What Demographic and Psychosocial Factors are Associated with Intention to Seek Help? An Insight into Help-Seeking for Emotional and Sexual Concerns in Women with Breast Cancer

This thesis is submitted in partial fulfilment of the Honours degree of Bachelor of Psychological Science (Honours)

School of Psychology

University of Adelaide

26 September 2022

Word Count: 9,420

Table of Contents

List of Figures

List of Tables

Abstract

Breast cancer survival rates are high in Australia and consequently many Australian women live with the disease. Many women with breast cancer report emotional distress and meet the clinical cut-off score for sexual dysfunction. Although only half of at-risk breast cancer survivors seek help for emotional and sexual concerns, previous research on help-seeking among breast cancer survivors have primarily focussed on physical symptoms. Australian women (N = 123) within 5 years of their breast cancer diagnosis were surveyed on their help-seeking intentions and behaviours for emotional and sexual concerns. Using Andersen's Behavioural Model of Health Service Use and previous studies, demographic and psychosocial factors underwent preliminary analyses to determine associations with help-seeking intention, and then entered as predictors in two hierarchical logistic regressions. The results of the regression model indicated that positive attitudes towards seeking psychological help and higher scores on the DASS-21 were significant predictors of intention to seek help for emotional concerns. The only significant predictor for intention to seek help for sexual concerns was unmet need due to changes in sexual relationships. Women intended to seek help for sexual concerns from formal rather than informal sources of help. Findings of this study suggest interventions should be implemented to increase help-seeking for emotional concerns, providing education to women about the effectiveness of seeking help, and to healthcare professionals surrounding effective informal screening to identify women at risk of emotional distress. Help for sexual concerns may be more targeted at the couple level rather than just involving survivors.

Keywords: help-seeking intention, breast cancer, emotional concerns, sexual concerns, demographic, and psychosocial factors

Declaration

This thesis contains no material which has been accepted for the award of any other degree of diploma in any University, and, to the best of my knowledge, this thesis contains no material previously published except where due reference is made. I give permission for the digital version of this thesis to be made available on the web, via the University of Adelaide's digital thesis repository, the Library Search and through web search engines, unless permission has been granted by the School to restrict access for a period of time

September 2022

Contribution Statement

In writing this thesis, my supervisors and I collaborated to generate research questions of interest and design the appropriate methodology. I conducted the literature search, collaborated with my supervisor on coding of analyses in SPSS. As part of a broader study, my supervisor and The South Australian Health and Medical Research Institute (SAHMRI) completed ethics applications, designed, provided funding, and advertised the online survey, coded data in SPSS and made this study possible. I wrote up all aspects of the thesis.

What Demographic and Psychosocial Factors are Associated with Intention to Seek Help? An Insight into Help-Seeking for Emotional and Sexual Concerns in Women with Breast Cancer.

Prevalence and Mortality of Breast Cancer

The most diagnosed cancer among women globally is breast cancer. In 2020, there were 2.26 million new cases and 685,000 deaths from breast cancer (Sung et al., 2021). In the same year, 7.8 million women worldwide were within 5 years of their breast cancer diagnosis (World Health Organisation, 2021). In Australia, one in eight women will be diagnosed with breast cancer before the age of 85 (Breast Cancer Network Australia, 2018). The prevalence of breast cancer in Australia has been growing, with 12,113 new cases of breast cancer diagnosed in 2002, and 20,428 new cases projected to occur by 2022 (Australian Institute of Health and Welfare, 2019). Nevertheless, Australia has one of the highest breast cancer survival rates globally due to improvements in screening interventions, diagnoses, and treatment (Breast Cancer Network Australia, 2018). The five-year relative survival rate for Australian women is 90.8% and the ten-year survival rate 83%. This increase in both incidence and survival rate means that many women are living with the disease both nationally and worldwide.

Impact of Breast Cancer on Women's Well-being

Women with breast cancer can experience a range of negative effects on physical, emotional, and psychosocial functioning (Rajagopal et al., 2019; Vinokur et al., 1989). Studies of self-reported symptoms have shown that up to half of women diagnosed with breast cancer report emotional distress (Burgess et al., 2005; Mehnert & Koch, 2008; Reich et al., 2008; Vahdaninia et al., 2010). Heightened emotional distress is typically reported during the first year following diagnosis (Trunzo & Pinto, 2003), however, effects can still be evident ten years post diagnosis (Koch et al., 2013). The implications of emotional distress in

breast cancer may include, but are not limited to; poor psychosocial functioning, maladaptive coping, poor control of physical symptoms, treatment non-compliance, and long hospital stays (Mehnert & Koch, 2008; Park & Rosenstein, 2015). As such, interventions targeted at addressing emotional concerns to reduce these adverse health risks are important.

Sexuality is an integral part of women's well-being, with sexual and psychological function shown to both be crucial contributors to overall quality of life (QOL; Dai et al., 2020). The physical and emotional changes experienced from diagnosis, treatment, and long-term survivorship can impact the sexual well-being of women with breast cancer (Chang et al., 2019). One survey study of 127 breast cancer survivors, found as many as 83% of participants met the clinical cut-off score for sexual dysfunction (Boquiren et al., 2016). Impaired sexual well-being is associated with heightened emotional distress, poor QOL, negative effects on relationships and self-identity, and impacted disease outcomes (Boquiren et al., 2016). Despite the sexual and emotional issues experienced by women with breast cancer, many do not seek help or access services/support for these issues (Mehnert and Koch, 2008; Ussher et al., 2013).

Help-Seeking Behaviour, Service Use, and Unmet Need

Help-seeking has a range of definitions based on the underlying illness and different settings. Help-seeking has commonly been defined as a process-based behaviour, where help-seeking is an intentional act and not a passive process (Scott & Walter, 2010). The concept of intention is important in help-seeking because it distinguishes the act of seeking help from receiving help from others (Cornally & McCarthy, 2011). The help-seeking process includes symptom perception, interpretation, appraisal, decision making, and taking action to seek help from a healthcare professional (Scott & Walter, 2010). It is important to note that help-seeking can also be actioned through informal sources of help (e.g., family, friends, and peers; Cornally & McCarthy, 2011; Momeni & Rafii, 2020). Help-seeking has been

interchangeably researched as health service utilisation in the literature, however, they are two different concepts. Help-seeking has typically been conceptualised as a multi-stage process that is intentional/goal oriented, whereas health service utilisation is incidental (Momeni & Rafii, 2020; Scott & Walter, 2010).

A majority of studies investigating help-seeking among breast cancer populations explore help-seeking for physical symptoms, to inform interventions designed to improve screening for cancer and providing effective cancer treatments (Grimley et al., 2020; O'Mahony & Hegarty, 2009; Osjrio & Kamizato, 2018). Conversely, studies on help-seeking for emotional and psychosocial issues in cancer populations are limited (Cohen et al., 2018). Kadan-Lottick et al. (2005) found that in 251 advanced cancer survivors, 28% accessed help for emotional concerns post-cancer diagnosis, and less than half of patients with symptoms of psychological distress sought help for these concerns, similar trends are found in another study of head and neck cancer survivors (Cohen et al., 2018).

Studies investigating help-seeking for sexual concerns among women with breast cancer are also limited. In Reese et al.'s (2020) study of 144 American breast cancer patients, just under half of participants sought help for sexual concerns in the month pre-survey. Participants sought help from a range of sources: 24% discussed concerns with a healthcare professional, 42% with individuals other than healthcare professionals and 21% sought help from other sources, with mixed usage between groups. Resulting studies suggest that women with breast cancer prefer seeking help for sexual concerns from informal sources (e.g., intimate partners, family, and friends) rather than formal sources (e.g., healthcare professionals, such as doctors, nurses, and psychologists; Dai et al., 2020; Reese et al., 2020)

Low rates of help-seeking, despite experiencing emotional and sexual concerns, can lead to a high degree of unmet need in cancer populations (Hyde et al., 2016; Smith et al., 2013; von Heymann-Horan et al., 2013). Psychological needs were the most reported unmet

need one-month post diagnosis, and sexual unmet need increasing the most (1 month to 3 months post diagnosis; Minstrell et al., 2008).

Data on rates of help-seeking are informative, although, it is important to understand what factors are associated with help-seeking behaviours. Given the high degree of unmet needs that women with breast cancer may experience regarding their emotional and sexual well-being (Burris et al., 2015; Eggins et al., 2022; Minstrell et al., 2008; von Heymann-Horan et al., 2013), research is required to investigate the factors that may facilitate or hinder help-seeking for these concerns.

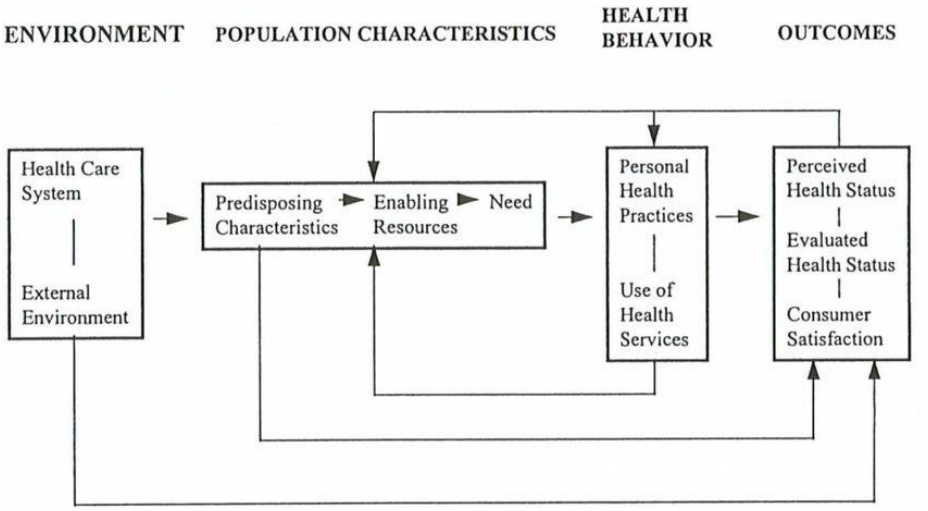
Theoretical Frameworks for Understanding Help-Seeking

Models of health behaviour can provide useful frameworks to guide our understanding of factors influencing help-seeking. Many models such as the Theory of Planned Behaviour (Azjen, 1991) and the Health Belief Model (Becker, 1974) have been applied in the context of help-seeking behaviour. However, Andersen's (1995) Behavioural Model of Health Service Use has been widely recognised and used in help-seeking literature (Ricketts & Goldsmith, 2005), especially in cancer settings (Woodford et al., 2021; You et al., 2019). Originally created in 1968, after a few iterations, the most recent model was developed in 1995. Andersen's (1995) model (Figure 1) describes healthcare service use as a function of environmental factors, population characteristics, health behaviour, and health outcomes. Crucial to this study is how predisposing, enabling, and need factors are associated with help-seeking amongst women with breast cancer. Predisposing factors can be "biological imperatives" (e.g., age and gender; Andersen, 1995, p. 2), social factors (e.g., education, ethnicity, occupation), and health beliefs (e.g., attitudes and beliefs around the health service and one's health). Enabling factors enable, or disable, one's access to health services, such as income, location, health insurance, and availability of services. Finally, need

factors are the perceived and/or evaluated need for health services, such as current health status and diagnosed health issues.

Figure 1

The Andersen Model of Healthcare Services Utilization



Note. From "Revisiting the Behavioral Model and Access to Medical Care: Does it Matter?" by Andersen, 1995, Journal of Health and Social Behavior 36(1), p. 8. Copyright 2022 by the Journal of Health and Social Behaviour.

In addition to past studies, this model's factors will guide consideration of potential factors associated with help-seeking in breast cancer populations. Given the limited number of studies that examine help-seeking for emotional and sexual concerns among women with breast cancer (Mehnert & Koch, 2008; Otto et al., 2018; Reese et al., 2020), studies assessing factors associated with help-seeking for physical problems among women with breast cancer are also used. This study has also broadened the analysis to include help-seeking studies of other cancer populations.

Predisposing Characteristics

Age

Globally, younger people with cancer report higher rates of help-seeking for emotional concerns compared to older people with cancer (Grande et al., 2006; Mehnert & Koch, 2008; Steginga et al., 2008). Although younger women with cancer report more psychological distress (Burgess et al., 2005; Compas & Luecken, 2002), Mehnert and Koch (2008) found in their study of 1,083 breast cancer survivors, younger women are better aware of psychological support available and more likely than older women to participate in support groups.

A similar pattern has been found regarding help-seeking for sexual concerns among women with breast cancer. Younger women with breast cancer report higher sexual dysfunction and greater impact than older women (Boquiren et al., 2016; Reese et al., 2020). Studies in breast cancer found that the greater impact of sexual concerns on younger women was a facilitator in reporting a higher intention to seek help for these concerns compared to older women (Hill et al., 2011; Reese et al., 2020).

Relationship Status

Research shows that women with breast cancer and no significant relationship are less likely to seek help for sexual concerns than those who are married/de facto (Reese et al., 2020). Ussher et al. (2013) also found in their study (N = 1,956) that being in a significant relationship is a facilitator for help-seeking. One sixth of participants reported not seeking help as they were not in a significant relationship, thus reporting no sexual concern, and a reluctance to seek new relationships and/or intimacy. Interestingly, women with breast cancer also sought help for sexual concerns primarily from partners (Reese et al., 2020).

Attitudes

Various models that have been used in the context of help-seeking show that attitudes can play an important role in the help-seeking process (Andersen, 1995; Azjen, 1991). Azjen's (1991) Theory of Planned Behaviour proposes direct relationships between attitudes

and intention, as well as intention and behaviour. Attitudes in this context involve the perceived effectiveness and benefits of seeking help from professionals and knowledge/attitudes towards mental health (Picco et al., 2016).

