0.80	< .001

Note. N = 2002 for each variable.

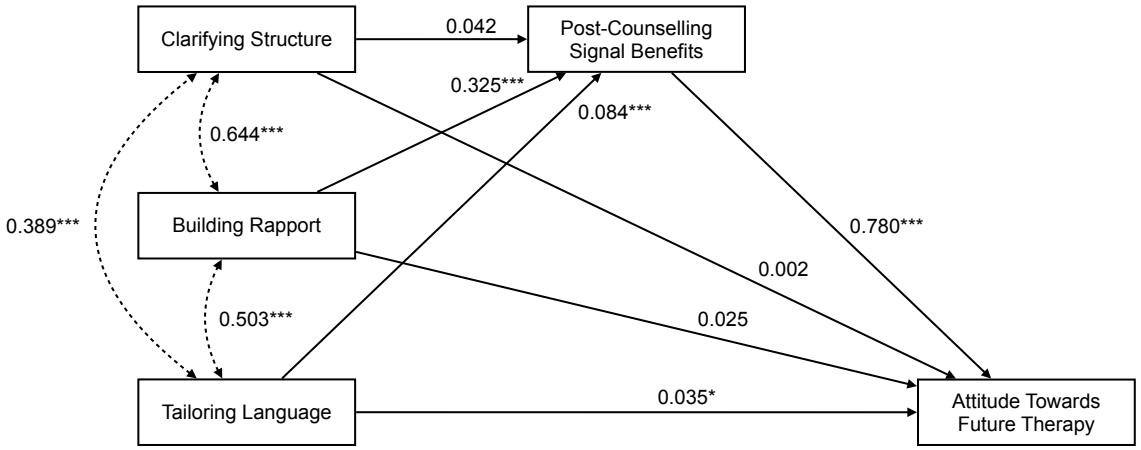
Evaluated signal benefits were expected to mediate the relationships between each of the three therapist behaviour variables and attitudes towards future therapy. The structural equation model revealed positive indirect effects of building rapport scores (β = .254; Z = 11.113; p < .001) and tailoring language scores (β = .066; Z = 3.544; p < .001) on attitudes towards future therapy through evaluated signal

benefits, which supported the hypothesis. The direct effect of tailoring language scores on attitudes towards future therapy remained significant, while the direct effect of building rapport scores did not (Figure 4.3). This indicates that the effect of building rapport scores on attitudes towards future therapy were fully mediated by evaluated signal benefits, while the effect of tailoring language scores was partially mediated. The indirect effect of clarifying structure scores on attitudes towards future therapy was not significant (β = .032; Z = 1.547; p = .122) when building rapport scores and tailoring language scores were included in the model. Examining the alpha and beta pathways shows that there was no significant relationship between clarifying structure scores and evaluated signal benefits (Figure 4.3). As such, only two of the three prediction mediation pathways were supported.

The model did, however, reveal a large residual covariance between clarifying structure scores and building rapport scores (r = .644; p < .001), and a medium residual covariance between clarifying structure scores and tailoring language scores (r = .389; p < .001) (Figure 4.3). This indicates that clarifying structure scores do not explain a significant portion of the variance in evaluated signal benefits after building rapport scores and tailoring language scores were included in the model. Overall, the three therapist behaviour variables alone explained 16.3% of the variance in evaluated signal benefits, and the full model explained 64.2% of the variance in attitudes towards future therapy. The overall hypothesis for this model was partially supported.

Figure 4.3

Path Diagram and Standardised Regression Coefficients Representing the Effects of Clarifying Structure Scores, Building Rapport Scores, and Tailoring Language Scores on Attitudes Towards Future Therapy, Mediated by Evaluated Signal Benefits



Note. *p < .05, **p < .01, ***p < .001.

4 Discussion

Mood and anxiety disorders are among the largest contributors to non-fatal losses in health, functioning, and quality of life in men worldwide (World Health Organization, 2019), and are associated with increased risks of suicide (World Health Organization, 2017). Research has focused on masculinity as a barrier to formal help seeking, however, even men who overcome that barrier are at risk of discontinuing treatment, despite still suffering mental health problems (Oliffe et al., 2019). As such, factors beyond the man seeking help, such as treatment-related factors, may affect help seeking (Seidler, Rice, River, et al., 2018), and theoretical models that consider factors related to the help seeker and contextual factors simultaneously remain under-researched (Vogel & Heath, 2016; Wenger, 2011). The

Signalling Model of Male Help-Seeking Behaviour was developed to fill this theoretical gap. The Model describes help-seeking behaviour as an emergent property of the interaction between five components — the signaller, signal, receiver, feedback, and environment — and this paper is one of the first empirical tests of some of the predicted relationships. Three models test relationships between signal benefits, help-seeking motivation and attitudes, and therapist behaviours using survey data collected from Australian men about their most recent experience in therapy. The results demonstrated, as hypothesised, that initial motivation to attend therapy and attitudes towards future therapy are linked to men's ratings of therapy benefits. Further, ratings of therapy benefits mediate the relationship between therapist behaviours and attitudes towards future therapy. These results are consistent with the Signalling Model predictions that signal benefits affect motivation to signal and that receiver behaviours affect attitudes towards future signalling by affecting signal benefits.

The link between signal benefits and initial motivation to attend therapy or attitudes towards future therapy is consistent with previous research indicating that the perception of signal benefits can facilitate male help-seeking. For example, in a survey of 14 factors facilitating their decision to seek help, men rated "Belief that professional support helps in recovery" as the strongest facilitating factor (Seidler et al., 2020a). Qualitative evidence suggests that men who recognise benefits of help seeking, for example that help seeking upholds or maintains their masculinity, endorse that help seeking (O'Brien et al., 2005). Similarly, men's ratings of treatment effectiveness — another measure of signal benefits — is positively correlated with intentions to seek help in the future for both personal or emotional problems and suicidal thoughts (Cusack et al., 2006). The first and second models both explained

a large proportion of the variance in initial motivation to attend therapy and attitudes towards future therapy, respectively, which highlights the importance of men's perceptions of signal benefits in the help-seeking process and demonstrates the potential predictive power of the Signalling Model.

The third model examined the relationship between receiver behaviour and attitudes towards future help seeking. The Signalling Model posits that receiver behaviour affects men's perceptions of signal benefits, which, in turn, affects their attitude towards future help seeking. Of the three therapist behaviour variables, two (building rapport with clients and tailoring language to suit male clients) satisfied this mediation, while the third (clarifying structure of therapy) did not. Clarifying structure, however, was associated with the other two therapist behaviours, suggesting that therapists who built a rapport or tailored their language were likely to also have clarified the structure of therapy. As such, including clarifying structure scores in the model did not explain any additional variance in evaluated signal benefit scores. Previous evidence has demonstrated that therapist behaviours relating to building rapport are effective at engaging men in therapy. For example, men report a preference for a personal, individual connection — a rapport — with their therapist, which reduces their fear of being stigmatised while seeking help (Seidler, Rice, Oliffe, et al., 2018). Similarly, male veterans in group therapy described collaboration and fellowship as an important part of treatment, and their engagement diminished when that atmosphere was disrupted (Kivari et al., 2018). A lack of rapport between men and healthcare providers acts as a barrier to accessing care (Yousaf et al., 2015) and disclosing distress (Coles et al., 2010). Another study, using the same cohort examined in this paper, found that the most common reason for men dropping out of therapy was lack of a "connection" with their therapist (Seidler, Wilson, Kealy,

et al., 2021, p. 5). Tailoring language by using humour and adopting relevant metaphors has also been shown to engage men in therapy. For example, the *It's a Goal!* program uses football (i.e., soccer) as a metaphor for therapy, which improved men's engagement by describing therapeutic processes in safe, familiar, and accessible terms, and enabling men to better understand and communicate their psychological state by relating to similar situations in football (Spandler et al., 2014). Humour can also serve to ease tensions after dealing with difficult emotions during the therapy (Spandler et al., 2014). Beyond engagement with therapy, however, this study shows that these therapist behaviours are related to men's attitude towards future help seeking as well. The Signalling Model considers help seeking in the long-term, which is particularly important when examining healthcare utilisation for mental health problems, which typically require users to access healthcare many times, over multiple sessions.

Given that the hypotheses were either supported or partially supported, the Signalling Model may be a promising avenue for future research into male help seeking. The Model can examine associations between signaller-related and treatment-related factors in a unified framework, to better understand and facilitate male help-seeking behaviour. The key signalling constructs examined in this study, namely signal benefits and therapist behaviours, were positively associated with men's initial motivation to attend therapy or their attitude towards future therapy. One implication is that advertising the benefits of therapy to men could facilitate male help seeking, as some existing research suggests (Sagar-Ouriaghli et al., 2019). Another implication is that therapist behaviours that engage men in therapy may also facilitate future help seeking.

The results of this study should be interpreted in light of several strengths and limitations. The sample size and sampling procedure represent strengths of the study. First, the study drew from a dataset with a large sample size, which reduces the uncertainty of statistical analyses and increases the representativeness of the sample (Biau et al., 2008). Second, advertisements for participation were targeted to men of younger and older age groups, and to men living in rural and remote areas, in order to mitigate under-representation of these groups. In addition, the sociodemographic characteristics of the final sample were similar to those of the general Australian male population (Table 4.1), and the age distribution of the sample resembled the age distribution of the Australian male population. In fact, the only notable deviation between the sample characteristics and the general population characteristics comes from the only data that have not been disaggregated by sex. Overall, the final sample demographically represents the total population of Australian males, which is a strength of this paper.

The survey itself suffered from some limitations. The survey used was not created specifically to test the Signalling Model. While particular signal benefits — helpfulness and satisfaction — are measured, measures of total or overall signal benefits are absent, as are measurements of total signal costs — a vital aspect of signalling. Another limitation is the use of retrospective measures of pre-counselling helpfulness and initial motivation to attend. Participants may not accurately recall how helpful they perceived counselling or how motivated they were to attend, particularly where the experience of counselling discussed in the survey may have occurred over 10 years ago. Finally, the three therapist behaviour variables were calculated by counting the types of behaviours participants were exposed to in each of the three categories. This may not be the best way to derive this variable, given

that therapists may not need to use their entire repertoire to successfully engage a male client. In addition, the correlations between the three variables are statistically significant, suggesting that they may all be related to an underlying, latent variable. The derivation of these variables, lack of validation, and lack of examination of the measure's psychometric properties all represent a limitation of this paper. Future research should determine the best scoring method and seek to validate this measure.

Additionally, the survey was cross-sectional, which precludes making any conclusions about causality or directionality. It is possible that the true direction of the observed relationships conflicts with Signalling Theory. For example, participants who recalled greater motivation to attend may have been more likely to report greater perceived signal benefits. Alternatively, participants who reported greater evaluated benefits may have been more likely to recall engaging therapist behaviours. There were also limitations associated with the sample itself. The sample was self-selected, and thus may not be representative of the Australian male population. In addition, the sample in this study only included participants who sought help. The Signalling Model not only describes the conditions under which men are predicted to seek help, but also the conditions under which men are predicted to refrain from seeking help, which is an equally important research focus that could not be examined with the sample used in this study.

To redress these limitations, future research might test the Signalling Model on randomly-sampled cohorts of men who both sought help and refrained. Ideally, a purpose-designed survey should be used, and perceptions of signal costs and benefits across both groups should be measured. Variables could be measured longitudinally, before and after help seeking, to avoid the limitations of retrospective

measures and to help establish the directionality predicted by the Model. Future studies might also endeavour to test the Signalling Model in its entirety, rather than focusing on a subset of its components and relationships.

Theoretical perspectives on male help seeking have focused on signaller-related factors as barriers to help seeking, however, evidence shows that men who overcome initial reticence and access mental healthcare are still at risk of dropout. This suggests that treatment-related factors, in conjunction with signaller-related factors, may play a role in the maintenance of ongoing, long-term help seeking. This paper is one of the first studies to test pathways within the Signalling Model of Male Help-Seeking Behaviour, which can examine the relationships between signaller-related and treatment-related factors and their effect on help seeking in a unified framework. In this study, relationships between perceived signal benefits and initial motivation to attend therapy, evaluated signal benefits and attitudes towards future therapy, and therapist behaviours and attitudes towards future therapy were tested. The results supported the predictions of the Signalling Model, namely that ratings of signal benefits would be positively associated with both initial motivation to attend therapy and attitudes towards future therapy. Furthermore, therapist behaviours aimed at engaging men were positively related to signal benefits and, in turn, attitudes towards future therapy. These results are consistent with the Signalling Model, suggesting that it may be used to understand male help seeking, and the relationships between predictor variables, in greater detail. Furthermore, these results suggest that advertising the benefits of therapy might facilitate greater help seeking among men, and that clinical recommendations for engaging men in therapy in the short-term may also improve long-term, ongoing help seeking behaviour.