Steginga et al. (2008) found that in their study of 439 cancer patients, more positive attitudes were significantly associated with help-seeking for emotional concerns. This finding is consistent with the previous literature in cancer populations (Compas & Luecken, 2002; Grimley et al., 2020; O'Mahony and Hegarty, 2009; Velasco et al., 2020). Studies investigating the role of attitudes in help-seeking for sexual concerns are limited (Cohen et al., 2018), however, Dai et al. (2020) suggests that negative attitudes and beliefs about help-seeking for sexual concerns (e.g., embarrassment, taboo, and misconceptions) are barriers.

Time Since Diagnosis

Several studies with breast cancer survivors found that time since diagnosis did not have a significant effect on emotional distress, and in turn it was not a predictor of help-seeking for emotional concerns (Compas & Luecken, 2002; Mehnert & Koch, 2008; Osborne et al., 2004). The authors suggest that the constant threat of cancer recurrence enables anxiety and other emotional distresses to remain constant over the breast cancer journey. Similar has been seen for help-seeking for sexual concerns because distress plays a role in sexual functioning (Goerling et al., 2020; Ussher et al., 2013). Reese et al. (2020) also found no difference in help-seeking for sexual concerns based on time since diagnosis.

Type of Treatment

In past studies, results have varied on the relationship between help-seeking for emotional concerns and type of treatment (Lovelace et al., 2019). Al-Ghazal et al. (2000) found that breast conserving surgery was associated with better psychosocial well-being than mastectomy with reconstruction, in their sample of 577 breast cancer survivors. Intention to seek help for emotional concerns may also differ between treatment types. Howes et al.

(2016) found in their study (N = 400) women that had breast reconstruction surgeries report the greatest sexual well-being and mastectomy with no reconstruction had the poorest sexual well-being. This may result in women who received mastectomy with no reconstruction having a higher intention to seek help for sexual concerns.

Enabling resources

Location and Level of Disadvantage

People with cancer living in rural/remote locations have been found to have higher emotional distress and lower QOL than their counterparts living in metropolitan locations (Bettencourt et al., 2007; Crawford-Williams et al., 2022). There is evidence that remoteness is a barrier to seeking help for physical breast cancer symptoms and sexual concerns due to access inequity (Butow et al., 2012; Harries et al., 2020; Minstrell et al., 2008; Momeni & Rafii, 2020). There is an evident need for further research into the effect of geographical location on help-seeking for emotional concerns in cancer populations (McDowell et al., 2010). Similarly, level of disadvantage may be a barrier for help-seeking for emotional and sexual concerns. Momeni and Rafii (2020) conducted a concept analysis showing that level of disadvantage is a barrier for help-seeking for physical symptoms limiting access to services, especially for professional sources of help.

Need

Emotional Distress

Women diagnosed with breast cancer have been found to have higher levels of emotional distress, especially anxiety and depressive symptoms, than a normative cohort (Compas & Luecken, 2002). Several studies have found that among general and breast cancer patients, higher levels of emotional distress, including symptoms of anxiety, depression, and stress are associated with increased need and help-seeking for these concerns (Cohen et al., 2018; Mehnert & Koch., 2008; McDowell et al., 2011; Steginga et al., 2008). These studies

are also consistent with Andersen's (1995) behavioural model, where increased need is theorised as a facilitator of seeking help.

Fear of Recurrence

Fear of breast cancer recurrence is the constant anticipation of cancer returning and is associated with stress symptoms and avoidance behaviours (Lee-Jones et al., 1997). Yu et al., (2022) found in their study of 231 Chinese breast cancer survivors that fear of recurrence (FoR) is reported as an issue for 68% of survivors. Women with a higher fear of breast cancer recurrence report a higher level of unmet emotional need and a range of negative effects on well-being and psychosocial functioning (Vachon et al., 2021).

Studies investigating the relationship between FoR and help-seeking for emotional concerns are limited and the results have been mixed (Reed et al., 2021). Otto et al. (2018) found that FoR was not a significant predictor of help-seeking for emotional concerns in breast cancer participants (N = 300). Thewes et al. (2012), also studied fear of breast cancer recurrence in 218 Australian women and found that higher FoR was a significant predictor of psychological/counselling support use. This is supported by breast cancer and general cancer studies (Lebel et al., 2013; Prins et al., 2022; Vachon et al., 2021; Williams et al., 2021).

Sexual Dysfunction and Unmet Need

With the traumatic nature of breast cancer and its associated treatments and side effects, breast cancer survivors frequently experience disrupted sexual functioning and report a higher level of unmet sexual need compared to a normative female sample (Boquiren et al., 2016). These issues ranged from vaginal discomfort and pain, fatigue, loss of sexual interest, and satisfaction (Boquiren et al., 2016; Reese et al., 2020). Ussher et al. (2013) found in breast cancer patients (N = 1,956), 85% reported changes in sexual well-being, with 65% of participants seeking help for these issues from informal or formal sources. Similarly, Reese et

al. (2020) found help-seeking was significantly associated with sexual dysfunction and dissatisfaction.

Present Study

To date, research on help-seeking in breast cancer populations has been focused on factors associated with help-seeking for physical symptoms. Studies investigating help-seeking for sexual and emotional concerns among women with breast cancer have been limited. As women with breast cancer report high levels of emotional distress and sexual concerns, how they access these health care services and the barriers for seeking help for these concerns requires further investigation.

Study Aims

This study is a subset of a broader, pre-existing data set that collected a range of patient reported outcomes (PROMs) of women within 5 years of their breast cancer diagnosis. The study aims to increase understanding of the factors associated with intention to seek help for emotional and sexual concerns among women with breast cancer. These will be guided by findings in the literature and through adapted versions of Andersen's (1995) Behavioural Model of Health Service Use (see Figures 2 and 3).

Figure 2

An Adaption of Andersen's (1995) Behavioural Model of Health Service Use Applied to Seeking Help for Emotional Concerns in Women with Breast Cancer

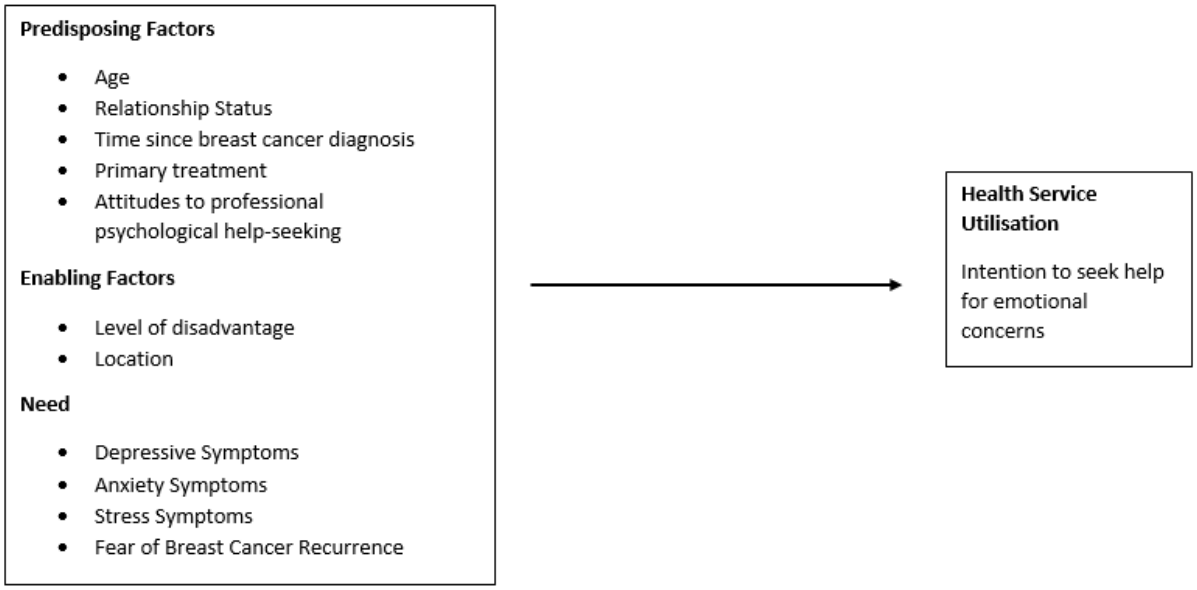
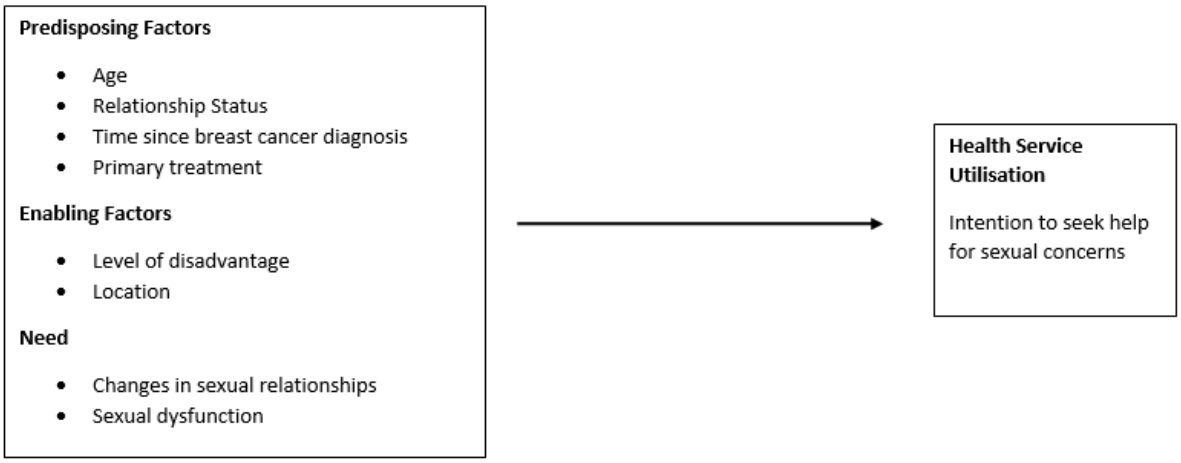


Figure 3

An Adaption of Andersen's (1995) Behavioural Model of Health Service Use Applied to Seeking Help for Sexual Concerns in Women with Breast Cancer



Based on these aims it was hypothesised:

Hypothesis 1: Women will have greater intention to seek help from informal sources rather than formal sources for sexual and emotional concerns

Hypothesis 2: Older women and women not in a significant relationship will have a lower intention to seek help for emotional and sexual concerns

Hypothesis 3: Higher scores on the ‘attitudes towards seeking professional psychological help’ scale will be positively associated with a greater intention to seek help for emotional concerns

Hypothesis 4: Higher scores on depression, anxiety, stress, and fear of breast cancer recurrence scales will be associated with greater intention to seek help for emotional concerns

Hypothesis 5: Women with greater sexual dysfunction and higher unmet need due to changes in their sexual relationship will have a higher intention to seek help for sexual concerns

Hypothesis 6: Time since diagnosis will not be associated with intention to seek help for emotional and sexual concerns

Hypothesis 7: Type of primary treatment will be associated with intention to seek help for emotional and sexual concerns.

Hypothesis 8: Women living in rural/remote locations and with higher levels of disadvantage will have lower intentions of seeking help for emotional and sexual concerns

Method

Participants and Procedure

The study design was an experimental online survey, conducted via Qualtrics software, accessible through a link on the South Australian Health and Medical Research Institute (SAHMRI) website. The survey was advertised via South Australian and National cancer organisations, and social media support groups. Women who were interested in the survey were directed to information about the study and eligibility criteria, which included: aged 18 years or older, competent English skills, Australian resident, and within 5 years of breast cancer diagnosis. Participants were informed that the broader study was to measure health and well-being of women with breast cancer throughout the cancer journey, and data collection priorities to inform gaps in care. As part of the broader study on women with breast cancer and perceptions of the assessment of PROMs, participants were randomly assigned to complete a minimum set of PROMs (QoL), or an extended set survey of measures, which included the minimum set measures, as well as selected measures of psychosocial functioning (Ettridge et al., 2021). The current study was comprised of women who completed the extended survey (n = 123). Data collection took place from June to September 2018. The broad study and this sub-study were approved by the University of Adelaide Human Research Ethics Committee (Ethics ID: H-2018-072).

Measures

Socio-Demographic, Disease, and Illness Information

The minimum set measures were modified from the International Consortium for Health Outcomes Measurement (ICHOM) recommended survey set for breast cancer clinical indicators (Ong et al., 2017). The questions adapted for this survey included, type of cancer treatment, stage of cancer, and diagnosis and treatment date. Socio-demographic questions were adapted from previous population surveys (Australian Bureau of Statistics, 2018;

Harrison Health Research, 2012). Socio-demographic information collected included age, relationship status, postcode for location coding (ABS, 2011), and level of disadvantage coding (ABS, 2016).

Fear of Cancer Recurrence

Fear of breast cancer recurrence was measured using the FoR scale, revised from an ovarian cancer version (Lerman et al., 1994; Rabin et al., 2004). This modified scale consists of 5-items, for example, "*How often have you worried about getting breast cancer again*?" and "*How often have worries about getting breast cancer again affected your ability to carry out your daily activities.*" Responses were assessed on a 4-point Likert scale (0 = *never* to 3 = *always*). Mean scores were calculated for each participant and ranged from 1-4, with higher scores indicating greater FoR. Previous use of this scale in a breast cancer cohort showed validity, internal consistency, and reliability (Rabin et al., 2004). This sample had a Cronbach's alpha of 0.90, demonstrating excellent internal consistency.

Depression, Anxiety, and Stress

The degree of depression, anxiety, and stress symptoms was measured using the Depression, Anxiety, and Stress Scale (DASS-21; Lovibond & Lovibond, 1995), which is a self-report questionnaire of 21-items assessing symptoms of depression (7 items), anxiety (7 items), and stress (7 items) over the previous 7-days. Example items include "*I tended to over-react to situations*" (stress), "*I experienced trembling (e.g in the hands)*" (anxiety) and "*I felt down-hearted and blue*" (depression). Each item was assessed on a 4-point Likert scale (0 = *did not apply to me at all* to 3 = *applied to me very much, or most of the time*). Item scores were summed for each scale (ranging 0-21), with higher scores on the DASS scales indicating more symptoms. The DASS-21 has been shown to be valid in a cancer patient sample and have good reliability in a breast cancer sample (Bener et al., 2016). Cronbach's

alpha for each scale ranged from 0.80 to 0.89 for this sample, showing good internal consistency.