Chapter Five: Ten to Men Paper

Statement of Authorship

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Co-Author Contributions

By signing the Statement of Authorship, each author certifies that:

i. the candidate's stated contribution to the publication is accurate (as detailed above);

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Applying Signalling Theory to Multivariate Models of Male Help Seeking: Testing a Novel Theoretical Application Using Data from the Ten to Men Study

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Abstract

Research into male help-seeking has identified a broad array of inhibiting and facilitating factors, but there remains no consensus on a model of male help seeking that encompasses a plurality of these factors. The Signalling Model of Male Help-Seeking Behaviour, based on Signalling Theory, describes help-seeking behaviours as a product of the interaction between the help seeker, help-seeking behaviour, help provider, feedback, and environmental factors. This paper used data from Wave 3 of the Ten to Men study, a national Australian dataset with a large sample size (*n* = 2,071 for this paper). This paper examines the relationships between these components across four structural equation models. The first two models examine the relationships between distress, bond with help providers, and help-seeking behaviour, for both formal and informal help seeking. The third model examines relationships between distress, previous help seeking, informal help seeking, and formal help seeking. The final model examines relationships between distress, ability to find health-related information, and formal help seeking.

Whilst ability to find health-related information was unrelated to help seeking, distress, the bond with formal help sources, previous help seeking, and informal help seeking were positively associated with formal help seeking, as predicted. As such, the results provided partial support for the hypotheses. These findings demonstrate that the Signalling Model can collate disparate predictors of male help seeking. Future research should explore the mechanisms by which previous and informal help seeking may act as feedback, using purpose-designed measures. Furthermore, the results suggest that interventions that address factors external to the help seeker, such as bond with informal help sources, such as friends and family members, may indeed facilitate formal help seeking behaviour.

1 Introduction

Men's help seeking for mental health issues has received increased attention in recent decades, given the prevalence of common mental disorders among men. In Australia, approximately 1 in 8 men meet the diagnostic criteria for an affective disorder within their lifetime, 1 in 5 meet criteria for an anxiety disorder, and 3.1% of men report experiencing suicidal ideation in the previous 12-month period (Australian Bureau of Statistics, 2022g, 2022k). Suicide was the 10th leading cause of death for Australian men in 2020, and the leading cause for boys and men aged 15–44 (Australian Bureau of Statistics, 2022b). The Australian Bureau of Statistics recorded 2,384 male suicides in 2020, over three times the number of female suicides (Australian Bureau of Statistics, 2022b). Men seek help for mental health issues at lower rates than women, despite similar or even greater healthcare needs (Addis & Mahalik, 2003; Australian Bureau of Statistics, 2022j; Möller-Leimkühler, 2002). Furthermore, the literature suggests that men tend to delay help seeking until symptoms become more severe (Galdas et al., 2005; Seidler et al., 2016), reducing the possibility of early intervention (Department of Health, 2019).

Many barriers and facilitators of male help seeking have been identified (Wenger, 2011). For example, adherence to traditional masculine norms is inversely associated with attitudes towards help seeking (Gerdes et al., 2018; O'Neil, 2008, 2012; Wong et al., 2017). Negative emotions, such as fear, distress, and embarrassment, also act as barriers to help seeking among men, as do contextual factors such as cost, in money and time, and poor communication with healthcare providers (Yousaf et al., 2015). Social stigma is the barrier most referenced in the qualitative literature (Hoy, 2012). Facilitating factors include encouragement from

friends or family, the belief in effective treatment, and perceiving a legitimate reason for help seeking (Hoy, 2012; Vogel et al., 2007).

Currently, however, no comprehensive theoretical model incorporating a broad range of predictors is widely accepted (Gulliver et al., 2012). Existing models applied specifically to male help seeking (rather than general help seeking) often focus on adherence to traditional masculine norms (Hoy, 2012; Vogel & Heath, 2016). This approach under-emphasises the role of influences beyond the man himself on his help-seeking (Vogel & Heath, 2016), and fails to address the needs of a diverse population of men who embody a variety of masculinities (Seidler, Rice, River, et al., 2018). Furthermore, existing approaches focus on identifying predictive factors, such as those related to the help seeker, however, less focus is devoted to considering how interactions with external or contextual factors, such as sociocultural or interpersonal factors, affects the help seeking process (Wenger, 2011). A broader, comprehensive model can examine how factors related to the help seeker interact with external factors, such as treatment modality, to affect help seeking (Seidler, Rice, River, et al., 2018), and can account for the variation in male help-seeking behaviour across contexts, and among men (Addis & Mahalik, 2003; Seidler, Rice, River, et al., 2018). Greater understanding of these processes is necessary to refine existing interventions or identify new targets for intervention (Seidler, Rice, River, et al., 2018). As such, empirical testing of broader, more comprehensive models that incorporate a range of predictive factors external to the man is needed to better understand help seeking among increasingly diverse populations of men, and, ultimately, to better facilitate male help seeking and improve men's mental health outcomes (Seidler, Rice, River, et al., 2018; Vogel & Heath, 2016).

1.1 The Signalling Model of Male Help-Seeking Behaviour

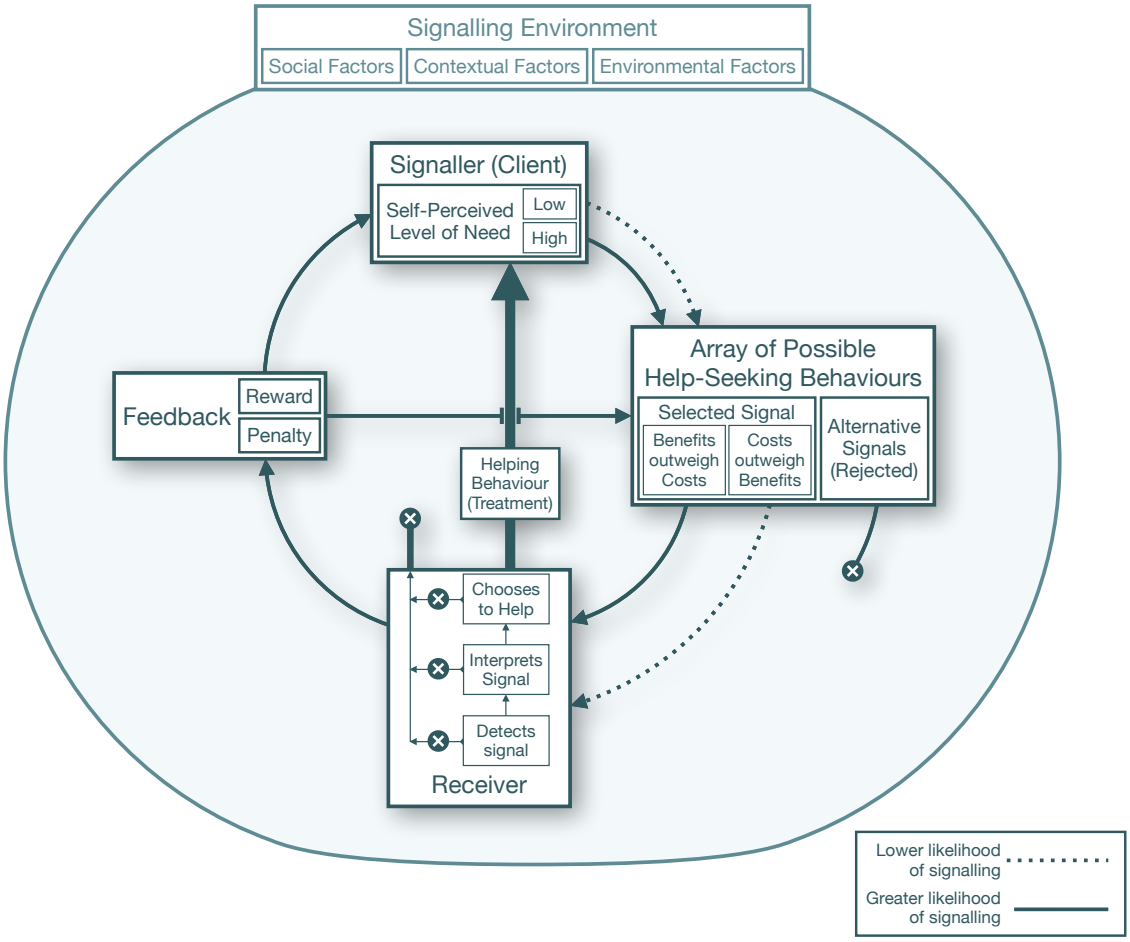
The Signalling Model of Male Help-Seeking Behaviour (Figure 5.1) describes male help seeking as an interaction between many components. The *signaller* is the man seeking help, help-seeking behaviours are called *signals*, and the help provider is the *receiver*. The signals communicate the signaller's self-perceived level of need for help, and have *benefits* and *costs* associated with their production (Lachmann et al., 2001; Maynard Smith & Harper, 1995). Signallers who perceive a need for help are motivated to signal but will only do so when the perceived benefits of doing so outweigh the perceived costs (Lachmann et al., 2001; Maynard Smith & Harper, 1995). *Feedback* describes the receiver's response to a help-seeking signal, which the signaller can use to re-evaluate the benefits and costs of signalling in the future. Finally, the *signalling environment* describes factors external to the signaller, signal, receiver, and feedback, that influence help seeking (Connelly et al., 2011). The Signalling Model posits that factors related to the signaller, signal, receiver, feedback, and environment can all be included into a multivariate predictive model of help-seeking behaviour.

Self-perceived need is positively related to severity of psychological distress (Codony et al., 2009), and multivariate analyses of the link between severity of psychological distress and male help-seeking behaviour have been conducted. These models have included sociodemographic variables (Martin et al., 2021), health-behaviour variables (Martin et al., 2021), previous help seeking (Demyan & Anderson, 2012), and availability of healthcare (Gagné et al., 2014) as additional predictors of male help-seeking behaviour. Multivariate analyses consistent with the Signalling Model, however, have not yet been studied, and represent a gap in the literature. As such, this paper aims to address this gap by testing a series of novel

multivariate models of male help-seeking behaviour that are consistent with the Signalling Model, and exploring the relationships between those variables.

Figure 5.1

Diagram of the Signalling Model



1.2 The Current Study

In accordance with the Signalling Model, the models in this study conceptualise severity of psychological distress, which is related to self-perceived need (Codony et al., 2009), as a predictor of help-seeking behaviour, and variables that act as signal benefits or costs as additional predictors in multivariate models of help-seeking

behaviour. The first two models examine factors spanning the signaller and receiver components: one models formal (i.e., professional) help seeking and the other models informal (i.e., non-professional) help seeking. For the first model, severity of psychological distress is modelled as a predictor of formal help-seeking behaviour. Bond — level of trust and attachment (Bordin, 1979) — with formal sources spans the signaller and receiver components and is therefore included as an additional predictor variable. Previous research shows that severity of psychological distress is positively related to men's formal help-seeking behaviour (Vogel & Heath, 2016), and that bond with formal sources is positively related to help seeking in men (Coles et al., 2010; Hoy, 2012; Seidler, Wilson, Kealy, et al., 2021; Yousaf et al., 2015). In accordance with this evidence and the Signalling Model, it is hypothesised that there will be a positive effect of both severity of psychological distress and bond on formal help seeking, when both predictors are included in the model.

Men identify both professionals and non-professionals as potential sources of help (Daraganova & Quinn, 2020; Smith et al., 2006), suggesting that the same relationships might hold true for informal (i.e., non-professional) help seeking, which involves informal sources, such as friends or family members. As such, the second model includes both distress and bond with informal sources as predictors of informal help seeking. Both predictors are hypothesised to have a positive effect on informal help seeking, when included in the model.