Attitudes

Attitudes towards seeking help was assessed using the Attitudes Towards Seeking Professional Psychological Help Scale (ATPPHS; Fischer & Farina, 1995). The ATPPHS is a 10-item scale that includes items such as "*If I believed I was having a mental breakdown, my first inclination would be to get professional attention*" and "*Personal and emotional troubles, like many things, tend to work out by themselves*". Participants were asked to rate these items on a 4-point Likert scale (1 = *disagree* to 4 = *agree*). Items 2, 4, 8, 9, and 10 were reverse worded and required the score to be reverse coded before scoring. All ratings were summed for each participant (ranging from 0-30) and a higher score indicated more positive attitudes towards seeking professional psychological help. The scale was previously found to have good internal consistency and test-retest correlation (Fischer & Farina, 1995). The Cronbach alpha for this sample was 0.87, which demonstrates good internal consistency.

Help-Seeking for Emotional and Sexual Concerns

The rates and sources of help-seeking for emotional and sexual concerns were assessed with an adapted help-seeking measure (Wilson et al., 2005), which was also used in a recent survey of men with prostate cancer (Hyde et al., 2016). Current, past, and future (intended) help-seeking for emotional concerns were assessed by asking participants if they had sought help in the past 6 months, currently sought help, or intended to seek help in the next 6 months for emotional concerns from a list of sources of help. Listed sources included: doctor, nurse, psychologist or counsellor, breast cancer support group, another woman who has had cancer, or other. Participants were able to indicate the 'other' source using a text box if they wished. Response options included '*yes*', '*no*', or '*unsure*' in response to each source of help. The same set of questions were also asked for sexual concerns. For ease of analysis,

responses were dichotomised, with participants coded as having sought help, currently seeking help, or intended to seek help from a source if they responded '*yes*'. Those participants who indicated '*no*' or '*not sure*' were combined and coded as '*no*' in SPSS.

Unmet Need due to Changes in Sexual Relationship

Unmet need in sexual relationships was assessed using one item of the Supportive Care Needs Survey Brief Screening Tool (SCNS-ST9; Girgis et al., 2012). The SCNS-ST9 is a 9-item version of a longer 34 item measure. Item 5 "Changes in your sexual relationships" was used in this study to indicate unmet sexual need due to changes in one's sexual relationship. The item was rated on a 5-point Likert scale (1 = *no need* to 5 = *high need*). Each score was standardised from 0-100, with higher scores indicating higher need. The longer SCNS-SF34 has been shown to be reliable and valid (Boyes et al., 2009), with this brief 9-item measure also showing similar validity and reliability in cancer patients (Renovas et al., 2016).

Sexual Function and Enjoyment

Sexual function and enjoyment were assessed by specific scales of the European Organisation for Research and Treatment of Cancer Breast Cancer Specific Quality of Life Questionnaire (EORTC QLQ-BR23; Nguyen et al., 2015). This measure is used to assess breast cancer specific health-related quality of life and consists of 23 items measured on a 4-point scale (1 = *not at all* to 4 = *very much*), assessing functional scales of body image, future outlook, breast symptoms, and feelings surrounding hair loss. Sexual function and enjoyment were measured with items 14 "*To what extent are you interested in sex*?", 15 "*To what extent are you sexually active (with or without intercourse)*" and 16 "*Answer this question only if you have been sexually active: To what extent was sex enjoyable for you*". These three items consisted of two functional subscales; sexual enjoyment (1 item) and sexual functioning (2 items), these three items were combined in SPSS, and the mean of these three items

combined represents participants sexual function and enjoyment subscale. Scores range from 1-4 and higher scores on this subscale indicate better functioning and enjoyment. The EORTC QLQ-BR23 has been shown in breast cancer populations to have good validity and reliability (Tan et al., 2014). The internal consistency for all three items in this sample were good, with a Cronbach's alpha of 0.84.

Statistical Analysis

Data analyses were computed with IBM SPSS Statistics 27 (IBM, 2020). As this study includes a sub-sample of a broader study conducted by Ettridge et al. (2021), the sample size was pre-determined. Ettridge et al. (2021) required 80-100 participants for each experimental group to provide 80% power for detection of a moderate effect between groups (d = 0.50; Cohen, 1992), assuming an $\alpha = 0.05$ Type I error rate. The current sample consisted of 123 participants, however, of this sample missing data was present. Missing data levels are assumed to be normal if under 10% indicating the missing data in this study was low, negligible, and underwent pairwise exclusion (Parent, 2013). Missing cases of data for the outcome variables of help-seeking intentions was at n = 6 (4.9%) for emotional concerns and n = 7 (5.7%) for sexual concerns. For all other variables, instructions for handling missing data were provided by the authors of measures. For example, the DASS-21 does not allow for missing data and ATPPHS allows only 3 missing items. For measures with no instructions on how to handle missing data, approximately 2 items and/or 25-30% of missing data were allowed and existing items averaged for a mean score, if necessary.

Data were checked to assess whether they met the assumptions of the required statistical tests. Non-normal distributions were found for several continuous measures. Spearmon Rho correlation matrices were used to assess multicollinearity and results showed that the DASS-21 scale scores for depression, anxiety, and stress were highly correlated in this sample, with coefficients between 0.80 and 0.86, suggesting multicollinearity. However,

Variance Inflation Factor (VIF) scores, used to calculate multicollinearity in regression analyses, were calculated and found to be under 10. The DASS scales were expected to be moderately inter-correlated (Lovibond & Lovibond, 1995), not due to overlapping constructs, but because the negative affective states of depression, anxiety, and stress all may possess common causes. Therefore, we opted to proceed cautiously, including all three scales in the analyses, particularly given the authors indicate the three subscales measure separate constructs and the DASS scales are an established, validated measure.

Although normality is not an assumption for logistic regression, multiple variables were found to have a non-normal distribution as indicated by Shapiro-Wilks statistics and histograms. Consequently, when *t*-tests were conducted, so too were non-parametric Mann-Whitney U tests for continuous variables that were not normally distributed. The results of Mann-Whitney U tests did not differ from independent sample *t*-tests. Consequently, independent sample *t*-tests have been reported in this study for ease of interpretation. All other assumptions were met for hierarchical logistic regression, including adequate sample size, binary outcome variable, and minimal outliers (Pallant, 2020).

Descriptive statistics were first calculated for continuous and categorical variables to provide a preliminary understanding of the data and an insight into the participant characteristics of the sample. Second, a series of chi-square tests were conducted to assess associations between categorical variables and intention to seek help for emotional and sexual concerns. Independent sample *t*-tests were run for continuous variables to compare mean scores and intention to seek help for emotional and then sexual concerns.

Based on the results of the preliminary analyses and conceptual relevance, selected socio-demographic variables and predictor variables were entered into two separate hierarchal binary logistic regressions, with one regression analysing intention to seek help for emotional concerns and the other for sexual concerns (0 = no intention, 1 = intention).

Variables were entered into the regression in blocks of predictors following Andersen's (1995) Behavioural Model of Health Service Use. Predisposing characteristics were entered into Block 1 (Model 1), enabling resources were intended to be entered into Block 2, but none were shown to be significant in the preliminary analyses, so this was omitted. As such, the need factors were entered in Block 2 (Model 2).

Results

Participant Characteristics

Socio-demographic characteristics of the 123 participants in this study are displayed in Table 1. Participants had a mean (*M*) age of 53.5 years (Standard Deviation [*SD*] = 9.9), with ages ranging from 33 to 88 years. A large proportion (75.6%) of participants were born in Australia, with 8.1% born in England, 3.3% in New Zealand, and other birth countries (12.4%; i.e., USA, China, South Africa, Israel and others). One participant (0.8%) identified as Indigenous Australian. Most participants (97.6%) reported only speaking English at home. Participants were highly educated, with almost two thirds of women having a bachelor's degree or higher. About half of women had one or more comorbidities (1 = 27.3%, 2 or more = 23.1%).

Regarding prognosis, only a small proportion of women were diagnosed with Stage 4 breast cancer, with most women diagnosed with Stages 1-3. The mean amount of time that had elapsed since diagnosis was approximately two and a half years (*M* = 2.4, *SD* = 1.43), ranging from 0 to 5.3 years. Breast conserving surgery was the most common reported type of primary treatment for participants, closely followed by mastectomy, double mastectomy, and other treatments which were non-surgical, or participants had not received treatment yet at time of survey.

Table 1

Participant Characteristics for the Sample

Participant Characteristic	Total	
	n	%
Age (years)		
under 50	44	35.8
50-59	45	36.6
60+	34	27.6
Level of Disadvantage		
Most (quintiles 1-3)	54	44.3
Least (quintiles 4-5)	68	55.7
Location		
Major City	88	72.1
Regional/Remote	34	27.9
Relationship Status		
In a significant relationship	95	77.2
Single	28	22.8
Time since diagnosis		
<12 months	27	22.0
1-2 years	24	19.5
2-5 years	72	58.5
Breast Cancer Stage		
Stage 1	31	37.3
Stage 2	23	27.7
Stage 3	25	30.1
Stage 4	4	4.8
Type of Primary Treatment		
DB Mast	25	20.3
Mast	42	34.1
Breast conserving surgery	46	37.4
Other	10	8.1

Note. $N = 123$. Valid percentages are reported.

Descriptive Statistics and Correlations between Predisposing Characteristics and Need Factors

Table 2 shows descriptive statistics and bivariate correlations for the continuous measures that comprise the predisposing characteristics and need factors in this study. Age had small negative correlations with depression, stress, attitude towards seeking professional psychological help, sexual function and enjoyment, and changes in sexual relationships. These results indicated that as age increased, symptoms of depression and stress, positive

attitudes towards help-seeking, sexual function and enjoyment, and changes in sexual relationships decreased to a small extent. All DASS-21 subscales had large, positive correlations with each other, suggesting that these three symptoms of emotional distress may occur together in this population. Mean FoR score was moderately and positively correlated with all three DASS-21 subscales, indicating that as fear of breast cancer recurrence increased, symptoms of depression, anxiety, and stress also increased.

Table 2

Descriptive Statistics and Spearman Rho Correlations for Age and Scores on the DASS-21 Scales, Fear of Recurrence Scale, Attitudes Towards Professional Psychological Help Seeking Scale, Sexual Function Subscale and Enjoyment and Changes in Sexual Relationship Subscales

Variable	*n*	Possible range	*M*	*SD*	1	2	3	4	5	6	7	8
1. Age	123	33-88	53.51	9.94	-							
2. DASS Depression (-)	122	0-21	7.03	8.06	-.216*	-						
3. DASS Anxiety (-)	122	0-21	9.54	9.45	-.121	.862**	-					
4. DASS Stress (-)	122	0-21	9.02	7.65	-.200*	.844**	.831**	-				
5. Fear of Recurrence (-)	121	1-4	2.41	0.81	-.149	.459**	.540**	.449**	-			
6. Attitudes to Professional Psychological Help Seeking (+)	120	0-30	22.62	6.21	-.256**	-.007	-.023	.068	.002	-		
7. Sexual Function and Enjoyment (+)	123	1-4	1.58	0.66	-.241**	-.078	-.119	-.061	-.158	.159	-	
8. Changes in Sexual Relationships (-)	117	0-100	27.14	35.14	-.241**	.054	.126	.156	.146	.098	.047	-

Note. $N = 123$, responses varied between scales and valid responses are reported. Scales labelled (+) indicates higher scores = better functioning, (-) indicates higher scores = more symptoms, greater fear, and unmet need.

*$p < .05$ (2-tailed), **$p < .01$ (2-tailed).

Help-Seeking for Emotional Concerns

Table 3 reports participants' help-seeking intentions and behaviours for emotional concerns, reporting intended help-seeking with formal and informal sources, as well as current and past rates of help-seeking with those same sources. It was hypothesised that women would have a higher intention to seek help for emotional concerns from informal sources. Participants more commonly intended to seek help from informal sources of support, such as breast cancer support groups and other women who have had breast cancer, than formal sources, like doctors and psychologists/counsellors, partially supporting Hypothesis 1. Similarly, participants most commonly reported seeking help from these same informal sources at the time of the survey and previously in the six months prior to the survey. Participants were less likely to seek help from nurses and psychologists/counsellors.

Table 3

Help-Seeking Intentions and Behaviours for Emotional Concerns

Source of help	Intend to seek help				Currently seeking help				Have sought help in the past 6 months			
	Yes		No		Yes		No		Yes		No	
	n	%	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%
Doctor	25	22.3	87	77.3	30	27.5	79	72.5	45	41.3	64	58.7
Nurse	13	12.0	95	88.0	11	10.5	94	89.5	19	18.8	82	81.2
Psychologist or Counsellor	24	21.6	87	78.4	18	16.7	90	83.3	33	30.6	75	69.4
Breast Cancer Support Group	44	40.0	66	60.0	44	41.1	63	58.9	49	45.4	59	54.6
Another woman who has had breast cancer	48	42.9	64	57.1	50	44.2	63	55.8	52	47.7	57	52.3
Other	5	11.9	37	88.1	10	18.5	44	81.5	6	11.5	46	88.5
Any informal sources[a]	65	56.5	50	43.5	69	60.5	45	39.5	71	62.8	42	37.2
Any formal sources[a]	44	37.9	72	62.1	40	35.7	72	64.3	60	53.6	52	46.4
Total from any source[b]	74	62.7	44	37.3	80	67.2	39	32.8	87	73.7	31	26.3

Note. $N = 123$. Total numbers differed for each source of help; valid percentages are reported.