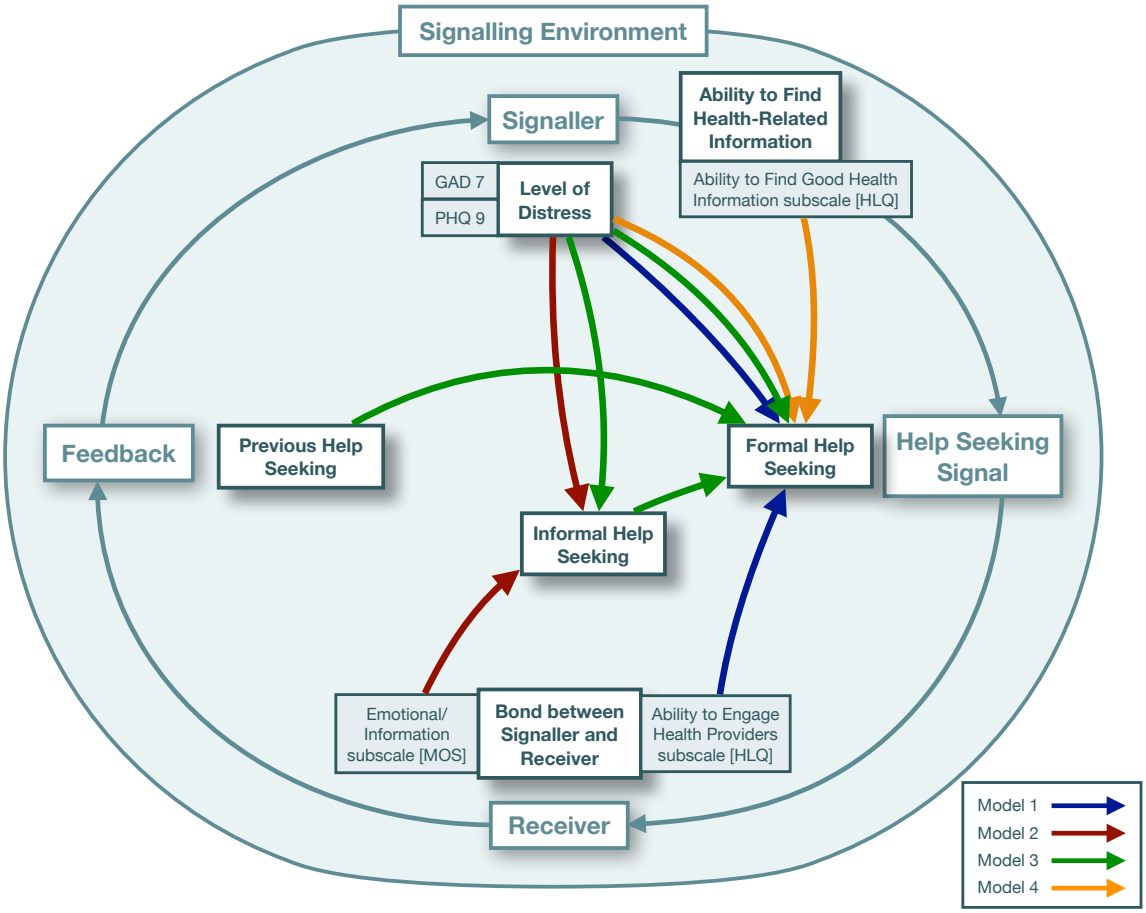
The third model examines factors spanning the signaller and feedback components. This model includes severity of psychological distress, previous help seeking, and informal help seeking as predictors of formal help seeking and. The valence of a previous experience is positively related to current help seeking (Cusack et al., 2006; Kiselica & Englar-Carlson, 2010; Seidler et al., 2020b; Strike et

al., 2006), and the familiarity with the help-seeking process afforded by previous experiences is positively related to current help seeking (Coles et al., 2010). Feedback from informal help seeking reduces the perceived risks (or costs) of help seeking among both men and women (Vogel et al., 2007), and encouragement from a trusted source, including informal sources, is the most common reason men cite for seeking help (Hoy, 2012). As such, all three predictors are hypothesised to have a positive effect on formal help-seeking behaviour when included in the model. Furthermore, given that distress is positively related to help-seeking (Vogel & Heath, 2016), it is hypothesised that severity of psychological distress will be positively associated with both informal and previous help seeking.

The final model examines factors spanning the signaller and environment components. A signaller's ability to find health-related information is a property of both the signaller, in terms of their ability, and of the signalling environment, in terms of the availability of that information. The effect of this factor on help-seeking behaviour remains under-researched, however, it is considered a component of health literacy (Milner et al., 2019), which has been shown to positively predict formal help seeking (Berkman et al., 2011; Bonabi et al., 2016). As such, the final model includes both severity of psychological distress and ability to find health-related information as predictors of formal help seeking. It is hypothesised that both predictors will have a positive effect on formal help seeking when included in the model. Figure 5.2 shows these four models, and the associated hypothesised relationships overlayed onto the Signalling Model itself.

Figure 5.2

Diagram of Signalling Model (Light Blue) Including Constructs and Measures (Dark Blue), and Hypothesised Relationships (Arrows)



2 Methods

2.1 Data source

The Ten to Men study is a nation-wide, longitudinal study on the health of Australian men and boys (Bandara et al., 2021). Data collected covers six topics related to men's health: wellbeing and mental health, use of health services, health-related behaviours, health status, health knowledge, and social determinants (Bandara et al., 2021). To date, three waves of data collection have been conducted, in 2013/14, 2015/16, and 2020/21. Recruitment of participants for the study followed

a stratified, multi-stage, cluster random sampling procedure (for full survey details, see Bandara et al., 2021). Men and boys were eligible to participate provided they were aged 10–55 during the recruitment phase, they were Australian citizens or permanent residents, and they were fluent in English. The study received approval from the University of Melbourne Human Research Ethics Committee, and all participants provided informed consent (Bandara et al., 2021). Three inclusion criteria were specified for this paper. Firstly, participants had to have participated in Wave 3, as most of the variables investigated in this paper are from Wave 3. Secondly, participants had to have identified as male (i.e., cisgender and transgender men) in Wave 3. Finally, participants had to have answered the questions about their help-seeking behaviour.

2.2 Measures

2.2.1 Sociodemographic Variables

Participants were asked about their age, gender identity (response options: male, female, transgender male to female, or transgender female to male), sexual identity (heterosexual, bisexual, homosexual, asexual, pansexual, or other), and Aboriginal or Torres Strait Islander status (no, Aboriginal only, Torres Strait Islander only, or both).

2.2.2 Formal and Informal Help-Seeking Behaviour

Help-seeking behaviour (i.e., signalling) was measured only in men who self-reported a personal, behavioural, or emotional problem in the previous 12 months, using the question: “Have you sought help for personal or emotional problems from any of these in the last 12 months?” (response options include: mental health

professional (i.e. psychologist, social worker, counsellor); intimate partner (e.g. girlfriend, boyfriend, husband, wife, de facto); or I have not sought help from anyone).

Binary variables were computed for both formal and informal help-seeking behaviour. Positive responses to any of “Mental health professional (i.e. psychologist, social worker, counsellor)”, “Phone helpline (e.g. Lifeline)”, and “Doctor/GP” were coded as “1”, separating participants who sought formal help from those who had not (“0”). Positive responses to any of “Intimate partner (e.g. girlfriend, boyfriend, husband, wife, de facto)”, “Friend (not related to you)”, “Parent”, “Other relative/family member”, or “Minister or religious leader (e.g. Priest, Rabbi, Chaplain)” were coded as “1” to differentiate from participants who did not seek informal help (“0”).

2.2.3 Psychological Distress

Psychological distress, a property of the signaller, was measured using two questionnaires. The 7-item Generalized Anxiety Disorder Scale (GAD-7; Spitzer et al., 2006) measured anxiety symptoms over the previous two weeks on a scale of 0 (not at all) to 3 (nearly every day), and the 9-item Patient Health Questionnaire (PHQ-9; Kroenke et al., 2001) assessed depressive symptoms over the previous two weeks on a scale of 0 (not at all) to 3 (nearly every day). Total scores range from 0–21 on the GAD-7 and 0–27 on the PHQ-9, with higher scores on each indicating higher symptom frequency. Scores of 10+ on the GAD-7 represent likely cases of Generalised Anxiety Disorder (Spitzer et al., 2006) and scores of 11+ on the PHQ-9 suggest likely major depression (Richardson et al., 2010). Internal consistency in this sample was high (GAD-7: $\alpha = 0.90$; PHQ-9: $\alpha = 0.88$).

A binary variable was computed for distress. Participants with either a GAD-7 score of 10+ or a PHQ-9 score of 11+ were coded as “1”, representing clinical levels of distress. Participants with one score missing and the other score above threshold were coded as “1”, as these participants still fulfilled the criteria for clinical levels of psychological distress. Participants with one score missing and the other below the threshold were coded as missing (“NA”), as their level of distress could not be determined.

2.2.4 Bond with Formal and Informal Help Sources

The bond between signaller and receiver was measured using two questionnaires. The 5-item “Ability to actively engage with healthcare providers” subscale of the Health Literacy Questionnaire (HLQ; Osborne et al., 2013) is operationalised as an indicator of participants’ bond with formal sources of help. It assesses the ease with which participants can communicate with healthcare providers. Each item is rated on a scale from 0 (cannot do) to 4 (very easy). Examples include “Make sure that healthcare providers understand your problems properly” and “Feel able to discuss your health concerns with a healthcare provider”. Higher total scores indicate a greater ability to engage with healthcare providers, and this measure was conceptualised as a measure of participants’ bond with formal sources of help. This measure demonstrated strong internal consistency ($\alpha = 0.95$).

The 8-item Emotional/Information subscale of the Medical Outcomes Study Social Support Survey (MOS; Sherbourne & Stewart, 1991) measures two dimensions of social support and is operationalized as an indicator of participants’ bond with informal sources of help. The emotional support dimension describes encouragement of the expression of feelings, empathetic understanding, and

positive affect, while the informational support dimension describes the offering of feedback, advice, or guidance (Sherbourne & Stewart, 1991). Example items include “Someone to confide in or talk to about yourself or your problems”, and “Someone to give you good advice about a crisis” (Sherbourne & Stewart, 1991). Participants rate how often each type of support is available to them, on a 5-pt Likert scale from 1 (none of the time) to 5 (all of the time). Higher average scores indicate greater social support from family and friends (Moser et al., 2012; RAND Corporation, 2023). Average scores on this measure were conceptualised as a representation of participants’ bond with informal sources of help. For this sample, internal consistency was strong ($\alpha = 0.97$).

2.2.5 Previous Formal Help Seeking

Participants’ previous formal help seeking was captured in Waves 1 and 2. In those waves, separate questionnaires were used for 15–17 year olds, over 18 year olds, and parents of 10–14 year olds. Participants over 18 were asked: “Excluding any time spent in hospital, have you consulted any of these health professionals for your own health in the past 12 months?”. Responses included “Accredited counsellor” and “Psychologist”. Parents of 10–14 year olds were asked: “In the past 12 months, has your son visited any of the following medical services?”. Responses included “A counsellor or psychologist” and “A psychiatrist”. Neither wave included a similar question for 15–17 year olds.

A binary variable was computed to capture any previous formal help seeking (i.e., in Wave 1 or 2). Participants who self-reported visiting a mental health professional (“Accredited counsellor” or “Psychologist”) or whose parents reported that they had visited a mental health professional (“A counsellor or psychologist” or

“A psychiatrist”) in the previous 12-months, in either Wave 1 or 2, were coded as “1”, representing previous formal help seeking. Participants with no recorded visits to a mental health professional in previous waves were coded as “0”, representing no previous formal help seeking. Participants with data missing from one wave were coded as “1” if they had visited a mental health professional in the other wave, and were coded as missing (“NA”) if they had not, as their previous formal help seeking could not be determined.

2.2.6 Ability to Find Health-Related Information

Participants’ ability to find health-related information, a property of the interaction between the signaller and the signalling environment, was assessed using the 5-item “Ability to find good health information” subscale of the HLQ. Items measured participants’ ratings of the difficulty of different tasks. Examples include “Find health information from several different places”, and “Get health information in words you understand”. Items are scored on a scale from 0 (cannot do) to 4 (very easy). Higher total scores indicate greater ease of finding health-related information. This measure has strong internal consistency ($\alpha = 0.94$).

2.3 Data Extraction and Analysis

The Ten to Men data accessed by users are already cleaned and formatted into separate datasets for each wave. Missing or erroneous data were coded using a standard code frame (Bandara et al., 2021). Each dataset was imported into RStudio version 4.0.2 (Posit Software, 2022) for variable extraction and computation.

The total Wave 3 sample comprised 7,919 participants. Those who did not identify as “Male” or “Transgender, female to male" were excluded, leaving 7,660

participants. Participants who did not self-report experiencing a personal or emotional problem in the previous 12 months were also excluded, as they were not asked about their help-seeking behaviour. Of the remaining 2,474 participants, 403 participants with missing data from the key variables were also excluded. Cronbach's alpha values for each scale were calculated in RStudio before the final dataset was exported.