[a] Cumulative help-seeking from any source of formal or informal help. [b] Both informal and formal sources of help.

Help-Seeking for Sexual Concerns

Table 4 shows participants' help-seeking (intended, current and past) for sexual concerns. With respect to intention to seek help, seeking help from formal sources (i.e., doctors and psychologists/counsellors) was most commonly reported, though rates were low overall. Participants were less likely to intend to seek help from informal sources, such as breast cancer support groups and other women who have had breast cancer. This does not support part of Hypothesis 1, predicting that women would be more likely to intend to seek help for sexual concerns from informal sources of help.

Participants reported they were most likely to currently seek help from doctors and another woman who has had breast cancer and less likely to currently seek help for sexual concerns from nurses and psychologists/counsellors.

Likewise, participants were most likely to have sought help in the past 6 months from doctors and another woman with breast cancer.

Table 4

Help-Seeking Intentions and Behaviours for Sexual Concerns

Source of help	Intend to seek help				Currently seeking help				Have sought help in the past 6 months			
	Yes		No		Yes		No		Yes		No	
	n	%	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%
Doctor	18	15.7	97	84.3	11	9.9	100	90.1	19	17.0	93	83.0
Nurse	1	0.9	108	99.1	0	0.0	109	100.0	2	1.8	107	98.2
Psychologist or Counsellor	8	7.3	101	92.7	1	0.9	109	99.1	3	2.8	106	97.2
Breast Cancer Support Group	8	7.2	103	92.8	3	2.8	106	97.2	6	5.5	103	94.5
Another woman who has had breast cancer	8	7.2	103	92.8	6	5.5	104	94.5	8	7.3	102	92.7
Other	1	1.4	68	98.6	1	1.4	72	98.6	1	1.4	73	98.6
Any informal sources[a]	12	10.5	102	89.5	9	8.0	104	92.0	12	10.7	100	89.3
Any formal sources[a]	22	19.1	93	80.9	12	10.6	101	89.4	20	17.7	93	82.3
Total from any source[b]	25	21.6	91	78.4	16	13.9	99	86.1	26	22.6	89	77.4

Note. $N = 123$. Total numbers differed for each source of help; valid percentages are reported.

[a]Cumulative help-seeking from any source of formal or informal help. [b] Both informal and formal sources of help.

Predictor Variables and the Differences Between Intention and no Intention to Seek Help

Tables 5 and 6 show the results of several independent sample *t*-tests that compared mean age and scores on continuous measures between those who did and did not intend to seek help for emotional and sexual concerns, respectively. Hypothesis 2 predicted that older women would have a lower intention to seek help for emotional and sexual concerns compared with younger women. As seen in Tables 5 and 6, this was only supported for intention to seek help for emotional concerns, partially supporting Hypothesis 2. There was a significant difference in age for intention to seek help for emotional concerns, with a large effect size, indicating that younger women reported greater intention to seek help. As can be seen in Table 6, regarding help-seeking intentions for sexual concerns, there was no significant difference in mean age according to help-seeking intention.

Hypothesis 3 predicted that higher scores on the 'attitudes towards seeking professional psychological help' scale would be positively associated with a greater intention to seek help for emotional concerns. There was a significant difference between intention, where women with a higher attitudinal score reported greater intention to seek help for emotional concerns. This was a medium effect size and provides support for Hypothesis 3.

Hypothesis 4 stated that higher scores on depression, anxiety, stress, and fear of breast cancer recurrence scales will be associated with greater intention to seek help for emotional concerns. Results of independent sample *t*-tests (reported in Table 5) show that participants who intended to seek help for emotional concerns had significantly higher scores on the DASS-21 scales of depression, anxiety, and stress, than those that did not intend to seek help. Similarly, women with greater mean FoR scores significantly reported greater intention to seek help for emotional concerns. All had medium effect sizes, except anxiety which had a large effect size.

Hypothesis 5 predicted that women with greater sexual dysfunction and higher unmet need due to changes in their sexual relationship would have a higher intention to seek help for sexual concerns. As can be seen from results in Table 6, the participants mean score for sexual function and enjoyment did not vary significantly between intention and no intention to seek help for sexual concerns. The inverse is seen for the unmet needs due to changes in sexual relationship variable, where participants that intended to seek help for sexual concerns reported significantly higher mean scores for changes in sexual relationships, compared to participants with no intention.

Table 5

Differences Between Intention to Seek Help for Emotional Concerns for Continuous Variables

	Intention		No Intention					
	M	*SD*	*M*	*SD*	*df*	*t*	*p*	Cohen's *d*
Age	52.1	9.56	55.8	10.0	116	2.01	0.05	9.74
Attitudes Towards Seeking Professional Psychological Help[a]	24.3	4.93	19.9	7.19	67.3	-3.66	<.001	5.87
DASS – Depression[a]	8.95	8.65	4.05	5.97	113.4	-3.63	<.001	7.77
DASS – Anxiety[a]	12.3	9.96	5.09	6.11	115.9	-4.89	<.001	8.74
DASS – Stress[a]	11.5	7.67	5.05	5.45	112.3	-5.34	<.001	6.93
Fear of Recurrence	2.56	0.79	2.15	0.77	115	-2.77	0.01	7.83

Note. $N = 123$.

[a]Equal variances not assumed

Table 6

Differences Between Intention to Seek Help for Sexual Concerns for Continuous Variables

	Intention		No Intention					
	M	*SD*	*M*	*SD*	*df*	*t*	*p*	Cohen's *d*
Age	50.6	9.42	54.3	9.93	114	1.66	0.10	9.82
Sexual Function and Enjoyment	1.64	0.53	1.58	0.68	114	-0.39	0.70	0.65
Changes in sexual relationships	53.0	34.1	20.3	32.3	114	-4.43	<.001	32.7

Note. $N = 123$.

Tables 7 and 8 report the results of chi-square tests comparing proportions of those that intended to seek help for emotional and sexual concerns from any source according to categorical predictors. Hypothesis 6 predicted that time since diagnosis would not be associated with intention to seek help for emotional and sexual concerns, whereas Hypothesis 7 predicted that type of primary treatment would be associated with intention to seek help for emotional and sexual concerns. Time since breast cancer diagnosis and type of primary treatment were not significantly associated with intention to seek help for emotional concerns (see Table 7) or sexual concerns (see Table 8). Thus, Hypothesis 6 was supported, but Hypothesis 7 was not.

Table 7

Crosstabulation of Categorical Predictor Variables and Intention to Seek Help for Emotional Concerns

	Reported intention to seek help for emotional concerns from 'any' source				
Predictor Variable	Yes *n* (%)	No *n* (%)	*χ2*	*p*	*Phi*
Relationship Status			0.02	0.89	-0.01
In a significant relationship	58(63.0)	34(37.0)			
Not in a significant relationship	16(61.5)	10(38.5)			
Time Since diagnosis			4.91	0.09	0.20
Within 12 months	21(77.8)	6(22.2)			
1-2 years	14(70.0)	6(30.0)			
2-5 years	29(54.9)	32(45.1)			
Primary Treatment			1.21	0.75	0.10
DBMAST	13(54.2)	11(45.8)			
MAST	27(67.5)	13(32.5)			
BCS	28(62.2)	17(37.8)			
Other	6(66.7)	3(33.3)			
Level of Disadvantage			0.46	0.50	-0.06
Most disadvantaged (1-3)	34(66.7)	17(33.3)			
Least Disadvantaged (4-5)	40(60.6)	26(39.4)			
Location			0.57	0.45	0.07
Major City	52(61.2)	33(38.8)			
Regional/Remote	22(68.8)	10(31.2)			

Note. N = 123, valid percentages are reported. All expected cell frequencies were greater than 5. DBMAST = double mastectomy, MAST = mastectomy, BCS = breast conserving surgery

Table 8

Crosstabulation of Categorical Predictor Variables and Intention to Seek Help for Sexual Concerns

	Reported intention to seek help for sexual concerns from 'any' source				
Predictor Variable	Yes *n* (%)	No *n* (%)	χ^2	*p*	*Phi*
Relationship Status			3.46	0.06	-0.17
In a significant relationship	23(25.3)	68(74.7)			
Not in a significant relationship	2(8.0)	23(92.0)			
Time since diagnosis			0.82	0.66	0.08
Within 12 months	7(26.9)	19(73.1)			
1-2 years	3 (15.8)	16(84.2)			
2-5 years	15 (21.1)	56(78.9)			
Primary Treatment			4.06	0.26	0.19
DBMAST	7(29.2)	17(70.8)			
MAST	11(28.2)	28(71.8)			
BCS	6(13.6)	38(86.4)			
Other	1(11.1)	8(88.9)			
Level of Disadvantage			0.73	0.39	0.08
Most disadvantaged (1-3)	9(18.0)	41(82.0)			
Least Disadvantaged (4-5)	16(24.6)	49(75.4)			
Location			0.23	0.63	-0.05
Major City	19(23.0)	64(77.0)			
Regional/Remote	6(18.7)	26(81.3)			

Note. N = 123, valid percentages are reported. All expected cell frequencies were greater than 5. DBMAST = double mastectomy, MAST = mastectomy, BCS = breast conserving surgery

Hypothesis 2 predicted that women not in a significant relationship would be less likely to intend to seek help for emotional and sexual concerns. Chi-square tests (see Table 7) indicated that relationship status was not significantly different between participants who

intended to seek help for emotional concerns and those who did not, partially rejecting Hypothesis 2. The association between women in a significant relationship and greater help-seeking intention for sexual concerns was approaching statistical significance, thus it was included in later analyses.

Hypothesis 8 predicted that women living in rural/remote locations and with higher levels of disadvantage would have lower intentions of seeking help for emotional and sexual concerns. As shown in Tables 7 and 8, there was no significant difference between level of disadvantage or location and intention to seek help for emotional concerns (Table 7) and sexual concerns (Table 8). Thus, Hypothesis 8 was not supported in this study.

Based on the significant results of these preliminary analyses, the variables retained for logistic regression models of help-seeking intentions for emotional concerns included age and attitudes to seeking professional psychological help as predisposing factors, as well as DASS-21 scales and FoR as need factors.

For help-seeking intentions for sexual concerns, the variables retained for logistic regression models, included: relationship status as predisposing factors, sexual function and enjoyment, and changes in sexual relationships as need factors. These variables were either significant or close to significance in preliminary analyses. No enabling factors were included in either regression models as they were not close to significance in preliminary analyses.

Predictors of Intention to Seek Help for Emotional Concerns

A hierarchical logistic regression analysis was conducted to determine significant predictors associated with intention to seek help for emotional concerns. Table 9 shows that variables were entered in two blocks following the adapted Andersen (1995) model. Model 2 includes the full model, with predisposing characteristics entered in Block 1 (age, ATTPHS scores) and need factors input into Block 2 (DASS-21 and mean FOR scores).

Table 9

Results of Hierarchical Logistic Regression Analyses for Intention to Seek Help for Emotional Concerns

Predictor Variables	Model 1			Model 2		
	B (SE)	*OR* [95% CI]	*p*	*B (SE)*	*OR* [95% CI]	*p*
Block 1: Predisposing Characteristics						
Age	-0.03 (0.02)	0.97 [0.93, 1.02]	.187	-0.02 (0.03)	0.99 [0.94, 1.04]	.430
Attitudes Towards Seeking Professional Psychological Help	0.11 (0.04)	1.12 [1.05, 1.20]	.002	0.16 (0.05)	1.18 [1.07, 1.29]	.001
Block 2: Need Factors						
DASS Depression				-0.19 (0.10)	0.82 [0.69, 0.99]	.042
DASS Anxiety				0.19 (0.08)	1.20 [1.04, 1.40]	.025
DASS Stress				0.17 (0.08)	1.19 [1.02, 1.39]	.033
Fear of Recurrence				0.04 (0.36)	1.04 [0.51, 2.11]	.945
Model Summary	$R^2 = 0.17$ Log likelihood = 134.8			$R^2 = 0.47$ Log likelihood = 104.9		

Note. N = 123. *OR*= Odds Ratio, 95% CI = 95% Confidence Interval, R^2 = Nagelkerke's Pseudo R^2.

**p* ≤.05 (2-tailed), ***p* ≤.01 (2-tailed).

Significant predictors of participants' intentions to seek help for emotional concerns were the ATTPHS scores and the DASS-21 scale scores, which provide further support for Hypothesis 1 and partial support for Hypothesis 2. Results from this model suggest that intentions to seek help for emotional concerns were predicted by more positive attitudes to seeking professional psychological help and the odds of reporting intention to seek help for emotional concerns also increased when holding other variables constant.

All three DASS-21 scores were significant predictors of intention to seek help, suggesting that as symptoms of anxiety and stress increased, intention to seek help for emotional concerns also increased. However, in this model depression was negatively associated with intention to seek help for emotional concerns, suggesting that as depressive symptoms increased, intentions to seek help for emotional concerns decreased. To provide further insight into the results of this negative association, refer to Appendix A for three additional hierarchical logistic regressions that were conducted with each DASS-21 scale entered separately in Block 2. When depression was isolated from the other two subscales, higher depression scores were positively associated with intention to seek help, $B = 0.12$, $p = .005$, $OR = 1.13$, 95% CI [1.04, 1.23]. This suggests that the negative association observed in Table 9 is due to shared variance between the DASS-21 scales.

Age and FoR were not significantly associated with intention to seek help for emotional concerns in this regression model. Thus Hypotheses 1 and 2 are partially supported, but associations did not stay significant when holding other variables constant.

The final model explained 47% of the variance in intention to seek help for emotional concerns, this is an improvement on Block 1 accounting for 17% of variance.

Predictors of Intention to Seek Help for Sexual Concerns

Another hierarchical logistic regression analysis is reported in Table 10, which was run to determine predictors associated with intention to seek help for sexual concerns, following the adapted Andersen's (1995) model. Again, the full model is represented by Model 2, with predisposing characteristics (relationship status) entered into Block 1 and need factors (changes in sexual relationships and combined sexual function and enjoyment score) entered into Block 2.

Table 10

Results of Hierarchical Logistic Regression Analyses for Intention to Seek Help for Sexual Concerns

Predictor Variables	Model 1			Model 2		
	B (S.E)	*OR* [95% CI]	*p*	*B (S.E)*	*OR* [95% CI]	*p*
Block 1: Predisposing Characteristics						
Relationship status[a]	1.36 (0.78)	3.89 [0.85, 17.8]	.08	1.06 (0.84)	2.89 [0.56, 14.97]	.21
Block 2: Need Factors						
Changes in sexual relationships				0.03 (0.01)	1.03** [1.01, 1.04]	<.001
Sexual Function and Enjoyment				0.15 (0.41)	1.16 [0.52, 2.58]	.71
Model Summary	R^2 = 0.05 Log likelihood = 116.8			R^2 = 0.23 Log likelihood = 102.5		

Note. N = 123. *OR*= Odds Ratio, 95% CI = 95% Confidence Interval, R^2 = Nagelkerke's Pseudo R^2.

[a] Not in significant relationship is the reference group coded 0

*$p \leq .05$ (2-tailed), **$p \leq .01$ (2-tailed).

This logistic regression model indicated that the only significant predictor for intention to seek help for sexual concerns was unmet need due to changes in sexual relationships, proving further partial support for Hypothesis 6. This shows that participants reporting more changes in their sexual relationships were slightly more likely to intend to seek help for sexual concerns. Relationship status and sexual function and enjoyment were not significantly associated with intention to seek help for sexual concerns, after holding all other variables constant. Thus, Hypothesis 3 and part of Hypothesis 6 were not supported.

The full model explains 23% of variance seen in intention to seek help for sexual concerns compared to the first block explaining 5% of the variance.

Discussion

Overview of Findings

The help-seeking behaviours of cancer patients is an emerging research area, which can aid in supportive care for breast cancer survivors. Although help-seeking has been studied in women with breast cancer previously, this research has largely focused on help-seeking for physical symptoms, and little is known about the help-seeking behaviour of patients experiencing emotional and sexual concerns (Mehnert & Koch, 2008). This study employed Andersen's (1995) Behavioural Model of Health Service Use to explore intentions to seek help for emotional and sexual concerns in a sample of Australian women with breast cancer. The theoretical model and past studies have described what predictors are associated with an intention to seek help, who women with breast cancer seek help from, and at what rate.

Almost two thirds (62.7%) of women in this sample intended to seek help for emotional concerns and just under one-third (21.6%) intended to seek help for sexual concerns. Women with more positive attitudes towards seeking professional psychological help and higher emotional distress were more likely to intend to seek help for emotional concerns. Women experiencing a higher level of unmet need due to changes in their sexual relationships were more likely to intend to seek help for sexual concerns. Women preferred to seek help from informal sources for emotional concerns and formal sources for sexual concerns.

The models used in this study present promising results on the variables chosen and the theoretical framework. The final model for intention to seek help for emotional concerns explains 47% of variance, which is a strong result for the predictive values of this model. For sexual concerns, the final model explains 23% of the variance, which is acceptable but shows there may be other variables at play in help-seeking intentions.

Main Findings

Preferred Sources of Help

Women preferred to seek help for emotional concerns from informal sources but preferred to seek help for sexual concerns from formal sources, contrary to past studies and only partially supporting Hypothesis 8 (Dai et al., 2020; Reese et al., 2020). This may be because women find it uncomfortable being confronted with peer's problems when informally seeking help, and that women find support from a professional more valuable for sexual concerns than what a partner or peer could provide. This is corroborated in Veermeer et al.'s (2016) study of cervical cancer survivors and their preference for help-seeking from professional sources. Although women reported intention to seek help for sexual concerns from formal sources most, this percentage was still low (19.1%). As women with breast cancer experience high levels of unmet sexual needs (Boquiren et al., 2016), much work still needs to be done to encourage women in seeking help for these concerns. Through changing attitudes to seeking help for sexual concerns and education surrounding benefits and types of help available.

Predisposing Factors

The most significant predisposing factor was positive attitudes towards seeking professional psychological help, predicting intention to seek help for emotional concerns. Thus, partially supporting Hypothesis 4. These findings are in accordance with past research conducted in general cancer populations (Hunter et al., 2003; Leppin et al., 2019; McDowell et al., 2011; Steginga et al, 2008). McDowell et al. (2011) found that positive attitudes towards seeking help for emotional concerns after cancer diagnosis was a significant predictor of behavioural intention and uptake of psychological service use. Leppin et al.'s (2019) study of a German cancer population also found attitudes were a significant predictor when controlling for other variables in a help-seeking regression model. Reducing the stigma

associated with help-seeking for emotional concerns (Nearchou et al., 2018), and in turn improving attitudes towards help-seeking, further encourages women to seek help for emotional concerns. Attitudes to seeking professional sexual help was not measured in this research due to study constraints, however, results for emotional concerns show that future research in sexual attitudes would be highly valuable.

However, Hypothesis 2 which predicted that both younger women and women in a significant relationship would be more likely to intend to seek help for both emotional and sexual concerns, was not supported in this study. It was found in this study that age was not a significant predictor of intention to seek help for emotional or sexual concerns, contradicting previous research for both breast cancer and general cancer samples (Goodwin et al., 2020; Mehnert & Koch, 2008; Otto et al., 2018; Reese et al., 2020; Steginga et al., 2008). However, it may be that findings of this study are due to limitations of the sample. The findings of this study were in line with Cohen et al.'s (2018) study of head and neck cancer patients, although authors reasoned that this was due to the increased psychological consults that head and neck cancer patients must access due to the nature of said cancer type. Similarly, the non-significant findings for relationship status are quite unique to this study, with breast cancer studies finding that being in a significant relationship is an enabler for help-seeking (Reese et al., 2020; Ussher et al., 2013). These statistical similarities in age and relationship status are likely explained by a younger data set (with 27.6% aged 60 and over) compared to normative national breast cancer data sets (AIHW, 2018), and most participants being in a significant relationship (77.2%), not leaving enough variation to see a significant effect. Further studies could investigate these effects with a broader age and relationship status range, more reflective of the Australian breast cancer population.

Hypothesis 6 predicted that time since diagnosis would not be associated with intention to seek help for emotional and sexual concerns and the results of this study

supported this hypothesis. These findings are also in line with Mehnert and Koch (2008) and Reese et al.'s (2020) studies of breast cancer patients, suggesting that due to the constant threat of recurrence, anxiety persists throughout survivorship, and constant distress is prevalent regardless of the length of time since diagnosis. Whereas Hypothesis 7 was not supported, as this study found that type of treatment had no effect on intention to seek help for emotional and sexual concerns. Previous evidence for type of treatment and intention to seek help for emotional and sexual concerns is limited. Howes et al., (2016) found emotional distress did not differentiate between treatment types, which the results of this study may support. However, it does not support their finding that sexual concerns differ by breast cancer treatment type (Howes et al., 2016). Due to the limited studies on this variable in breast cancer help-seeking studies, future research would be beneficial to provide more evidence.

Enabling Factors

Both enabling factors, level of disadvantage and location, were not found to be significant predictors of intention to seek help for emotional and sexual concerns in this study. This does not support Hypothesis 8 that predicted more disadvantaged women and women living in rural/remote locations would be less likely to intend to seek help for emotional and sexual concerns. This is an unsurprising result as hypotheses were based on findings from help-seeking for physical cancer symptoms due to the lack of evidence for emotional and sexual concerns (Harries et al., 2020). This study measured intention to seek help and it could be speculated that these barriers may play a role in actual service use rather than intention to seek help. Women living in rural areas and experiencing high levels of disadvantage, barriers, or limited access to health services are unlikely to intend to seek help until faced with a persistent issue.

Need Factors

It was hypothesised that women with greater FoR and DASS-21 scores would be more likely to intend to seek help for emotional concerns. The results of this study show that higher scores on the DASS-21 scales were a significant predictor of intention to seek help for emotional concerns but FoR was not a significant predictor, thus Hypothesis 4 is only partially supported. The findings that suggest women with high scores for depression, anxiety and stress symptoms were more likely to intend to seek help for emotional concerns is consistent with past research, showing that cancer patients with higher levels of emotional distress are more likely to seek help for these concerns (Cohen et al., 2008; McDowell et al., 2011; Mehnert & Koch, 2008; Steginga et al., 2008). This sample had multicollinearity between the DASS-21 scales, suggesting that the emotional challenges of breast cancer can lead to an acute/unique elevation of all three states, and in turn women are motivated to seek help for these concerns. Although FoR was significantly associated with intention to seek help for emotional concerns in preliminary analyses, when input into the regression model and holding all other variables constant, FoR was not a significant predictor of intention to seek help for emotional concerns. This suggests that other variables and factors are at play in FoR and when holding these variables constant in regression models shows that FoR has no real significant effect on help-seeking intention. This study presents a unique finding by using a regression model, where other studies finding significance do not account for other emotional variables (Champagne et al., 2018; Thewes et al., 2012; Vachon et al., 2021). Sarkar et al's (2015) study of German cancer patients also found FoR was not significant for help-seeking for emotional concerns and speculates this may be due to avoidance behaviours associated with FoR.

Hypothesis 7 predicted that higher unmet needs in both sexual function and enjoyment, and changes in sexual relationships, would be associated with a higher intention to seek help for sexual concerns. Younger women had a higher unmet need for sexual

function and enjoyment, in line with Reese et al. (2020), however this was not a predictor for intention to help seek for sexual concerns. These findings are not in line with Hypothesis 7 and contradicts other studies in breast cancer samples (Boquiren et al., 2016; Dai et al., 2020). This may suggest that there are other factors that impact women's sexual concerns outside of the physical act of sex. Contrastingly, the variable measuring unmet need due to changes in sexual relationships was more nebulous than just function and enjoyment. It was found that higher unmet need due to changes in sexual relationships was a predictor of intention to seek help for sexual concerns, thus partially supporting Hypothesis 7. This may be due to the multifactorial nature of sexual relationships, as it involves both the patient and partner's experience. Both patients and their partners value emotional closeness, intimacy, and affection as part of sexual relationships and these elements are associated with better psychosocial outcomes (Albers et al., 2020). Consequentially, these sexual relationships change and may add distress to both patient and partner (Keesing et al., 2016). This could suggest that women may value the intimacy and closeness that comes with sexual relationships more than the physical act of sex.

Study Strengths, Limitations and Areas for Future Research

It is important to acknowledge that in this dataset there was multicollinearity present within the DASS-21 scale scores, and this presented limitations to data analysis. The authors of the DASS scales predict inter-correlations due to similar underlying causes of symptoms (Lovibond & Lovibond, 1995). High correlations in this breast cancer sample may indicate that women with breast cancer experience similar concerns and a heightened level of emotional distress (Dai et al., 2020; Minstrell et al., 2008). Future researchers must be mindful interpreting results of emotional distress in the breast cancer population as multicollinearity may occur in data.

The study was an online survey made up of self-report measures, so there may be presence of self-report biases. However, this study used highly validated measures, provided anonymity, and participants were recruited within 5 years of breast cancer diagnosis, greatly reducing the risk of social desirability and recall biases (Althubaiti, 2016). When controlling for biases, self-report data is highly valuable in providing responses on participants' experiences, appraisal of symptoms, and needs compared to other methods of data collection (Zhu et al., 1999). Measures of this study were highly validated in this sample and used/adapted from existing studies with similar populations (e.g., Bener et al., 2016; Hyde et al., 2016; Rabin, et al., 2004;). The sample size has an appropriate power and is a strong pool of a vulnerable population, contributing meaningful data that provides insight into issues that Australian women with breast cancer face

The sample collected for this study was younger and less disadvantaged than the national breast cancer dataset (AIHW, 2018), resulting in not enough variability to show a possible difference. Further research could be replicated with a broader age and socio-economic range of women, representative of the national data sets. This may be achieved by a wider scope of participant recruitment through population-based cancer registries or patient recruitment through health settings, such as oncology divisions in hospitals or breast cancer surgery clinics.

The main limitation of the study is that the survey was cross-sectional, and data on symptoms, needs, and help-seeking behaviour was only collected at one point in time. From this we cannot infer any causative relationships, therefore, it is recommended that future studies should be longitudinal. It is evidenced that unmet emotional needs continue into survivorship (Vivar & McQueen, 2005) and longitudinal studies may provide opportunities to ascertain what barriers to help-seeking persist over time.

A major strength of this study is that it adds to the sparse literature on an under-researched issue of help-seeking for emotional and sexual concerns in oncology. This is the first study of knowledge to research intention to seek help for both emotional and sexual concerns in women with breast cancer. This study also utilises a theoretical model, Andersen's Behavioural Model (1995), to guide choice of factors associated with help-seeking intention. The use of a theoretical framework is a valuable approach in help-seeking for explaining relationships at play in help-seeking behaviour, as they draw from theory grounded in previous research and help justify the current study.

Implications of Research

This study provides new knowledge about the predictors of help-seeking for emotional and sexual concerns among breast cancer survivors, which may inform the design of appropriate interventions. This study found that positive attitudes towards seeking professional psychological help was a predictor for intention to seek help for emotional concerns. Psychosocial education should be provided to increase women's knowledge of the effectiveness of professional help and break down fears and preconceived stigma around seeking help. This could be achieved through population-based education incorporating professionally guided short courses (Hao & Liang, 2011), or individual education with one-on-one interactions/videos of peers sharing past positive experiences with help-seeking (Buckley & Malouff, 2005; Leppin et al., 2019).

Women with a higher level of emotional distress were more likely to intend to seek help for emotional concerns. In addition, findings from this study indicate that women preferred seeking help for emotional concerns from informal sources of support. Policies implemented in breast cancer care may involve a formal screening program for healthcare professionals to identify women at risk of elevated emotional distress. Additional intensive education and training may be provided to healthcare professionals to identify these at-risk

women (Park et al., 2018), enabling an informal screening process for emotionally distressed patients. This screening and referral process has shown to be an effective intervention in general cancer populations (Dekker et al., 2020).