All statistical analyses were conducted in JASP, version 0.16.1.0 (JASP Team, 2022). The clinical distress variable was set as a binary (i.e., "nominal") variable. JASP automatically recognised all continuous variables as "scale" variables, and all categorical variables as "ordinal" variables. The "Descriptives" function was used to obtain the sample characteristics. Each model was tested using the "Structural Equation Modelling" function. To allow for a binary predictor variable, "Missing data handling" was set to "Listwise deletion" in the "Estimation options" tab. All other options were left on their default settings, and R-squared values were requested. For each model, relationships between all variables were specified, in order to explore any additional associations.

To test the first model, level of distress and bond with formal sources of help were specified as predictors of formal help-seeking behaviour, and level of distress was specified as a predictor of bond with formal sources of help. The second model specified level of distress and bond with informal sources of help as predictors of informal help-seeking behaviour, and level of distress as a predictor of bond with informal sources of help. To test the third model, level of distress, previous formal help seeking, and informal help-seeking behaviour were all specified as predictors of formal help-seeking behaviour. All other relationships between level of distress, previous formal help seeking, and informal help-seeking behaviour were also

specified. To test the final model, level of distress and ability to find health-related information were specified as predictors of formal help-seeking behaviour, and the relationship between level of distress and ability to find health-related information was also specified.

3 Results

The final sample comprised 2,071 participants, aged 16–62 years (*M* = 43.0 years; *SD* = 11.8). The age distribution of the sample resembles that of the general Australian male population, when the 16–62 year cut-off is factored in (*M* = 39.0 years; *SD* = 14.0) (Australian Bureau of Statistics, 2022i), and that of the full Wave 3 cohort (*M* = 43.2 years; *SD* = 12.8). All participants identified as cisgender male, which resembles the percentage of cisgender males in the full Wave 3 cohort (96.7%). The majority (91.5%) identified as heterosexual, which also resembled the percentage in the full cohort (89.1%). These figures cannot be compared to the characteristics of the general Australian male population, as the Australian Bureau of Statistics does not collect data on gender identity or sexual orientation (Australian Bureau of Statistics, 2022f). Table 5.1 compares the demographic characteristics of the final sample with the full Wave 3 cohort and the general population of Australian males.

Table 5.1

Sociodemographic Characteristics of the Participants in the Final Ten to Men Sample, Compared to the Full Wave 3 Cohort and the General Australian Male Population

Demographic Characteristic	% (Final Sample)	% (Wave 3 Cohort)	% (Australian Males)
Aboriginal or Torres Strait Islander[1]			
No	98.3	97.6	96.1
Aboriginal only	1.5	1.4	3.5
Torres Strait Islander only	0.1	0.1	0.2
Both	0.1	0.2	0.2
Relationship Status[2]			
Single/Never Married	25.6	23.6	27.7
De Facto/Partnered	15.1	13.9	11.8
Married	53.5	55.8	47.6
Separated	3.2	1.8	3.0
Divorced	1.6	1.3	7.6
Widowed	0.4	0.3	2.3
Current Residence[3]			
Major Cities	61.1	58.5	72.2*
Inner Regional	18.7	20.9	17.8*
Outer Regional	13.9	14.3	8.1*
Remote	0.3	0.2	1.2*
Very Remote	0.1	0.1	0.8*
Current Employment Status[4]			
Employed Full Time	56.7	56.4	47.8
Employed Part Time	11.7	11.8	15.4
Unemployed, Seeking Employment	8.0	5.8	3.9
Not Employed, Not Seeking Employment	8.5	6.4	-
Income Range[4]			
$0–$49,999	23.1	20.8	50.3
$50,000–$99,999	33.4	31.1	31.2

$100,000–$149,999	20.7	19.8	10.6
>$150,000	11.9	11.9	7.8

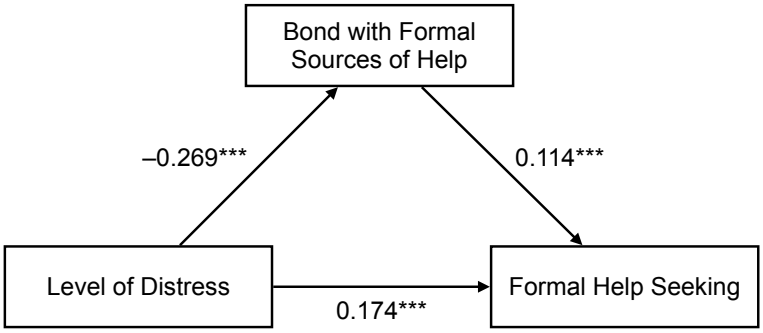
Note. N = 2071 for final sample. *N* = 7919 for Wave 3 cohort. [1](Australian Bureau of Statistics, 2023a). [2](Australian Bureau of Statistics, 2022c). [3](Australian Bureau of Statistics, 2023b). *Percentages are based on male and female estimates. [4](Australian Bureau of Statistics, 2022d).

For the full Wave 3 cohort, only 14.6% reported having sought formal help during a previous wave, while, for the final sample, that percentage rose to 25.0%. Similarly, people in the full Wave 3 cohort were less likely to display clinical levels of distress (10.8%) than people in the final sample (25.4%).

For the first model, level of distress and bond with formal sources of help were both predicted to be positively related to formal help-seeking behaviour. A structural equation model revealed that both variables were positively related to formal help seeking (Figure 5.3), supporting the hypotheses for this model. Together, these factors explained 3.3% of the variance in formal help-seeking behaviour. In addition, a significant inverse relationship was detected between level of distress and bond with formal sources of help (Figure 5.3).

Figure 5.3

Path Diagram and Standardised Regression Coefficients Representing the Effect of Level of Distress and Bond with Formal Sources of Help on Formal Help-Seeking Behaviour (Model 1)

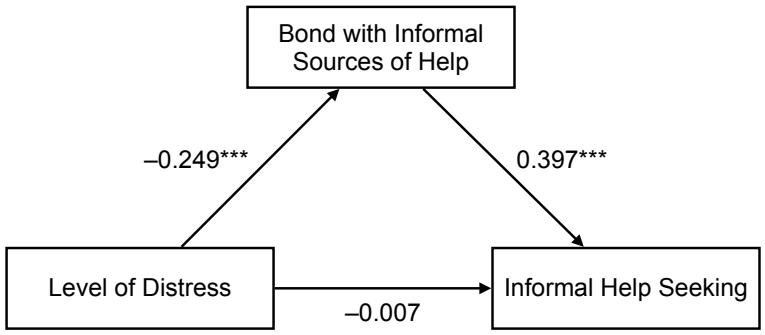


Note. *p < .05, **p < .01, ***p < .001.

In the second model, level of distress and bond with informal sources of help were both predicted to be positively related to informal help-seeking behaviour. As predicted, bond with informal sources of help was positively related to informal help seeking (Figure 5.4), however level of distress was not significantly related to informal help seeking, when bond with informal sources was included in the model. A significant inverse relationship was also observed between level of distress and bond with informal sources of help (Figure 5.4). This model explained 15.9% of the variance in informal help-seeking behaviour, and the hypotheses were partially supported.

Figure 5.4

Path Diagram and Standardised Regression Coefficients Representing the Effect of Level of Distress and Bond with Informal Sources of Help on Informal Help-Seeking Behaviour (Model 2)

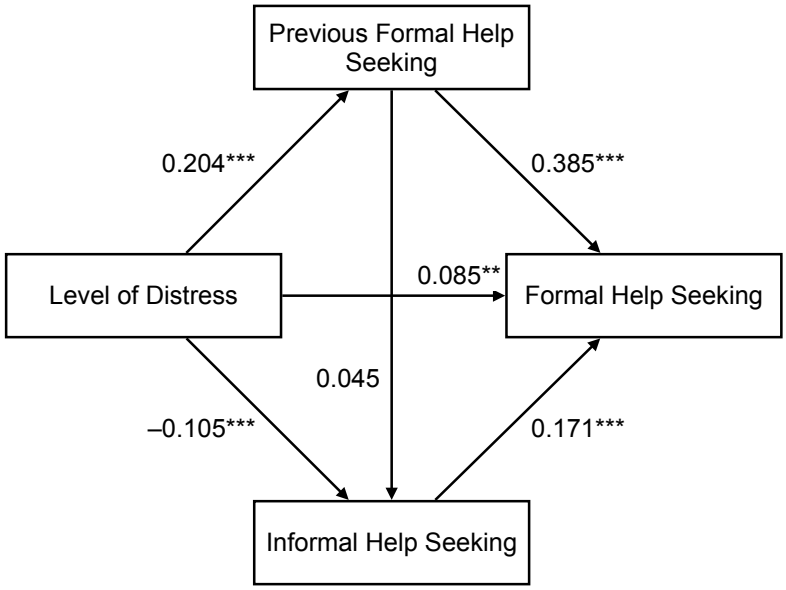


Note. *p < .05, **p < .01, ***p < .001.

Level of distress, previous formal help seeking, and informal help-seeking behaviour were all predicted to be positively related to formal help-seeking behaviour, when included in a single model. Significant positive relationships were detected between all three predictor variables and formal help-seeking behaviour (Figure 5.5), supporting the hypotheses. Level of distress was also positively related to previous formal help seeking, as predicted (Figure 5.5). Contrary to the hypothesis, level of distress was inversely related to informal help seeking (Figure 5.5). This model explained 19.8% of the variance in formal help-seeking behaviour, and the hypotheses were partially supported.

Figure 5.5

Path Diagram and Standardised Regression Coefficients Representing the Effect of Level of Distress, Previous Formal Help Seeking, and Informal Help-Seeking Behaviour on Formal Help-Seeking Behaviour (Model 3)

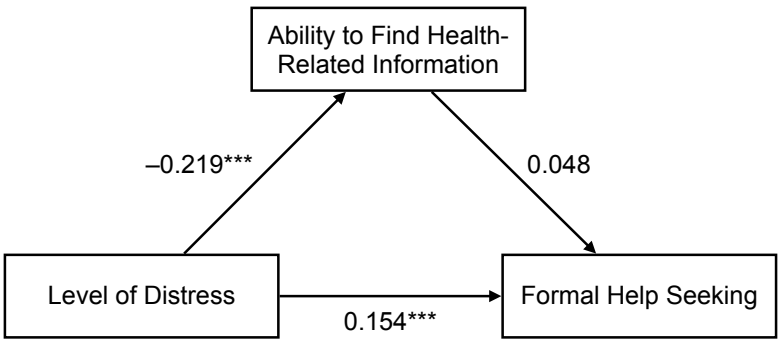


Note. *p < .05, **p < .01, ***p < .001.

For the final model, it was predicted that a signaller's ability to find health-related information would be positively related to formal help-seeking behaviour. No significant relationship was observed between ability to find health-related information and formal help-seeking behaviour (Figure 5.6), which did not support the hypothesis. Level of distress was positively related to formal help-seeking behaviour, as predicted (Figure 5.6). A significant inverse relationship was also detected between level of distress and ability to find health-related information (Figure 5.6). Overall, this model explained 2.3% of the variance in formal help seeking, and the hypotheses were only partially supported.

Figure 5.6

Path Diagram and Standardised Regression Coefficients Representing the Effect of Level of Distress and Ability to Find Health-Related Information on Formal Help-Seeking Behaviour (Model 4)



Note. *p < .05, **p < .01, ***p < .001.

4 Discussion

Common mental disorders represent a significant health issue for men, however, men seek help at lower rates than women despite similar healthcare needs (Australian Bureau of Statistics, 2022j). Many predictive factors of male help-seeking behaviour have been studied, however, the field lacks a consensus on a theoretical model that incorporates factors related to the man with external factors (Gulliver et al., 2012) and considers the interactions between these factors (Wenger, 2011). The Signalling Model of Male Help-Seeking Behaviour was recently developed to address this gap in the literature, and this paper serves as one of the first empirical tests of some of the relationships within the Model. The Model considers the help seeker — the signaller — as part of an interaction with other components — the signal, receiver, feedback, and environment — which produces help-seeking behaviour. This paper analysed four multivariate models of help seeking that

included factors spanning the signaller and receiver (i.e., bond with help sources), signaller and feedback (i.e., previous and informal help seeking), and signaller and environment components (i.e., ability to find health-related information), using real-world data from a large cohort of Australian men. These analyses demonstrated that properties of the signaller, such as distress, together with external factors, such as bond with receivers, previous help seeking experiences, and informal help seeking, predict men's help-seeking behaviour in multivariate models. Further, the results show that the Signalling Model has the potential to construct theory-driven, multivariate models of male help seeking that include properties of the signaller and external factors.

The Signalling Model posits that help-seeking behaviour is predicted by a self-perceived need for help along with factors that affect the benefits and costs of help seeking, in a multivariate model. As such, clinical levels of distress, which is positively related to self-perceived need (Codony et al., 2009), were hypothesised to have a positive, total effect on help-seeking behaviour across all models, which was supported for formal help seeking. Existing research has demonstrated a positive relationship between distress and formal help seeking (Australian Bureau of Statistics, 2022j; Martin et al., 2021), and the results of this study also indicate that distress is positively related to formal help seeking. Additionally, other factors that may be related to perceived signal benefits and costs, such as bond with help sources, and previous and informal help seeking, are also associated with help seeking, including when distress is included in the model. Investigating the effects of these additional factors on ratings of perceived signal benefits and costs represents an avenue for future research. Assuming that distress is related to self-perceived

need, as demonstrated in previous research (Codony et al., 2009), these results are consistent with the Signalling Model.

This study demonstrated that bond with receivers is associated with both formal and informal help seeking. There was a positive relationship between bond and help seeking in both cases, as predicted, which is consistent with previous literature (Coles et al., 2010; Cusack et al., 2006; Seidler, Wilson, Kealy, et al., 2021; Yousaf et al., 2015). Distress and bond, however, were inversely related. This suggests that men suffering greater distress — those most in need of help — are more likely to lack a feeling of trust and attachment in receivers, which is associated with reduced help seeking. Previous evidence has linked mood and anxiety disorders with greater social isolation (Chou et al., 2011; Elmer & Stadtfeld, 2020), and social isolation may be associated with a decline in feelings of trust and attachment towards healthcare providers or peers. Alternatively, social isolation may positively predict psychological distress and negatively predict bond with receivers, which would be consistent with the findings of this paper. This result indicates that strengthening men's bond with healthcare providers may facilitate formal help seeking, and strengthening their bond with friends and family may facilitate informal help seeking.

Informal help seeking was positively related to formal help seeking, as expected, which is consistent with qualitative evidence (Hoy, 2012). Contrary to predictions, however, distress had an inverse total effect on informal help seeking. This result indicates that men with clinical levels of distress are less likely to seek help from informal sources than men with lower levels of distress, while the reverse was found for formal help seeking. Men commonly describe social stigma from peers as a potential cost of seeking help (Hoy, 2012), as the symptoms of depression, for example, are described as conflicting with masculine norms (Seidler et al., 2016). As

such, higher levels of distress, and, by extension, more severe symptoms, may be associated with a greater risk of being stigmatised by peers. This could explain the inverse relationship between distress and help seeking from peers, and not mental health professionals. Alternatively, men's peers may be ill-equipped to respond effectively to men's help seeking for depression (Vogel & Heath, 2016), relative to mental health professionals. As such, at clinical levels of distress, men's peers may represent uniquely risky (i.e., costly) receivers compared to professionals. This result suggests that men who lack informal support networks might benefit from targeted interventions to improve help seeking. Initiatives designed to strengthen men's social support networks, such as "R U OK?" day (R U OK?, 2023) or Movember's "Practice Conversations" webpage (Movember, 2023), already aim to improve informal help seeking at the community level, with the goal of facilitating formal help seeking, consistent with the results of this study. In any case, future research might aim to include these social factors in multivariate models of male help seeking, using the Signalling Model as a framework.

The third model examined the feedback pathway specified in the Signalling Model. Both previous help seeking and informal help seeking were positively related to formal help seeking, as predicted. This is consistent with previous evidence. For example, the valence of a previous formal help seeking experience is positively related to men's attitudes towards future help seeking (Cusack et al., 2006), and negative experiences in particular can lead to avoidance of healthcare (Strike et al., 2006), scepticism of and resistance to therapy (Kiselica & Englar-Carlson, 2010), and doubt about the effectiveness of therapy (Seidler et al., 2020b). In addition, men have cited familiarity with the healthcare system gained through previous experience as a facilitating factor (Coles et al., 2010). In addition, previous research suggests

that being encouraged to seek professional help by a trusted informal source may reduce the perceived risk of seeking formal help (Hoy, 2012; Vogel et al., 2007). This study, however, demonstrated that both previous formal help seeking and informal help seeking are associated with formal help seeking, when distress is included in the model. The implication is that men experiencing clinical distress and in need of help are more likely to access formal healthcare if they have had a previous experience. As such, initiatives might focus on engaging first-time male healthcare users in particular.

This study found that one's ability to find health-related information was not related to formal help seeking. Existing evidence has linked health literacy to help seeking (Berkman et al., 2011; Bonabi et al., 2016), and ability to find health-related information is a component of health literacy (Milner et al., 2019). However, the relationship between ability to find health-related information specifically and formal help-seeking behaviour is under-researched. The lack of a relationship might be explained by the nature of the measure, which pertained to general (i.e., medical) health-related information, rather than mental health-related information specifically. Help seeking behaviour for physical and mental health problems differ among men. The vast majority of Australian men (88.7%) attend a GP each year (Australian Bureau of Statistics, 2017), whereas only a minority of men (12.2%) (Australian Bureau of Statistics, 2022j), even of those experiencing mental health symptoms (37.0%) (Australian Bureau of Statistics, 2022j), attend a healthcare professional for mental health issues. This could mean that factors that correlate with medical help seeking may not correlate with mental health help seeking. As such, health literacy among men for medical problems may not translate to health literacy for mental health problems.

The results of this study were broadly consistent with the hypotheses generated by the Signalling Model, suggesting that it may be useful in informing future research on men's help seeking. Specifically, the Signalling Model can be used to examine multivariate models of male help seeking, and the relationships between many predictive factors. The results indicated that unique proportions of the variance in help seeking were explained by factors related to the receiver and feedback components of the Signalling Model, even when distress was included in the models. This suggests that interventions aimed at facilitating help seeking among men should adopt a holistic approach, designed to leverage factors related to the receiver and feedback components while also leveraging factors related to signallers.

These results should be considered within the context of the strengths and limitations of this study. The nature of the Ten to Men sample is a strength of this paper. The sample includes a large number of participants recruited using cluster random sampling (Bandara et al., 2021). This method approaches true random sampling while incorporating some practical considerations for a study of this scale, meaning it approaches a truly representative sample of Australian men. A limitation, however, is that help-seeking behaviour was only measured for participants who reported having a personal, emotional, or behavioural problem, which reduced the final sample to approximately one quarter of the original sample. As such, one cannot assume that the final sample retains the advantages conferred by the robust sampling method. There are some key similarities and differences between the sociodemographic characteristics of the final sample, the full Wave 3 cohort, and the general Australian male population (Table 5.1). Firstly, age, Aboriginal and Torres Strait Islander status, and relationship status were distributed similarly across all three cohorts, suggesting that the final sample is representative of the general

Australian population on these dimensions. The distribution between residential areas appeared different in both Ten to Men samples, compared to the Australian population, however, these figures are not disaggregated by sex, and thus include female Australian residents, while Ten to Men does not. Finally, the Ten to Men study appears to overrepresent people working full time, people who are unemployed or not employed, and people in higher income brackets. For men, attitudes towards help seeking is positively related to income level (Hammer et al., 2013), which may have inflated the effects detected in this study. Future research should control for these demographic factors where possible.

This study has other methodological limitations worth discussing. First, the measures used were not purpose-designed to measure concepts related to signalling. In particular, ratings of perceived benefits and costs of help seeking are not examined, despite representing a key part of the Signalling Model. Second, due to the inconsistencies in the measures used at each wave, this study could only use cross-sectional data, meaning that causality and directionality cannot be inferred from the observed relationships, despite the Signalling Model making clear predictions about directionality. Future research could improve on this study by utilising purpose-designed measures of Signalling Model concepts and measuring variables in both people who reported having a personal, behavioural, or emotional problem and people who did not. Purpose-designed surveys could be used to test the complete Signalling Model, rather than a subset, as tested in this paper. This study examined distress as a proxy for perceived need, so a purpose-designed survey could measure perceived need directly, which would constitute a better test of the Signalling Model. Finally, the use of consistent measures across waves could permit longitudinal analyses of relevant variables in future studies.

This paper serves as a preliminary empirical test of a new theoretical model: the Signalling Model of Male Help Seeking. The Model was developed to collate a wide variety of explanatory variables into a unified framework, describe how they might interact, and position them within the help-seeking process. Using data from the Ten to Men study, this paper investigated factors spanning the signaller and receiver, signaller and feedback, and signaller and environment. When clinical levels of distress was included as a predictor of formal help-seeking behaviour, bond with receivers, previous help seeking, and informal help seeking were unique predictors of formal help seeking. This suggests that interventions focused on either strengthening men's bond with both formal and informal receivers, engaging first-time mental healthcare users, or engaging socially isolated men may be effective in increasing male help-seeking behaviour. More importantly, holistic interventions that address deficits in all components of the Signalling Model may be the most effective. Future research might aim to conduct more complete testing of the Model using purpose-designed measures.

Chapter Six: Discussion

6.1 Aims of This Chapter

This chapter serves as a discussion for the thesis. First, a brief summary of the motivations and findings of the thesis is presented, in the context of the overall aim. Next, the strengths and limitations are discussed. The following section describes the research, clinical, and policy implications of the program of research. This chapter also includes a discussion of the significance of the work, and the contribution that the thesis makes to the existing body of research, followed by a conclusion.

6.2 Motivation for Thesis and Summary of Findings

The thesis addresses an issue of societal importance. To briefly recap, recent national data indicate that 1 in 8 men have experienced an affective disorder in their lifetime, and 1 in 5 men have experienced an anxiety disorder (Australian Bureau of Statistics, 2022g). Although rates of Australian men accessing mental health services have increased, only around one in three men experiencing a mental disorder sought professional help in 2019 (Australian Bureau of Statistics, 2008, 2022j). Having a clear theoretical understanding of influences on male help-seeking behaviour is essential for taking action to improve men's engagement with professional services; clarifying that theoretical understanding became the motivation for the thesis.

Broadly, the aim of the thesis was to critique the theoretical perspectives currently applied to male help-seeking behaviour and, in response, to develop and test a new theoretical model to address the limitations of existing theories. The thesis first reviewed existing literature to identify theoretical gaps and limitations, which are recounted here. Research has often applied a sex-difference approach, focusing on

men's lower rates of help seeking relative to women, or a Masculine Gender-Role Socialisation approach, focusing on masculinity as a predictive factor (Hoy, 2012; Vogel & Heath, 2016). Further, masculinity has typically been quantified as a trait variable — adherence to traditional masculine norms — considered stable across situations (Addis & Mahalik, 2003). Finally, the review found that help seeking is often operationalised as a one-time, binary behaviour — whether or not the man sought professional help (Wenger, 2011). Together, the implications of this are a tendency for existing research to focus on the extent to which adherence to traditional masculine norms predicted the decision to seek help, possible overshadowing the importance of contextual factors (Vogel & Heath, 2016), such as the relationship between the help seeker and help provider, the types of behaviour required to access help, or the broader contextual, social, and environmental factors.

In response, the author developed the Signalling Model based on concepts within the existing Signalling Theory literature, by defining the man seeking help as the signaller, the source of help as the receiver, and help-seeking behaviours as signals. From there, self-perceived level of need was determined to be the internal quality being signalled, receiver responses were determined to be feedback, and any external factors, such as social cues or cultural norms, were determined to be properties of the signalling environment.

After defining the new Model, the author conducted a critical review to determine the extent of support from the existing literature. This is now summarised briefly. Seven predictions were derived from the Signalling Theory literature and applied to the new Signalling Model. The male help-seeking literature was then synthesized to assess the extent to which it supported the predictions. The first prediction stated that level of need is positively related to help-seeking behaviour.

Cross-sectional (Downs & Eisenberg, 2012) and longitudinal correlational data (Czyz et al., 2013; Freedenthal & Stiffman, 2007), including from a large cohort study (Codony et al., 2009), were consistent with this prediction.

The second, third, and fourth predictions related to signal benefits and costs and their relationship to help seeking. Respectively, the second and third predictions stated that there are benefits associated with seeking help, which incentivise signalling, and that there are costs associated with seeking help, which disincentivise signalling. Qualitative research has identified a variety of benefits, such as maintaining a masculine identity (O'Brien et al., 2005), and costs, such as social stigma (Hoy, 2012), that men describe as facilitating or inhibiting help seeking, respectively. Correlational evidence has also established a positive relationship between signal benefits and help seeking (Cusack et al., 2006), and a negative relationship between signal costs and help seeking (Doherty & Kartalova-O'Doherty, 2010). The fourth prediction stated that men are more likely to seek help when they believe that the benefits outweigh the costs, and more likely to refrain when they believe that the costs outweigh the benefits. This has not been investigated thoroughly; however, a small number of qualitative studies have found that men may delay help seeking until symptoms become more severe (Seidler et al., 2016; J. A. Smith et al., 2008), suggesting that there may be a point where the benefits of help seeking surpass the costs, triggering help seeking.