Findings from this study suggest that healthcare professionals should not only focus supportive care on sexual function/enjoyment, but also potential changes in sexual relationships. As sexual relationships affect both the patient and the partner, interventions based at a couple level may support dyadic coping, which can increase relationship satisfaction (Zimmerman, 2015). Couple interventions over multiple sessions with components of psychoeducation, skill-training in coping with stress, communication, and supportive behaviour is recommended for couples in the cancer journey (Albers et al., 2020; Manne et al., 2006; Traa et al., 2015; Zimmerman, 2015;).

Conclusions

This study used Andersen's (1995) Behavioural Model of Health Service Use as a theoretical basis to explore characteristics associated with intention to seek help for both emotional and sexual concerns in women with breast cancer. This study is the first to examine these constructs among women with breast cancer and provides preliminary evidence regarding important predictors of help-seeking intentions. Significant predictors of help-seeking intention for emotional concerns were positive attitudes to seeking professional psychological help and higher levels of emotional distress. Additionally, unmet needs due to changes in sexual relationships were a significant predictor for intention to seek help for sexual concerns. Further research with a more representative sample of ages and levels of disadvantage would be valuable in enabling researchers to explore if results are unique to this sample. It would also be beneficial to conduct longitudinal studies to ascertain whether these barriers and facilitators persist over the breast cancer journey. Nevertheless, this study has

advanced knowledge on the help-seeking behaviours for emotional and sexual concerns in women with breast cancer.

References

Aguirre Velasco, A., Cruz, I. S. S., Billings, J., Jimenez, M., & Rowe, S. (2020). What Are The Barriers, Facilitators And Interventions Targeting Help-Seeking Behaviours For Common Mental Health Problems In Adolescents? A Systematic Review. *BMC Psychiatry, 20*(1). https://doi.org/10.1186/s12888-020-02659-0

Ajzen, I. (1991). The Theory of Planned Behavior. *Organizational Behavior and Human Decision Processes, 50*(2), 179-211. https://doi.org/10.1016/0749-5978(91)90020-T

Albers, L. F., van Belzen, M. A., van Batenburg, C., Engelen, V., Putter, H., Pelger, R. C. M., & Elzevier, H. W. (2020). Discussing Sexuality in Cancer Care: Towards Personalized Information for Cancer Patients and Survivors. *Support Care Cancer, 28*(9), 4227-4233. https://doi.org/10.1007/s00520-019-05257-3

Al-Ghazal, S. K., Fallowfield, L., & Blamey, R. W. (2000). Comparison of Psychological Aspects and Patient Satisfaction Following Breast Conserving Surgery, Simple Mastectomy and Breast Reconstruction. *European Journal of Cancer, 36*(15), 1938-1943. https://doi.org/10.1016/S0959-8049(00)00197-0

Althubaiti, A. (2016). Information Bias in Health Research: Definition, Pitfalls, and Adjustment Methods. *Journal of Multidisciplinary Healthcare, 9*, 211-217. https://doi.org/10.2147/jmdh.S104807

Andersen, R. M. (1995). Revisiting the Behavioral Model and Access to Medical Care: Does it Matter? *Journal of Health and Social Behavior, 36*(1), 1. https://doi.org/10.2307/2137284

Australian Bureau of Statistics (2018). Methods, Classifications, Concepts & Standards. From https://www.abs.gov.au/websitedbs/d3310114.nsf/home/Methods,+Classifications,+Concepts+&+Standards

Australian Bureau of Statistics. (2011). Australian Standard Geographical Classification (ASGC), Australia. Cat. no. 1216.0.15.002. ABS: Canberra, Australia. From https://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/1216.0Main+Features1July%202011?OpenDocument

Australian Bureau of Statistics. (2016). Census of Population and Housing: Socio-eco-nomic Indexes for Areas (SEIFA), Australia. Cat. no. 2033.0.55.001. ABS: Canberra, Australia. From https://www.abs.gov.au/ausstats/abs@.nsf/mf/2033.0.55.001

Australian Institute of Health and Welfare (AIHW) 2018. Analysis of Breast Cancer Outcomes and Screening Behaviour for BreastScreen Australia. Cancer series no. 113. Cat no. CAN 118.

Australian Institute of Health and Welfare (AIHW) 2019. BreastScreen Australia Monitoring Report 2019. Cancer series no. 127. Cat. no. CAN 128.

Australian Institute of Health and Welfare (AIHW) (2022). Cancer Data in Australia. Retrieved from https://www.aihw.gov.au/reports/cancer/cancer-data-in-australia

Becker, M. H. (1974). The Health Belief Model and Sick Role Behavior. *Health Education Monographs, 2*(4), 409-419. https://doi.org/10.1177/109019817400200407

Bener, A., Alsulaiman, R., Lg, D., & Ayoubi Hr, E. (2016). Comparison of Reliability and Validity of the Breast Cancer Depression Anxiety Stress Scales (DASS-21) with the Beck Depression Inventory-(BDI-II) and Hospital Anxiety and Depression Scale (HADS). *International Journal of Behavioral Research & Psychology*,*4*(4), 197–203. https://doi.org/10.19070 /2332-3000-1600035

Bettencourt, B. A., Schlegel, R. J., Talley, A. E., & Molix, L. A. (2007). The Breast Cancer Experience of Rural Women: A Literature Review. *Psycho-Oncology, 16*(10), 875-887. https://doi.org/10.1002/pon.1235

Boquiren, V. M., Esplen, M. J., Wong, J., Toner, B., Warner, E., & Malik, N. (2016). Sexual Functioning in Breast Cancer Survivors Experiencing Body Image Disturbance. *Psycho-Oncology, 25*(1), 66-76. https://doi.org/10.1002/pon.3819

Boyes, A., Girgis, A., & Lecathelinais, C. (2009). Brief Assessment of Adult Cancer Patients' Perceived Needs: Development and Validation Of The 34-Item Supportive Care Needs Survey (SCNS-SF34). *Journal of Evaluation in Clinical Practice,15*(4), 602–606. https://doi.org/10.1111/j.1365-2753.2008.01057.x

Breast Cancer Network Australia (2018). Current Breast Cancer Statistics in Australia. From https://www.bcna.org.au/media/6101/bcna-2018-current-breast-cancer-statistics-in-australia-31jan2018.pdf

Buckley, G. I., & Malouff, J. M. (2005). Using Modeling and Vicarious Reinforcement to Produce More Positive Attitudes Toward Mental Health Treatment. *The Journal of Psychology: Interdisciplinary and Applied, 139*(3), 197–209. https://doi.org/10.1080/00223980.2019.12049782

Burgess, C., Cornelius, V., Love, S., Graham, J., Richards, M., & Ramirez, A. (2005). Depression and Anxiety in Women with Early Breast Cancer: Five Year Observational Cohort Study. *BMJ Clinical Research, 330*(7493), 702. https://doi.org/10.1136/bmj.38343.670868.d3

Burris, J. L., Armeson, K., & Sterba, K. R. (2015). A Closer Look at Unmet Needs at the End of Primary Treatment for Breast Cancer: A Longitudinal Pilot Study. *Behavioral Medicine, 41*(2), 69-76. https://doi.org/10.1080/08964289.2014.889068

Butow, P. N., Phillips, F., Schweder, J., White, K., Underhill, C., Goldstein, D., & Clinical Oncological Society of Australia (2012). Psychosocial Well-Being and Supportive Care Needs of Cancer Patients Living in Urban and Rural/Regional Areas: A Systematic Review. *Supportive Care In Cancer: Official Journal Of The*

Multinational Association Of Supportive Care In Cancer, *20*(1), 1–22. https://doi.org/10.1007/s00520-011-1270-1

Champagne, A., Ivers, H., & Savard, J. (2018). Utilization of Health Care Services in Cancer Patients With Elevated Fear of Cancer Recurrence. *Psycho-Oncology*, *27*(8), 1958-1964. https://doi.org/https://doi.org/10.1002/pon.4748

Chang, Y., Hu, W., Chang, Y., & Chiu, S. (2019). Changes in Sexual Life Experienced by Women in Taiwan After Receiving Treatment for Breast Cancer. *International Journal of Qualitative Studies on Health and Well-Being*, *14*(1), 1654343. https://doi.org/10.1080/17482631.2019.1654343.

Clark, K., Bergerot, C. D., Philip, E. J., Buga, S., Obenchain, R., & Loscalzo, M. J. (2017). Biopsychosocial Problem-Related Distress in Cancer: Examining the Role of Sex And Age. *Psycho-Oncology*, *26*(10), 1562-1568. https://doi.org/10.1002/pon.4172

Cohen, A., Ianovski, L. E., Frenkiel, S., Hier, M., Zeitouni, A., Kost, K., Mlynarek, A., Richardson, K., Black, M., Macdonald, C., Chartier, G., Rosberger, Z., & Henry, M. (2018). Barriers to Psychosocial Oncology Service Utilization In Patients Newly Diagnosed with Head and Neck Cancer. *Psycho-Oncology*, *27*(12), 2786-2793. https://doi.org/10.1002/pon.4889

Cohen, J. (1992). A Power Primer. *Psychological Bulletin*, *112*(1), 155–159. https://doi.org/10.1037//0033-2909.112.1.155

Compas, B. E., & Luecken, L. (2002). Psychological Adjustment to Breast Cancer. *Current Directions in Psychological Science, 11*(3), 111-114. https://doi.org/10.1111/1467-8721.00180

Cornally, N., & McCarthy, G. (2011). Help-Seeking Behaviour: A Concept Analysis. *International Journal of Nursing Practice*, *17*(3), 280-288. https://doi.org/https://doi.org/10.1111/j.1440-172X.2011.01936.x

Crawford-Williams, F., Goodwin, B. C., Chambers, S. K., Aitken, J. F., Ford, M., & Dunn, J. (2022). Information Needs and Preferences Among Rural Cancer Survivors in Queensland, Australia: A Qualitative Examination. *Australian and New Zealand Journal of Public Health, 46*(1), 81-86. /https://doi.org/10.1111/1753-6405.13163

Dai, Y., Cook, O. Y., Yeganeh, L., Huang, C., Ding, J., & Johnson, C. E. (2020). Patient-Reported Barriers and Facilitators to Seeking and Accessing Support in Gynecologic and Breast Cancer Survivors With Sexual Problems: A Systematic Review of Qualitative and Quantitative Studies. *The Journal of Sexual Medicine, 17*(7), 1326-1358. https://doi.org/10.1016/j.jsxm.2020.03.004

Dekker, J., Karchoud, J., Braamse, A., Buiting, H., Konings, I., van Linde, M. E., Schuurhuizen, C., Sprangers, M., Beekman, A., & Verheul, H. (2020). Clinical Management of Emotions in Patients with Cancer: Introducing the Approach "Emotional Support and Case Finding". *Translational Behavioral Medicine, 10*(6), 1399–1405. https://doi.org/10.1093/tbm/ibaa115

Doğan, R., Mercan, N., & Coşkun, S. (2021). Investigation of the Relationship Between Mental Health Literacy of Adults and Attitude Towards Seeking Psychological Help and Stigma by the Immediate Environment. *Perspectives in Psychiatric Care,* 1-8. https://doi.org/10.1111/ppc.13000

Eggins, R., Fowler, H., Cameron, J., Aitken, J. F., Youl, P., Turrell, G., Chambers, S. K., Dunn, J., Pyke, C., Baade, P. D., & Goodwin, B. (2022). Supportive Care Needs And Psychosocial Outcomes Of Rural Versus Urban Women With Breast Cancer. *Psycho-Oncology,* 1-7 https://doi.org/10.1002/pon.5977

Ettridge, K., Caruso, J., Roder, D., Prichard, I., Scharling-Gamba, K., Wright, K., & Miller, C. (2021). A Randomised Online Experimental Study to Compare Responses to Brief and Extended Surveys of Health-Related Quality of Life and Psychosocial Outcomes

Among Women With Breast Cancer. *Quality of Life Research, 30*(2), 407-423. https://doi.org/10.1007/s11136-020-02651-x

Ettridge, K., Scharling-Gamba, K., Miller, C., Roder, D., & Prichard, I. (2022). Body Image and Quality of Life in Women With Breast Cancer: Appreciating The Body and its Functionality. *Body Image, 40,* 92-102. https://doi.org/10.1016/j.bodyim.2021.11.001

Fischer, E. H., & Farina, A. (1995). Attitudes Toward Seeking Professional Psychological Help: A Shortened Form and Considerations for Research. *Journal of College Student Development, 36*(4), 368–373.

Girgis, A., Stojanovski, E., Boyes, A., King, M., & Lecathelinais, C. (2012). The Next Generation of The Supportive Care Needs Survey: A Brief Screening Tool for Administration in the Clinical Oncology Setting. *Psycho-Oncology, 21*(8), 827–835. https://doi.org/10.1002/pon.1973.