The fifth prediction was related to the receiver's role in the help-seeking process, and stated that help seeking is only successful when receivers correctly detect, interpret, and respond effectively to men's help-seeking signals. Correlational data from a large-cohort study (Borowsky et al., 2000) have demonstrated that depression in men is less likely to be diagnosed by physicians than in women, and is

less likely to be detected by traditional diagnostic instruments than ones designed to capture male-specific depressive symptoms (Zajac et al., 2022), demonstrating a failure to correctly interpret men's help seeking signals related to depression.

The sixth and seventh predictions concerned the feedback and signalling environment components. They stated, respectively, that feedback will influence the signaller's likelihood of future help-seeking behaviour, and that signalling behaviour is affected by environmental factors. Quantitative (Seidler et al., 2020b) and qualitative evidence (Strike et al., 2006) suggests that the valence of a help-seeking experience is positively related to future help-seeking attitudes. For example, men who have negative experiences with therapists or healthcare workers report feelings of reluctance towards any future help seeking (Kiselica & Englar-Carlson, 2010; Strike et al., 2006). In addition, quantitative (Nam et al., 2010) and qualitative data (O'Brien et al., 2005) have shown that cultural norms and social norms can affect the likelihood of men seeking professional help. Overall, the evidence provides some preliminary support for the Signalling Model.

To empirically test the Signalling Model, two primary studies were conducted, both using large-scale datasets to examine subsets of the full Model. Between them, the two studies captured variables and relationships associated with all five components of the Model — signaller, signal, receiver, feedback, and environment. The Men in Mind study (Chapter Four) examined cross-sectional data from a cohort of men who attended therapy, while the Ten to Men study (Chapter Five) examined national, cross-sectional data from a cohort of men in need of help who either sought formal or informal help or refrained.

The Men in Mind study tested relationships between signal benefits and both motivation to seek help and attitudes towards future help seeking, and between

receiver behaviour and attitudes towards future help seeking. The Ten to Men study examined the relationship between distress and formal and informal help seeking across four structural equation models. Together, the models included factors that spanned each of the five signalling components: levels of psychological distress; bond with formal and informal receivers; previous help seeking; informal help seeking; and ability to find health-related information.

The results of the Men in Mind study demonstrated positive relationships between perceived signal benefits and motivation to seek help, and between evaluated signal benefits and attitudes towards future help seeking. Further, evaluated signal benefits mediated the relationships between two therapist behaviours (building a collaborative rapport with clients and tailoring language to better suit male clients) and attitudes towards future help seeking. Another class of therapist behaviours (clarifying the structure of therapy) was not related to evaluated benefits of therapy or attitudes towards future therapy attendance when the other two therapist behaviours were included in the model. It was, however, strongly related to the other two classes of therapist behaviour. Overall, all three of the predictions were supported or partially supported.

The Ten to Men study found that distress had a positive effect on formal help seeking and an inverse effect on informal help seeking, across the four structural equation models. Bond was positively related to both formal and informal help seeking across the two models spanning the signaller, signal, and receiver components. Informal help seeking and previous help seeking were both positively related to formal help seeking in a model of the signaller, signal, and feedback components, and both factors explained unique variance in formal help seeking when distress was included in the model. Finally, the predicted relationship between

one's ability to find health-related information and help seeking was not supported. Overall, the hypotheses associated with one of the four models was supported, and the hypotheses associated with the other three models were all partially supported.

6.3 Strengths and Limitations of the Thesis

This thesis should be interpreted in light of its strengths and limitations. Testing the Signalling Model across two datasets was advantageous, as the Model could be tested over different types of cohorts. The Men in Mind sample consisted of men who had engaged in help seeking, while the Ten to Men study consisted of men who may or may not have sought help. That the results were mostly consistent with the Model in both cases, provides some preliminary evidence for the validity of the Model itself.

The datasets both employed robust sampling frames. First, both had large sample sizes, which tends to improve the representativeness of the sample and reduces uncertainty in study results (Biau et al., 2008). Second, both datasets employed sampling protocols that improved the representativeness of each sample compared to a purely self-selected survey with a similar sample size. The Men in Mind study recruited participants through the Movember website (Movember, 2021). Self-selected internet-based surveys raise concerns about external validity, due to the potential lack of representativeness of the sample (Keiding & Louis, 2016). To improve the representativeness of the sample, advertisements were targeted to younger and older men, and to men living in rural and remote communities, as these groups were initially under-represented. This was still, however, a self-selected sample, meaning that selection bias may have affected the internal validity of the sample (Keiding & Louis, 2016). For example, men may have been more willing to participate in the Men in Mind survey if they had a positive rather than a negative

experience in counselling. Overall, however, the Men in Mind sample appeared to be demographically representative of the general Australian male population.

The Ten to Men study used a stratified, multi-stage, cluster random sampling procedure (see Bandara et al., 2021 for details), which approximates a truly representative sample on a large scale, while making some practical compromises. That said, only a subset of the Ten to Men cohort was analysed in the study, based on their reporting having a personal, behavioural, or emotional problem in the previous 12-month period. As such, the representativeness of the full dataset may not apply to the cohort analysed herein. The final sample may have suffered from selection bias, as the selection factor — having a personal, behavioural, or emotional problem — was likely related to some of the predictor and outcome variables analysed (Keiding & Louis, 2016). Furthermore, while the final Ten to Men sample appears to represent the general Australian male population along some sociodemographic dimensions, the cohort appears to overrepresent people who are employed full time, who are unemployed or not employed, and people in higher income brackets. Ideally, future research should endeavour to recruit representative samples of men.

While accessing existing datasets was practical in the context of a time-limited thesis, their use was also associated with some limitations. The empirical studies lack purpose-designed measures of Signalling Model variables. As such, fundamental variables such as total perceived benefits and costs, and self-perceived need were not tested directly. While the results of the empirical studies are largely consistent with the Signalling Model, one can still only draw limited conclusions about its validity, and, therefore, the thesis only serves as a preliminary work. For the same reason, the entirety of the Model was unable to be empirically tested in a

single study. Testing the Model in its entirety would require measuring the fundamental variables in the Model — self-perceived need, total perceived benefits, and total perceived costs — and capturing predictive variables across all five components in a single dataset, rather than across a number of datasets. Qualitative research typically identifies these predictive factors (for examples, see Clark et al., 2018; Hoy, 2012), and future research might attempt to capture a wide array of predictive factors across all five components in a single questionnaire or set of questionnaires, to be tested in a single, holistic study. Methods for measuring the fundamental variables are discussed in 'Implications for Future Research' section of this chapter.

Another limitation of this thesis is that measures of masculinity are not included in the quantitative studies. The Ten to Men dataset includes the CMNI, however, so few participants completed the CMNI in Wave 3 that the final sample would have been reduced in size by around 90%, and the advantages of accessing a large dataset would have been lost. Furthermore, CMNI scores were only measured in Wave 1, conducted almost 10 years before Wave 3. An exploratory analysis showed very little association between the CMNI scores across the two waves, among participants who completed the CMNI both times. In addition, as noted throughout this thesis, CMNI scores represent a limited conception of masculinity, and the relationship between CMNI scores and men's help seeking has already been established by a robust body of empirical research. For these reasons, the author decided to exclude CMNI scores from the final analysis. Future research should aim to bring the full potential of the Signalling Model to bear, by measuring the masculinities men and formal and informal sources construct in the context of help-

seeking and examining the effects those masculinities have on signal benefits and costs.

It is worth noting that minority groups, such as transgender men and Aboriginal or Torres Strait Islander men are underrepresented in the quantitative studies. As such, the results may not be generalisable to these populations of men. Given that masculinities among these communities might differ from hegemonic masculinity, there may be unique sets of benefits and costs associated with these diverse masculinities that are not captured in this thesis. Future research on diverse populations might focus on identifying these unique signal benefits and costs, as a first step towards applying the Signalling Model to men in these communities. Future research might also design sampling procedures to increase representation from these communities.

Both quantitative studies used self-report measures of help-seeking attitudes and behaviour. This is a limitation, particularly for the Ten to Men study, as the results rely on participants remembering exactly who they sought help from over a 12-month period. Future research should, where possible, adopt behavioural measures of help-seeking behaviour, such as using administrative datasets when measuring formal help seeking. Similarly, the quantitative studies only partially employed the Dynamic Approach to help seeking. While help seeking from a variety of sources were examined in the Ten to Men study, neither study examined a variety of help seeking behaviours or outcomes. Future research might employ measures that capture different types of help-seeking behaviour and both successful and unsuccessful help seeking.

Finally, the review process used in the first paper lacked systematicity (Grant & Booth, 2009). The purpose of a critical review is to map existing evidence onto, in

this case, an existing theoretical model. Conducting systematic searching of the literature conflicts with this aim, as such searching may detect evidence that is outside the scope of the theoretical model, which cannot be appraised and synthesised. While a critical review is more appropriate than a systematic review for developing new theoretical models, it can only serve as a preliminary work rather than a conclusive one (Grant & Booth, 2009). While acknowledging that it would be a substantial undertaking, future research might aim to conduct a systematic review of the literature to identify the predictive factors that fall into all of the components of the Signalling Model. Systematic searches might endeavour to identify all predictive factors associated with a given component of the Model, or all predictive factors and interactions within the Signalling Model as a whole. A practical method for conducting such research might be to focus the search on help seeking for a specific illness. For example, researchers might select mental illnesses with high prevalence rates, such as depression, conduct a systematic review of all relevant predictive factors, and appraise and synthesise them within the Signalling Model. Such work could eventually lead to research that ranks the relative effect of each predictive factor on help seeking, which will aid in identifying targets for intervention.

6.4 Significance and Contribution of the Thesis

With further research, the Signalling Model may contribute to broadening the current paradigm around male help seeking. Men are typically thought to refrain from help seeking because doing so conflicts with traditional masculine norms (Addis & Mahalik, 2003). While evidence supports this claim, effect sizes are small (Gerdes et al., 2018; Seidler et al., 2016; Wong et al., 2017). Much of the male help-seeking literature focuses on this relationship (Hoy, 2012; Vogel & Heath, 2016), leading

some to suggest that the effects of contextual factors are being overshadowed (Affleck et al., 2018; Vogel & Heath, 2016). The Signalling Model can be used to collate the broad array of disparate factors associated with male help seeking under a comprehensive, unified framework. Rather than focusing on the masculinity of the signaller, factors or interactions within and between all of the Signalling Model components can be included in a single predictive model.

The Signalling Model can also be used to explore how socially constructed forms of masculinity influence help seeking. In this field, masculinity is often measured outside of the help-seeking context, as was the case with the two datasets examined in this thesis. The social constructionist perspective suggests that the form of masculinity constructed within the help-seeking interaction itself is the most relevant, and so measuring that form of masculinity would be a worthwhile research avenue. Such research would require surveying participants while they seek help, which may prove difficult from a practical perspective. Qualitative case illustrations may represent the starting point of this research avenue. For example, Kiselica and Englar-Carlson (2010) describe the form of masculinity that the psychologist attempted to create with their client, and the effect that had on the client's engagement. Investigating the ways that socially constructed masculinities might affect the benefits and costs of help seeking may also address the issue of small effect sizes typically found between masculinity and male help seeking (Seidler et al., 2016).

Noting that help seeking is typically operationalised in the empirical literature as a one-time decision between seeking help or refraining, Wenger (2011) suggested employing the Dynamic Approach to help seeking, which operationalises help seeking as a long-term behavioural pattern, including of a variety of help-seeking

behaviours from a variety of sources and culminating in a variety of outcomes. The Signalling Model incorporates this perspective across the signal, receiver, and feedback components. Help seeking can include a wide variety of signals, such as attending a therapist office or calling a helpline, can incorporate many different receivers, such as a counsellor or a friend, and can be considered a pattern of behaviours, whereby previous experiences can influence future help seeking. Future research applying the Dynamic Approach might capture the frequency with which participants accessed a given receiver, as a previous wave of the Ten to Men study did. Furthermore, the Dynamic Approach recognises that help seeking may not be successful (Wenger, 2011), which is captured in the feedback component of the Model. Future research might, therefore, track the success of each help seeking attempt made by men. One way to track the success of help seeking is demonstrated by the 2020/21 Australian National Survey of Mental Health and Wellbeing, which measured whether the needs of people who accessed professional mental healthcare were met across three categories: information, medication, and counselling (Australian Bureau of Statistics, 2022e). Perhaps a key method for implementing the Dynamic Approach is to conduct longitudinal studies, wherein the long-term behavioural patterns of people who do and do not seek help can be recorded, rather than recording a single instance of help seeking. The use of longitudinal studies is discussed in more detail in the 'Implications for Future Research' section.

6.5 The Signalling Model in the Context of Existing Theoretical Models

Aspects of the Signalling Model coincide with existing theoretical perspectives in the male help-seeking field. For example, Masculine Gender-Role Socialisation, in

the help-seeking context, posits that men are socialised to adhere to traditional masculine norms, which conflict with help-seeking behaviour. This perspective can be incorporated at the level of the signaller and the signal, by measuring the signaller's adherence to traditional masculine norms and the degree to which the signal itself conflicts with those norms, as has been done in previous research. The degree of conflict coincides with the signal cost.

The Theory of Planned Behaviour (Ajzen, 1991) posits that behaviour is the result of one's intentions, which are a product of attitudes, subjective norms, and perceived behavioural control (Li et al., 2017; J. P. Smith et al., 2008; Vogel & Heath, 2016). This Theory maps onto the pathway between signaller and signal, and elucidates the process that translates perceived need into signal production. Attitudes and intentions are both properties of the signaller, while subjective norms, which are the perceived social rewards or consequences of the behaviour, and perceived behavioural control, which describes the perceived ease or difficulty of the behaviour, are both incorporated in the Signalling Model as signal benefits and costs.

The Prototype/Willingness Model (Gerrard et al., 2008) adds an additional heuristic pathway to behaviour onto the Theory of Planned Behaviour. In this Model, one's prototype of the typical 'help seeker' affects their willingness to seek help, which, in turn, affects their likelihood of seeking help (Gerrard et al., 2008; Vogel & Heath, 2016). This Model, therefore, describes two pathways between the signaller and the signal: one through attitudes and intentions, and one through prototype and willingness. The degree of incongruence between the individual and the 'help seeker' prototype might be represented as a signal cost, while the degree of willingness might reduce the signal cost.

The Health Belief Model (Rosenstock, 1966) attributes help-seeking behaviour to six factors: susceptibility to a given health issue; perceived threat from that health issue; perceived benefits of help seeking; perceived costs of help seeking; perception of cues that motivate action; and self-efficacy (Vogel & Heath, 2016). Susceptibility to the health issue and perceived threat from the health issue both map onto the signaller component. The perceived benefits and costs mirror those elements in the Signalling Model, and the cues to take action map onto contextual, social, or environmental cues that may be present in certain signalling environments. Finally, self-efficacy is a signaller-related factor that is likely to reduce signal costs.

Andersen's Behavioural Model views healthcare usage as a function of predisposing, enabling, and need-related factors that act at either the contextual (community) or the individual level (Andersen & Davidson, 2007). Compared to the other prominent help-seeking models, this Model perhaps most resembles the Signalling Model. At the individual level, the need-related factor, which refers to the illness that requires treatment, bears a resemblance to perceived need in the Signalling Model. The enabling and predisposing factors at this level are factors that facilitate or impede help seeking and factors that predispose, but do not cause, help seeking, respectively. These are both sets of signaller-related factors that reduce signal costs. The predisposing, enabling, and need-related factors at the contextual level map onto receiver and environmental factors that affect the signal benefits and costs. Finally, recent versions of this Model include feedback loops (Andersen & Davidson, 2007), much like the Signalling Model.

The Access to Care Model (Gask et al., 2012) views help seeking as a series of stages: (1) candidacy (one's eligibility for healthcare); (2) navigation (to a point of entry into the healthcare system); (3) appearance (attending health services); (4)

categorisation/adjudication (professional judgements about interventions or services, e.g., diagnosis); (5) offer (of intervention or service); and (6) receipt/rejection (of the offer). This Model is somewhat unique as it views help seeking as a process, involving an interaction between the person seeking help and the healthcare provider, which is consistent with the Signalling Model and the Dynamic Approach to help seeking. This Model only applies to formal help seeking, however, unlike the Signalling Model and the Dynamic Approach, which consider informal help seeking as part of the overall process. The candidacy, navigation, and appearance stages map onto the perceived need and signal components, and signal benefits and costs are likely to have an effect at the navigation and appearance stages, while the categorisation/adjudication and offer stages resemble the receiver detection, interpretation, and response processes within the Signalling Model.

Perhaps the most distinctive feature of the Signalling Model, in contrast to the theoretical perspectives described above, aside from the Access to Care Model, is the incorporation of the receiver component as an equally important part of the Model. Signalling is viewed as a process that the receiver takes part in, rather than a behaviour that begins and ends with men producing the signal. Masculine Gender-Role Socialisation, the Theory of Planned Behaviour, the Prototype/Willingness Model, and the Health Beliefs Model do not include a receiver component, and Andersen's Behavioural Model only considers receiver and feedback factors in so far as they affect the decision to seek help. The Signalling Model and the Access to Care Models alone consider the possibility of signal breakdowns at the receiver end of the process, although, compared to the Signalling Model, the Access to Care Model is less concerned with environmental factors and with the variety of help-seeking behaviours, sources, and outcomes outside of formal healthcare settings. As

such, the Signalling Model has the potential to shift the goal of help-seeking research from increasing the spontaneous production of help-seeking behaviours to increasing the success rate of help-seeking behaviours by optimising receiver detection and response, along with the other components of the Model.

6.6 Implications for Future Research

6.6.1 Study Design and Recruitment of Participants

The Signalling Model suggests that longitudinal studies are preferential for understanding male help seeking, as they can measure men's long-term patterns of help-seeking behaviour. Furthermore, cross-sectional studies of help seeking suffer from two distinct disadvantages. Firstly, cross-sectional studies conducted before help seeking cannot measure help-seeking behaviour, and therefore rely on measures of help-seeking attitudes or intentions, which are often self-reported and subject to biases, such as demand effects. The Men in Mind study, for example, measures attitudes towards attending future therapy, rather than conducting a follow-up survey to measure help-seeking behaviour. Secondly, cross-sectional studies conducted after help seeking has taken place generally rely on retrospective measures of predictive factors. In the Ten to Men study, bond with healthcare providers, for example, was measured after any reported help seeking took place, as was motivation to seek help in the Men in Mind study. According to the Signalling Model, the predictive factors, like bond and motivation, precede the decision to seek help, and, ideally, those factors should be measured before the decision to seek help is made. When they are measured retrospectively, any changes in these factors due to help seeking itself cannot be controlled for, which threatens the internal validity of the results. Longitudinal studies can mitigate both disadvantages by measuring

predictive factors at baseline, free of any maturation effects or effects that help seeking itself has on those factors, and then measuring help-seeking behaviour at follow-up, rather than measuring attitudes or intentions. In addition, where cross-sectional studies can only measure associations between variables, longitudinal studies can capture temporal order, providing stronger evidence from which to infer causality (Rindfleisch et al., 2008).

While help-seeking behaviour can be measured by self-report, as it is in the Ten to Men study, formal help seeking in developed countries can often be measured using administrative datasets. For example, the Australian Government keeps records of citizens' usage of public healthcare (Medicare), and these records can be sampled for research purposes and used to establish someone's long-term pattern of formal help-seeking behaviour, free of any biases introduced by self-report. Measures of long term-patterns of informal help seeking will likely have to rely on self-reported data, however, as the only alternative data source would be the informal receivers themselves, and multiple informal receivers would have to be surveyed to establish the pattern of help-seeking behaviour for any given signaller.

The Signalling Model has implications for the recruitment of participants in future research. Firstly, the Model makes predictions about why men seek help and why they might refrain. Recruiting men who either have or have not sought help in the same cohort, like the Ten to Men study did, represents the most effective way to investigate help seeking from a Signalling perspective. The Ten to Men methodology could have been improved by measuring help-seeking and the associated predictor variables among men who did not perceive a need for help, as the Signalling Model also makes predictions in those cases. This would also ensure that the representativeness of the total sample could be leveraged to answer questions about

men's help seeking for personal, behavioural, or emotional problems. While the Men in Mind dataset did recruit participants who did not attend therapy, they were not asked the same questions about the benefits and costs of help seeking. Future research should examine benefits and costs among help-seekers and non-help-seekers alike, with high and low levels of perceived need.

The Signalling Model conceptualizes help seeking as an interaction between signallers and receivers. As such, future research might attempt to capture elements of this interaction. This would require recruiting signallers and receivers, and possibly even conducting measurements within the help-seeking interaction itself. Existing research has investigated therapists' and healthcare workers' perspectives on and experiences with male help seeking (for examples, see Seidler, Wilson, Trail, et al., 2021; Seymour-Smith et al., 2002), however these studies did not recruit signallers and receivers in the same cohort. Alternatively, if these two cohorts are recruited separately, researchers might employ methods of data source triangulation (see Thurmond, 2001), to identify converging results across cohorts. Beyond recruiting signallers and receivers in the same cohort, researchers might attempt to observe the help-seeking interaction itself. Case illustrations (for example, see Kiselica & Englar-Carlson, 2010) of the therapeutic interaction may elucidate emergent properties of the help-seeking interaction that would otherwise go undetected. Similarly, evaluative studies of a particular treatment (for example, see Spandler et al., 2014) may also provide insights into the features of the interaction. Future Signalling Model research might benefit by including both signallers and receivers, and, where possible, examining the help-seeking interaction itself.

6.6.2 Measuring Key Signalling Model Variables

The Signalling Model highlights the importance of men's perceptions of the benefits and costs of seeking help, suggesting that predictive factors should be analysed in relation to their effect on perceived benefits and costs whenever practical. Individual barriers and facilitating factors are often identified using qualitative methods (for example, see Clark et al., 2018; Cleary, 2012; Coles et al., 2010; Johnson et al., 2012; O'Brien et al., 2005). The Men in Mind study employs quantitative methods to measure a perceived signal cost (feeling less like a man), a perceived signal benefit (treatment helpfulness), and evaluated signal benefits (treatment helpfulness and satisfaction). Future research applying the Signalling Model should continue to quantify signal benefits and costs, however, methodologies that can capture overall or total signal benefits and costs, which may not be captured by those three variables alone, need to be employed.

Discrete choice experiments could perhaps be used to capture an overall measure of benefits and costs. Discrete choice experiments are used in health economics to examine participants' preferences for different healthcare services or policies (de Bekker-Grob et al., 2012). These experiments present participants with a choice between two or more hypothetical healthcare scenarios that vary across certain attributes (Gerard et al., 2008). For example, the scenarios might describe different treatments for depression that vary by monetary cost, availability, and modality. The levels of each attribute are thought to determine the overall utility of each scenario (Gerard et al., 2008). Participants then report which scenario they prefer, which is assumed to represent the scenario with the highest utility. Researchers can then determine a latent utility function across the attributes,

indicating which levels of each attribute are preferred on average (de Bekker-Grob et al., 2012).

In the Signalling Model context, the overall utility indicated by participants' choices could be conceptualized as a representation of the overall signal benefits and costs. Similarly, the latent utility across the levels of each predictive factor illustrates the conditions necessary for men to perceive the greatest signal benefit, relative to the cost, and thus indicate the conditions that will elicit the greatest likelihood of signalling. As such, discrete choice experiments could be used to capture the effects of predictive factors on the overall benefits and costs, as described by the Signalling Model. This would allow researchers to quantify the relative effects of different predictive factors and identify targets for help-seeking intervention that would have the greatest effects.

The Signalling Model also describes self-perceived level of need for help as a key variable that motivates help-seeking behaviour. Future research might investigate perceived need in greater detail. Perceived need is typically measured using a single item with a yes/no response (for example, see Codony et al., 2009; Downs & Eisenberg, 2012), as in the Ten to Men dataset. The Signalling Model, however, defines need as a continuous internal quality, rather than a construct with two discrete levels. The Perceived Need for Treatment subscale of the Self-Appraisal of Illness Questionnaire (Marks et al., 2000) is a continuous measure of perceived need. This measure includes six self-report items assessing perceived need, such as "I think my condition requires psychiatric treatment", each measured on 4-point Likert scales. Higher total scores indicate greater levels of perceived need (Bonabi et al., 2016). Future research applying the Signalling Model should employ continuous measures of perceived need such as this.