Goerling, U., Bergelt, C., Müller, V., & Mehnert-Theuerkauf, A. (2020). Psychosocial Distress in Women With Breast Cancer and Their Partners and Its Impact on Supportive Care Needs in Partners. *Frontiers in Psychology, 11*, 564079. https://doi.org/10.3389/fpsyg.2020.564079

Goodwin, B. C., Ralph, N., Ireland, M. J., Hyde, M. K., Oliffe, J. L., Dunn, J., & Chambers, S. (2020). The Role Of Masculinities in Psychological and Emotional Help Seeking by Men with Prostate Cancer. *Psycho-Oncology, 29*(2), 356-363. https://doi.org/10.1002/pon.5264

Grande, G. E., Myers, L. B., & Sutton, S. R. (2006). How Do Patients Who Participate In Cancer Support Groups Differ From Those Who Do Not? *Psycho-Oncology, 15*(4), 321-334. https://doi.org/10.1002/pon.956

Grimley, C. E., Kato, P. M., & Grunfeld, E. A. (2020). Health and Health Belief Factors Associated With Screening and Help-Seeking Behaviours for Breast Cancer: A

Systematic Review and Meta-Analysis of the European Evidence. *British Journal of Health Psychology, 25*(1), 107-128. https://doi.org/10.1111/bjhp.12397

Hao, Z., & Liang, B. (2011). Effect of Group Guidance on Intention of Seeking Professional Psychological Help Among University Students. *Chinese Journal of Clinical Psychology, 19*, 699–702

Harries, J., Scott, S. E., Walter, F. M., Mwaka, A. D., & Moodley, J. (2020). Women's Appraisal, Interpretation and Help-Seeking for Possible Symptoms of Breast and Cervical Cancer in South Africa: A Qualitative Study. *BMC Women's Health, 20*(1). https://doi.org/10.1186/s12905-020-01120-4

Harrison Health Research. (2012). The health omnibus survey spring 2012. Adelaide: Harrison Health Research.

Hill, E. K., Sandbo, S., Abramsohn, E., Makelarski, J., Wroblewski, K., Wenrich, E. R., McCoy, S., Temkin, S. M., Yamada, S. D., & Lindau, S. T. (2011). Assessing Gynecologic and Breast Cancer Survivors' Sexual Health Care Needs. *Cancer, 117*(12), 2643-2651. https://doi.org/10.1002/cncr.25832

Howes, B. H., Watson, D. I., Xu, C., Fosh, B., Canepa, M., & Dean, N. R. (2016). Quality of Life Following Total Mastectomy with and Without Reconstruction Versus Breast-Conserving Surgery for Breast Cancer: A Case-Controlled Cohort Study. *Journal of Plastic, Reconstruction & Aesthetic Surgery, 69*(9), 1184-1191. https://doi.org/10.1016/j.bjps.2016.06.004

Hunter, M. S., Grunfeld, E. A., & Ramirez, A. J. (2003). Help-Seeking Intentions for Breast-Cancer Symptoms: A Comparison of the Self-Regulation Model and the Theory of Planned Behaviour. *British Journal of Health Psychology, 8*(3), 319-333. https://doi.org/10.1348/135910703322370888

Hyde, M. K., Zajdlewicz, L., Wootten, A. C., Nelson, C. J., Lowe, A., Dunn, J., & Chambers, S. K. (2016). Medical Help-Seeking for Sexual Concerns in Prostate Cancer Survivors. *Sexual Medicine, 4*(1), e7-e17. https://doi.org/10.1016/j.esxm.2015.12.004

IBM Corp. Released 2020. IBM SPSS Statistics for Windows, Version 27.0.

Kadan-Lottick, N. S., Vanderwerker, L. C., Block, S. D., Zhang, B., & Prigerson, H. G. (2005). Psychiatric Disorders and Mental Health Service use in Patients with Advanced Cancer. *Cancer, 104*(12), 2872-2881. https://doi.org/10.1002/cncr.21532

Keesing, S., Rosenwax, L., & McNamara, B. (2016). A Dyadic Approach to Understanding the Impact of Breast Cancer on Relationships Between Partners During Early Survivorship. *BMC Women's Health, 16*(1), 57. https://doi.org/10.1186/s12905-016-0337-z

Koch, L., Jansen, L., Herrmann, A., Stegmaier, C., Holleczek, B., Singer, S., Brenner, H., & Arndt, V. (2013). Quality of Life in Long-Term Breast Cancer Survivors – A 10-Year Longitudinal Population-Based Study. *Acta Oncologica, 52*(6), 1119-1128. https://doi.org/10.3109/0284186x.2013.774461

Lebel, S., Tomei, C., Feldstain, A., Beattie, S., & McCallum, M. (2013). Does Fear of Cancer Recurrence Predict Cancer Survivors' Health Care Use? *Support Care Cancer, 21*(3), 901-906. https://doi.org/10.1007/s00520-012-1685-3

Lee, I., Lee, J., Lee, S. K., Shin, H.-J., Jung, S.-Y., Lee, J. W., Kim, Z., Lee, M. H., Lee, J., & Youn, H. J. (2021). Physicians' Awareness of the Breast Cancer Survivors' Unmet Needs in Korea. *Journal of Breast Cancer, 24*(1), 85. https://doi.org/10.4048/jbc.2021.24.e3

Lee-Jones, C., Humphris, G., Dixon, R., & Hatcher, M. B. (1997). Fear of Cancer Recurrence – A Literature Review and Proposed Cognitive Formulation to Explain Exacerbation

of Recurrence Fears. *Psycho-Oncology*, *6*(2), 95-105. https://doi.org/10.1002/(sici)1099-1611(199706)6:2<95::Aid-pon250>3.0.Co;2-b

Leppin, N., Nagelschmidt, K., Koch, M., Riera-Knorrenschild, J., Seifart, C., Rief, W., Barke, A., & von Blanckenburg, P. (2019). Cancer Patient Utilisation of Psychological Care in Germany: The Role of Attitudes Towards Seeking Help. *European Journal of Cancer Care*, *28*(6), e13165. https://doi.org/10.1111/ecc.13165

Lerman, C., Daly, M., Masny, A., & Balshem, A. (1994). Attitudes About Genetic Testing for Breast-Ovarian Cancer Susceptibility. *Journal of Clinical Oncology*,*12*(4), 843–850. https://doi.org/10.1200/JCO.1994.12.4.843.9

Lovelace, D. L., McDaniel, L. R., & Golden, D. (2019). Long-Term Effects of Breast Cancer Surgery, Treatment, and Survivor Care. *Journal of Midwifery & Women's Health, 64*(6), 713-724. https://doi.org/10.1111/jmwh.13012

Lovibond, S. H., and Lovibond, P. F. (1995b). Manual for the Depression Anxiety Stress Scales. *Psychology Foundation*.

Manne, S. L., Ostroff, J. S., Norton, T. R., Fox, K., Goldstein, L., & Grana, G. (2006). Cancer-Related Relationship Communication In Couples Coping with Early Stage Breast Cancer. *Psycho-Oncology*, *15*(3), 234-247. https://doi.org/https://doi.org/10.1002/pon.941

McDowell, M. E., Occhipinti, S., Ferguson, M., & Chambers, S. K. (2011). Prospective Predictors Of Psychosocial Support Service use After Cancer. *Psycho-Oncology*, *20*(7), 788-791. https://doi.org/10.1002/pon.1774

Mehnert, A., & Koch, U. (2008). Psychological Comorbidity and Health-Related Quality of Life and its Association with Awareness, Utilization, and Need for Psychosocial Support in a Cancer Register-Based Sample of Long-Term Breast Cancer Survivors.

Journal of Psychosomatic Research, 64(4), 383-391. https://doi.org/10.1016/j.jpsychores.2007.12.005

Minstrell, M., Winzenberg, T., Rankin, N., Hughes, C., & Walker, J. (2008). Supportive Care of Rural Women with Breast Cancer in Tasmania, Australia: Changing Needs Over Time. *Psycho-oncology, 17*(1), 58–65. https://doi.org/10.1002/pon.1174

Momeni, M., & Rafii, F. (2020). Help-Seeking Behaviour for Cancer Symptoms: an Evolutionary Concept Analysis. *Scandinavian Journal of Caring Sciences, 34*(4), 807-817. https://doi.org/10.1111/scs.12788

Nearchou, F. A., Bird, N., Costello, A., Duggan, S., Gilroy, J., Long, R., McHugh, L., & Hennessy, E. (2018). Personal and Perceived Public Mental-Health Stigma as Predictors of Help-Seeking Intentions in Adolescents. *Journal of Adolescence, 66*, 83-90. https://doi.org/10.1016/j.adolescence.2018.05.003

Newell, S., Sanson-Fisher, R. W., Girgis, A., & Bonaventura, A. (1998). How Well Do Medical Oncologists' Perceptions Reflect Their Patients' Reported Physical And Psychosocial Problems? Data From A Survey Of Five Oncologists. *Cancer, 83*(8), 1640–1651. https://doi.org/10.1002/(SICI)1097-0142(19981015)83:8<1640::AID-CNCR21>3.0.CO;2-#

Ng, C. W. Q., Lim, J. N. W., Liu, J., & Hartman, M. (2020). Presentation of Breast Cancer, Help Seeking Behaviour and Experience Of Patients In Their Cancer Journey In Singapore: A Qualitative Study. *BMC Cancer, 20*(1). https://doi.org/10.1186/s12885-020-07585-8

Nguyen, J., Popovic, M., Chow, E., Cella, D., Beaumont, J. L., Chu, D., et al. (2015). EORTC QLQ-BR23 and FACT-B for the Assessment of Quality of Life in Patients with Breast Cancer: A Literature Review. *Journal of Comparative Effectiveness Research, 4*, 157–166. https://doi.org/10.2217/cer.14.76

O'Mahony, M., & Hegarty, J. (2009). Factors Influencing Women in Seeking Help from a Health Care Professional on Self Discovery of a Breast Symptom, in an Irish Context. *Journal of Clinical Nursing, 18*(14), 2020-2029. https://doi.org/10.1111/j.1365-2702.2008.02564.x

O'Mahony, M., & Hegarty, J. (2009). Help Seeking for Cancer Symptoms: A Review of the Literature. *Oncology Nursing Forum, 36*(4), E178-E184. https://doi.org/10.1188/09.onf.e178-e184

Ong, W. L., Schouwenburg, M. G., van Bommel, A. C. M., Stowell, C., Allison, K. H., Benn, K. E., Saunders, C. (2017). A standard set of value-based patient-centered out-comes for breast cancer: The International Consortium for Health Outcomes Measurement (ICHOM) initiative. *JAMA Oncology, 3*(5), 677–685. https://doi.org/ 10.1001/jamaoncol.2016.4851

Osborne, R. H., Elsworth, G. R., Sprangers, M. A. G., Oort, F. J., & Hopper, J. L. (2004). The Value of the Hospital Anxiety and Depression Scale (HADS) for Comparing Women with Early Onset Breast Cancer with Population-Based Reference Women. *Quality of Life Research, 13*(1), 191-206. https://doi.org/10.1023/b:qure.0000015292.56268.e7

Oshiro, M., & Kamizato, M. (2018). Patients' Help-Seeking Experiences and Delaying in Breast Cancer Diagnosis: A Qualitative Study. *Japan Journal of Nursing Science, 15*(1), 67-76. https://doi.org/10.1111/jjns.12173

Otto, A. K., Soriano, E. C., Siegel, S. D., Losavio, S. T., & Laurenceau, J. P. (2018). Assessing the Relationship Between Fear of Cancer Recurrence and Health Care Utilization in Early-Stage Breast Cancer Survivors. *Journal of Cancer Survivorship, 12*(6), 775-785. https://doi.org/10.1007/s11764-018-0714-8

Pallant, J. (2020). SPSS Survival Manual: A Step by Step Guide to Data Analysis Using IBM SPSS. Taylor & Francis Group. http://ebookcentral.proquest.com/lib/adelaide/detail.action?docID=6215124

Parent, M. C. (2013). Handling Item-Level Missing Data: Simpler Is Just as Good. *The Counseling Psychologist, 41*(4), 568-600. https://doi.org/10.1177/0011000012445176

Park, E. M., & Rosenstein, D. L. (2015). Depression in adolescents and young adults with cancer. Dialogues in Clinical Neuroscience, 17(2), 171-180. https://doi.org/10.31887/dcns.2015.17.2/epark

Park E, Yoon J, Choi E, Kim I, Kang D, Lee S, Lee J, Nam S, Ahn J, Visser A, Cho J. (2018). A Train the Trainer Program for Healthcare Professionals Tasked with Providing Psychosocial Support to Breast Cancer Survivors. *BMC Cancer* 18(45). https://doi.org/10.1186/s12885-017-3965-2

Picco L, Abdin E, Chong SA, Pang S, Shafie S, Chua BY, Vaingankar JA, Ong LP, Tay J and Subramaniam M (2016). Attitudes Toward Seeking Professional Psychological Help: Factor Structure and Socio-Demographic Predictors. *Frontiers in Psychology. 7*(547). https://doi.org/10.3389/fpsyg.2016.00547

Prins, J. B., Deuning-Smit, E., & Custers, J. A. E. (2022). Interventions Addressing Fear of Cancer Recurrence: Challenges and Future Perspectives. *Current Opinion in Oncology, 34*(4), 279-284. https://doi.org/10.1097/cco.0000000000000837

Qasim, S., Tayyab, H., Zulqadar, K., Masood, S., Qasim, T. B., & Zubair, Z. (2020). Breast Cancer Knowledge and Perceived Barriers to Help Seeking Among Pre-Clinical and Clinical Female Medical Students of King Edward Medical University, Lahore: A Cross-Sectional Study. *BMC Medical Education, 20*(1). https://doi.org/10.1186/s12909-020-02132-2

Rabin, C., Leventhal, H., & Goodin, S. (2004). Conceptualization of Disease Timeline Predicts Posttreatment Distress in Breast Cancer Patients. *Health Psychology, 23*(4), 407–412. https://doi.org/10.1037/0278-6133.23.4.407

Rajagopal, L., Liamputtong, P., & McBride, K. A. (2019). The Lived Experience of Australian Women Living with Breast Cancer: A Meta-Synthesis. *Asian Pacific Journal of Cancer Prevention, 20*(11), 3233-3249. https://doi.org/10.31557/apjcp.2019.20.11.3233

Reed, S. C., Berrett-Abebe, J., Whitney, R. L., Sarkar, S., & Bell, J. F. (2021). Relationships Between Fear Of Cancer Recurrence, Anxiety And Worry, And Health Behaviors And Health Service Use: A Systematic Review. *Journal of Psychosocial Oncology Research & Practice, 3*(4), e064. https://doi.org/10.1097/or9.0000000000000064