In addition, future research in this field may conceptualise signalling models with internal qualities other than self-perceived level of need. Indeed, a limitation of the Signalling Model described herein is that it focuses only on intentional, positive help-seeking behaviours, and is therefore restricted to examining men who are aware of their need for help. The literature recognises that men may not be aware that they need help (Galdas et al., 2005), and that men in distress sometimes engage in unintentional or destructive behaviours rather than traditional help-seeking behaviours (Rice et al., 2013), which are both beyond the scope of the Signalling Model defined herein. As such, it may be beneficial to develop a broader signalling model that can also include men in those situations. Future research in this vein might focus on training receivers to be more attentive to these non-traditional signals and to deliver effective help to men who are unaware of their need for help.

6.6.3 Researching Feedback

The Ten to Men study examined two factors related to feedback — informal and previous help seeking — and demonstrated that both were positively related to formal help seeking. Determining whether informal help seeking does function as a form of feedback for formal help seeking should be investigated further. Future research might examine how men's perception of the benefits and costs of formal help seeking change after seeking informal help. Researchers might also examine how informal receivers detect and respond to men's help-seeking signals, along with the effect of those responses on the signallers themselves.

Previous help seeking is often linked to current help seeking, however it remains unclear whether previous help seeking affects current or future help seeking due to the valence of those previous experiences (for example, Seidler et al., 2020b;

Strike et al., 2006) or the familiarity with the healthcare system afforded by those experiences (for example, Coles et al., 2010), or a combination of the two. Future research might examine whether a negative previous experience or no previous experience is a stronger inhibitor of help seeking. Furthermore, previous help seeking is often captured on a single item asking measuring whether the participant has sought help previously or not (for examples, see Cusack et al., 2006; Seidler et al., 2020b; Strike et al., 2006), as in both the Men in Mind and Ten to Men studies. Future research should investigate the properties of previous experiences and their effects on perceived benefits, perceived costs, and current or future help-seeking behaviours.

Longitudinal studies could be used to study the feedback component in greater detail. In addition to the advantages outlined previously, longitudinal studies allow researchers to examine changes in perceived benefits and costs in response to formal and informal help-seeking experiences. For example, researchers might conduct entry and exit surveys of men accessing mental healthcare to determine changes in relevant factors over the course of treatment. The changes in perceived benefits and costs could then be attributed to measured properties of the healthcare experience, illuminating which aspects of healthcare facilitate or inhibit male help seeking.

Future research may also broaden the theoretical conception of feedback. In the Signalling Model defined herein, the feedback mechanism allows help seeking to be understood as a cyclical or iterative process. In reality, feedback, especially in the long term, may be far more complex. Future research might examine how the timing of feedback affects future signalling, and how the effects of recent feedback compare

to the effects of earlier feedback. Future research might conceptualise feedback taking into account the temporal dimension of ongoing patterns of help seeking.

6.7 Clinical Implications

The Signalling Model and the results of the thesis have some implications for clinical practice. In particular, the Men in Mind study demonstrated that therapist behaviours are positively related to men's post-counselling ratings of signal benefits, which are, in turn, strongly positively related to their attitudes towards attending future therapy, which is consistent with the feedback component of the Signalling Model. As such, the Model emphasises the importance of gender-sensitivity in clinical practice with male clients, in that engaging men in the therapeutic process in particular ways might facilitate male help seeking in the long-term. Specifically, the study indicated that men responded positively to therapists who built a collaborative rapport with them and tailored their language to suit their clients.

Building a collaborative relationship is thought to engage men in therapy more than the traditional expert-patient relationship because it empowers men to take an active role in their treatment. This is thought to counteract feelings of incompetence commonly experienced by men with mental health issues (Seidler, Rice, Ogrodniczuk, et al., 2018). Men also prefer participating in teams to achieve a common purpose, and a collaborative therapeutic relationship is more consistent with this preference (Kiselica & Englar-Carlson, 2010). Forming this bond with their therapist or other group therapy participants may facilitate male help seeking by reducing men's fear of being stigmatised when expressing vulnerability (Kivari et al., 2018; Seidler, Rice, Oliffe, et al., 2018).

Men report difficulty communicating their psychological state in a clinical setting (Seidler et al., 2016). Tailoring language to better suit male clients using familiar metaphors is thought to help men to engage in therapy by giving a familiar language with which to understand and communicate their psychological state (Spandler et al., 2014). Similarly, using humour can engage men by helping men to feel more comfortable in the therapeutic context (Spandler et al., 2014). The results of this thesis suggest that building these strategies into gender-sensitive therapy with men may improve men's long-term patterns of formal help-seeking behaviour.

6.8 Policy Implications

Australia is one of the leading countries when it comes to men's health policy, with the first ever men's health policy being established by New South Wales in 1999 (Wilkins & Savoye, 2009). That policy was ahead of its time in moving away from the notion that men are at fault for refraining from seeking help and focusing instead on how to make healthcare more accessible to men. The policy also drew attention to the role of contextual factors, such as social determinants, in men's help-seeking behaviour (Wilkins & Savoye, 2009). The current Australian Men's Health Strategy (Department of Health, 2019) also draws attention to men's lower rates of formal help seeking, compared to women, and notes that more can be done on the part of healthcare providers to improve access and better engage men in the help-seeking process. Furthermore, the Strategy highlights the need to invest in community outreach programs, improve general health literacy, and meet the healthcare needs of priority populations, such as Aboriginal and Torres Strait Islander men, men from disadvantaged socio-economic backgrounds, and men from culturally and linguistically diverse backgrounds (Department of Health, 2019). Overall, The

Signalling Model is consistent with these policy prescriptions in several ways. Australian policies emphasise the effect of contextual factors on help seeking, and consider the receiver's role in the help seeking process, just as the Signalling Model does. Additionally, the Signalling Model, if developed further, could be applied to priority populations, by examining predictive factors affecting signal benefits and costs that are specific to those populations.

As of 2015, only Brazil and Ireland have introduced targeted national-level men's health policies (Baker, 2015). Ireland's National Men's Health Policy focused on contextual factors, masculine socialisation, and supporting men at the community level. Moreover, this Policy advocated for a holistic approach to improving men's health and help seeking (Baker, 2015). The key implication of the Signalling Model, reflected in the results of this thesis, is that men's help-seeking behaviour is the product of the interaction between all of the Signalling Model components, rather than a product of the signaller alone. As such, all components of the Model need to be optimised to maximise effective help seeking. Hence, just like Ireland's Policy, the Signalling Model suggests that policy should adopt a holistic approach, targeting men who seek help, both formal and informal sources of help, and the broader sociocultural environment. The Brazilian policy, however, was criticised for focusing too heavily on men's responsibility to seek help and overlooking contextual factors that affect help seeking, which is not consistent with the Signalling Model.

Since then, however, prominent organisations have introduced men's health and help seeking policies for more generalised use. In 2018, the World Health Organization released the 'Strategy on the Health and Well-Being of Men in the WHO European Region' (World Health Organization, 2018), and the American Psychological Association released the 'APA Guidelines for Psychological Practice

with Boys and Men' (American Psychological Association, 2018). The priorities outlined in these documents are promisingly consistent with the Signalling Model. For example, the World Health Organization Strategy advocates for promoting positive masculinities at the governmental, educational, and community levels of society, in an effort to facilitate help seeking. In addition, the Strategy prioritises better understanding male help seeking and the interactions between signaller and environment-related factors, as well as improving gender sensitive practices at the receiver level (World Health Organization, 2018). The APA Guidelines focus on recognising masculinity as socially constructed, and recognising the need to develop and promote health services that cater to the needs of men (American Psychological Association, 2018). Overall, the national and international policy landscape is consistent with many of the features of the Signalling Model, and therefore, the Model itself could potentially be useful in advancing the many policy goals and priorities outlined here.

In Australia, at the institutional level, there are initiatives targeted towards men's mental health and help seeking that also coincide with aspects of the Signalling Model. For example, Beyond Blue have partnered with Australia Post, with the goal of delivering information and raising awareness about mental illness and Beyond Blue's mental health support services to more Australians (Australia Post, 2023). From a Signalling perspective, this initiative seeks to advertise the benefits of mental health support, particularly to people who are in greater need, such as members of the LGBTQI+ community, Aboriginal and Torres Strait Islander Peoples, people from culturally and linguistically diverse backgrounds, and people living in regional locations (Australia Post, 2023). The Men in Mind study found that perceived benefits are positively related to men's initial motivation to attend therapy, and so

initiatives such as this, which advertise the benefits of therapy, may play a role in increasing the perceived benefits and the likelihood of help seeking.

Other initiatives focus on improving feedback from informal sources at the community level. For example, the Movember Foundation website (Movember, 2021) allows users to practice conversing with a male friend who is distressed. The webpage includes a script from the person in distress, and multiple-choice response options for users. Once selected, each multiple-choice option describes why it may be a good or bad way of interacting with someone in distress. Further, the webpage emphasises encouraging men in distress to seek professional help. Similarly, the R U OK? day initiative (R U OK?, 2023) is a day of action for raising suicide awareness and asking someone who may be struggling if they are 'okay'. This website directs people to ask, listen, encourage the person to seek professional help if necessary, and check in later, although this is not specifically targeted towards men. Both resources aim to improve people's ability to respond to men who are seeking help informally and encourage them to seek formal help. As such, both resources target the receiver and feedback components of the Signalling Model, and, based on the Ten to Men study results, initiatives to increase the likelihood of men seeking informal help may indirectly increase men's formal help seeking. Overall, however, these smaller-scale initiatives remain focused on individual components of the Signalling Model, rather than adopting a holistic approach.

6.9 Conclusion

This thesis addressed the need for a more comprehensive theoretical understanding of male help seeking for mental illness. To achieve this, potential limitations of existing theoretical perspectives were identified. These include a focus

on masculinity as a predictive factor, despite small effect sizes, and reliance on outmoded definitions of masculinity and help-seeking behaviour in the empirical literature. To address these limitations, a new theoretical model was defined based on Signalling Theory. The Signalling Model of Male Help-Seeking Behaviour describes the help-seeking process as an interaction between the signaller, signal, receiver, feedback, and signalling environment components. The Model is able to incorporate a broad array of predictive factors, along with contemporary definitions of both masculinity and help-seeking behaviour.

The existing male help-seeking literature was reviewed and found to be broadly consistent with predictions generated by the Signalling Model. Subsequently, two empirical studies each tested a subset of the components of the Model. In the Men in Mind study, it was predicted that men's ratings of perceived signal benefits would be positively related to their initial motivation to attend therapy, and their ratings of evaluated signal benefits would be positively related to their attitudes towards future therapy. Both hypotheses were supported by the results. In that study, it was also predicted that the three types of therapist behaviours would be positively related to evaluated signal benefits, which would, in turn, be positively related to attitudes towards future therapy. Two of the therapist behaviours were positively associated with evaluated signal benefits, and evaluated signal benefits were positively related to attitudes towards future therapy, partially supporting the hypothesis. For the Ten to Men study, it was predicted that, across four multivariate models, bond with both formal and informal receivers, across two models, previous and informal help seeking, in a third model, and ability to find health-related information, in a fourth, would all uniquely predict help seeking after distress was taken into account. Results from the first, second and third models supported the hypothesised effects of bond

with formal and informal sources, and previous and informal help seeking. The results from the fourth model, however, only partially supported the predictions,. Overall, the results from the two empirical studies provided some empirical support for the Signalling Model itself.

Future research might employ purpose-designed measures of key Signalling Model constructs to conduct robust and comprehensive tests of the Model, potentially including the use of discrete choice experiments. Future Signalling Model research might also employ longitudinal methods where possible, as they confer several advantages over cross-sectional studies of the Model. A key implication of the Signalling Model is the conceptualisation of male help seeking as a long-term process involving many components beyond the man himself. Rather than focusing predominantly on increasing men's spontaneous help-seeking behaviours, future research and policy should be directed to optimising all components of the Model to ensure that male help seeking is successful and results in the acquisition of effective help.

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Appendix

Table S1

List of Microskills included in Men in Mind Study, by Category

Measure
Clarifying the Structure of Therapy
“The counsellor explained their role from the outset”
“The counsellor asked about my expectations of counselling”
“The counsellor explained the structure of counselling and how long it would takes”
“The counsellor helped me put together goals for what I wanted to get out of counselling”
“The counsellor offered me practical skills and takeaways to work on between sessions”
Building Rapport and a Collaborative Relationship
“The counsellor talked about me seeking help in positive terms”
“The counsellor created a casual, comfortable and collaborative environment (i.e., I felt that we worked together)”
“The counsellor highlighted my strengths and we used these in counselling”
“The counsellor empowered me (e.g. to lead counselling and work towards my goals)”
“The counsellor checked whether I felt like counselling was working for me”
“The counsellor really tried to understand me”
Tailoring Language
“The counsellor used language I could understand (no jargon)”
“The counsellor used humour or metaphors in counselling”