Reese, J. B., Sorice, K. A., Pollard, W., Zimmaro, L. A., Beach, M. C., Handorf, E., & Lepore, S. J. (2020). Understanding Sexual Help-Seeking for Women With Breast Cancer: What Distinguishes Women Who Seek Help From Those Who Do Not? *The Journal of Sexual Medicine, 17*(9), 1729-1739. https://doi.org/10.1016/j.jsxm.2020.06.004

Reich, M., Lesur, A., & Perdrizet-Chevallier, C. (2008). Depression, Quality of Life and Breast Cancer: A Review of The Literature. *Breast Cancer Research and Treatment, 110*(1), 9-17. https://doi.org/10.1007/s10549-007-9706-5

Renovanz, M., Hickmann, A.-K., Coburger, J., Kohlmann, K., Janko, M., Reuter, A. K., et al. (2016). Assessing Psychological and Supportive Care Needs in Glioma Patients—Feasibility Study on the use of the Supportive Care Needs Survey Short Form (SCNS-SF34-G) and the Supportive Care Needs Survey Screening Tool (SCNS-ST9) In Clinical Practice. *European Journal of Cancer Care, 27*(1), e12598. https://doi.org/10.1111/ecc.12598

Ricketts, T. C., & Goldsmith, L. J. (2005). Access in Health Services Research: The Battle of the Frameworks. *Nurse Outlook, 53*(6), 274-280. https://doi.org/10.1016/j.outlook.2005.06.007

Sarkar, S., Sautier, L., Schilling, G., Bokemeyer, C., Koch, U., & Mehnert, A. (2015). Anxiety and Fear of Cancer Recurrence and its Association with Supportive Care Needs and Health-Care Service Utilization in Cancer Patients. *Journal of Cancer Survivorship, 9*(4), 567-575. https://doi.org/10.1007/s11764-015-0434-2

Scott, S., & Walter, F. (2010). Studying Help-Seeking for Symptoms: The Challenges of Methods and Models. *Social and Personality Psychology Compass, 4*(8), 531-547. https://doi.org/10.1111/j.1751-9004.2010.00287.x

Smith, C., Carmady, B., Thornton, C., Perz, J., & Ussher, J. M. (2013). The Effect of Acupuncture on Post-Cancer Fatigue and Well-Being for Women Recovering from Breast Cancer: A Pilot Randomised Controlled Trial. *Acupuncture in Medicine, 31*(1), 9-15. https://doi.org/10.1136/acupmed-2012-010228

Steginga, S. K., Campbell, A., Ferguson, M., Beeden, A., Walls, M., Cairns, W., & Dunn, J. (2008). Socio-demographic, psychosocial and attitudinal predictors of help seeking after cancer diagnosis. Psycho-Oncology, 17(10), 997-1005. https://doi.org/10.1002/pon.1317

Sung H, Ferlay J, Siegel RL, Laversanne M, Soerjomataram I, Jemal A, Bray F. Global Cancer Statistics 2020: GLOBOCAN Estimates Of Incidence and Mortality Worldwide for 36 Cancers in 185 Countries. *CA: A Cancer Journal for Clinicians, 71*(3), 209-249. https://doi.org/10.3322/caac.21660

Tan, M. L., Idris, D. B., Teo, L. W., Loh, S. Y., Seow, G. C., Chia, Y. Y., & Tin, A. S. (2014). Validation of EORTC QLQ-C30 and QLQ-BR23 Questionnaires in the

Measurement of Quality of Life of Breast Cancer Patients in Singapore. *Asia-Pacific Journal of Oncology Nursing, 1*(1), 22–32. https://doi.org/10.4103/2347-5625.135817

Thewes, B., Butow, P., Bell, M. L., Beith, J., Stuart-Harris, R., Grossi, M., Capp, A., & Dalley, D. (2012). Fear of Cancer Recurrence in Young Women with a History of Early-Stage Breast Cancer: A Cross-Sectional Study of Prevalence and Association with Health Behaviours. *Supportive Care in Cancer, 20*(11), 2651-2659. https://doi.org/10.1007/s00520-011-1371-x

Traa, M. J., De Vries, J., Bodenmann, G., & Den Oudsten, B. L. (2015). Dyadic Coping and Relationship Functioning in Couples Coping with Cancer: A Systematic Review. *British Journal of Health Psychology, 20*(1), 85-114. https://doi.org/https://doi.org/10.1111/bjhp.12094

Travers, J. L., Hirschman, K. B., & Naylor, M. D. (2020). Adapting Andersen's Expanded Behavioral Model Of Health Services Use to Include Older Adults Receiving Long-Term Services and Supports. *BMC Geriatrics, 20*(1). https://doi.org/10.1186/s12877-019-1405-7

Trunzo, J. J., & Pinto, B. M. (2003). Social Support as a Mediator of Optimism and Distress in Breast Cancer Survivors. *Journal of Consulting and Clinical Psychology, 71*(4), 805-811. https://doi.org/10.1037/0022-006x.71.4.805

Ussher, J. M., Perz, J., & Gilbert, E. (2013). Information Needs Associated with Changes to Sexual Well-Being after Breast Cancer. *Journal of Advanced Nursing, 69*(2), 327-337. https://doi.org/https://doi.org/10.1111/j.1365-2648.2012.06010.x

Vachon, E., Krueger, E., Champion, V. L., Haggstrom, D. A., Cella, D., & Cohee, A. A. (2021). The Impact of Fear of Cancer Recurrence on Healthcare Utilization Among Long-Term Breast Cancer Survivors Recruited Through ECOG-ACRIN Trials. *Psycho-Oncology, 3*0(3), 279-286. https://doi.org/10.1002/pon.5568

Vahdaninia, M., Omidvari, S., & Montazeri, A. (2010). What do Predict Anxiety and Depression in Breast Cancer Patients? A Follow-Up Study. *Social Psychiatry and Psychiatric Epidemiology, 45*(3), 355-361. https://doi.org/10.1007/s00127-009-0068-7

Vermeer, W. M., Bakker, R. M., Kenter, G. G., de Kroon, C. D., Stiggelbout, A. M., & ter Kuile, M. M. (2015). Sexual Issues among Cervical Cancer Survivors: How can we Help Women Seek Help? *Psycho-Oncology, 24*(4), 458-464. https://doi.org/https://doi.org/10.1002/pon.3663

Vinokur, A. D., Threatt, B. A., Caplan, R. D., & Zimmerman, B. L. (1989). Physical and Psychosocial Functioning and Adjustment to Breast Cancer. Long-Term Follow-Up of a Screening Population. *Cancer, 63*(2), 394-405. https://doi.org/10.1002/1097-0142(19890115)63:2<394::aid-cncr2820630233>3.0.co;2-5

Vivar, C. G., & McQueen, A. (2005). Informational and Emotional Needs of Long-Term Survivors of Breast Cancer. *Journal of Advanced Nursing, 51*(5), 520-528. https://doi.org/10.1111/j.1365-2648.2005.03524.x

von Heymann-Horan, A. B., Bidstrup, P. E., Kristiansen, L. C., Olsen, A., Andersen, K. K., Elsass, P., Johansen, C., & Dalton, S. O. (2013). Equity in the use of Publicly Subsidized Psychotherapy among Elderly Danish Cancer Patients – A Register-Based Cohort Study. *Acta Oncologica, 52*(2), 355-363. https://doi.org/10.3109/0284186X.2012.742965

Wang, X., Wang, N., Zhong, L., Wang, S., Zheng, Y., Yang, B., Zhang, J., Lin, Y., & Wang, Z. (2020). Prognostic Value of Depression and Anxiety on Breast Cancer Recurrence And Mortality: A Systematic Review and Meta-Analysis of 282,203 Patients. *Molecular Psychiatry, 25*(12), 3186-3197. https://doi.org/10.1038/s41380-020-00865-6

Wevers, Marijke & Bredal, Inger & Verhoef, Senno & Bleiker, Eveline & Hahn, Daniela & Brouwer, Titia & Kieffer, Jacobien & Ausems, Margreet & Aaronson, Neil. (2020). Psychological Distress in Newly Diagnosed Breast Cancer Patients: An Observational Study Comparing those at High Risk of Hereditary Cancer with those of Unknown Risk. *Journal of Psychosocial Oncology Research & Practice. 2*:1(e18). http://dx.doi.org/10.1097/OR9.0000000000000018

Williams, J. T. W., Pearce, A., & Smith, A. B. (2021). A Systematic Review of Fear of Cancer Recurrence Related Healthcare use and Intervention Cost-Effectiveness. *Psycho-Oncology*, *30*(8), 1185-1195. https://doi.org/10.1002/pon.5673

Wilson, C.J., Deane, F.P., Ciarrochi, J. & Rickwood, D. (2005). Measuring help-seeking intentions: Properties of the General Help-Seeking Questionnaire. *Canadian Journal of Counselling*, *39*(1), 15–28.

Woodford J, Månberg J, Cajander Å, Enebrink P, Harila-Saari A, Hagström J, Karlsson M, Solimena H, von Essen V. Help-Seeking Behaviour and Attitudes Towards Internet-Administered Psychological Support among Adolescent and Young Adults Previously Treated for Cancer During Childhood: Protocol for a Survey and Embedded Qualitative Interview Study in Sweden. *BMJ Open, 11*(4):e041350. https://doi.org/10.1136/bmjopen-2020-041350

World Health Organisation (2021). Breast Cancer Fact Sheets. From https://www.who.int/news-room/fact-sheets/detail/breast-cancer

World Health Organisation. (2021). New global breast cancer initiative highlights renewed commitment to improve survival. From https://www.who.int/news/item/08-03-2021-new-global-breast-cancer-initiative-highlights-renewed-commitment-to-improve-survival

You, H., Gu, H., Zhang, N., Fan, H., Kou, Y., Cui, N., Liu, X. Y., Li, X. L., & Gu, J. H. (2019). Why Hasn't this Woman been Screened for Breast and Cervical Cancer? - Evidence from a Chinese Population-Based Study. *Public health, 168*, 83–91. https://doi.org/10.1016/j.puhe.2018.12.007

Yu, Z., Sun, D., & Sun, J. (2022). Social Support and Fear of Cancer Recurrence Among Chinese Breast Cancer Survivors: The Mediation Role of Illness Uncertainty. *Frontiers in Psychology, 13*, 864129. https://doi.org/10.3389/fpsyg.2022.864129

Zhu, K., McKnight, B., Stergachis, A., Daling, J. R., & Levine, R. S. (1999). Comparison of Self-Report Data and Medical Records Data: Results from a Case-Control Study on Prostate Cancer. *International Journal of Epidemiology, 28*(3), 409-417. https://doi.org/10.1093/ije/28.3.409

Zimmermann, T. (2015). Intimate Relationships Affected by Breast Cancer: Interventions for Couples. *Breast Care, 10*(2), 102-108. https://doi.org/10.1159/000381966

Appendix A: Further Hierarchical Logistic Regression Models - Isolating DASS Scales

Table A1

Results of Hierarchical Logistic Regression Analyses for Intention to Seek Help for Emotional Concerns: Isolated DASS-Depression Subscale

Predictor Variables	Model 1			Model 2		
	B (SE)	*OR* [95% CI]	*p*	*B (SE)*	*OR* [95% CI]	*p*
Block 1: Predisposing Characteristics						
Age	-0.03 (0.02)	0.97 [0.93, 1.02]	.209	-0.01 (0.02)	0.99 [0.95, 1.04]	.718
Attitudes to seeking Professional Psychological help	0.11 (0.04)	1.12 [1.05, 1.20]	.001	0.15 (0.04)	1.16 [1.07, 1.27]	<.001
Block 2: Need Factors						
DASS Depression				0.12 (0.04)	1.13 [1.04, 1.23]	.005
Fear of Recurrence				0.33 (0.31)	1.39 [0.76, 2.54]	.291
Model Summary	$R^2 = 0.17$ Log likelihood = 138.9			$R^2 = 0.33$ Log likelihood = 122.0		

Note. N = 123. *OR* = Odds Ratio, 95% CI = 95% Confidence Interval, R^2 = Nagelkerke's Pseudo R^2

*p≤.05 (2-tailed), **p≤.01 (2-tailed).

Table A2

Results of Hierarchical Logistic Regression Analyses for Intention to Seek Help for Emotional Concerns: Isolated DASS-Anxiety Subscale

Predictor Variables	Model 1			Model 2		
	B (SE)	*OR* [95% CI]	*p*	*B (SE)*	*OR* [95% CI]	*p*
Block 1: Predisposing Characteristics						
Age	-0.03 (0.02)	0.97 [0.93, 1.02]	.209	-0.01 (0.02)	0.99 [0.94, 1.04]	.649
Attitudes to seeking Professional Psychological help	0.11 (0.04)	1.12 [1.05, 1.20]	.001	0.17 (0.05)	1.18 [1.08, 1.30]	<.001
Block 2: Need Factors						
DASS Anxiety				0.16 (0.04)	1.17 [1.08, 1.27]	<.001
Fear of Recurrence				0.05 (0.34)	1.05 [0.53, 2.06]	.895
Model Summary	$R^2 = 0.17$ Log likelihood = 138.9			$R^2 = 0.41$ Log likelihood = 112.6		

Note. N = 123. *OR* = Odds Ratio, 95% CI = 95% Confidence Interval, R^2 = Nagelkerke's Pseudo R^2

*p≤.05 (2-tailed), **p≤.01 (2-tailed).

Table A3

Results of Hierarchical Logistic Regression Analyses for Intention to Seek Help for Emotional Concerns: Isolated DASS-Stress Subscale

Predictor Variables	Model 1			Model 2		
	B (SE)	*OR* [95% CI]	*p*	*B (SE)*	*OR* [95% CI]	*p*
Block 1: Predisposing Characteristics						
Age	-0.03 (0.02)	0.97 [0.93, 1.02]	.209	-0.00 (0.02)	1.00 [0.95, 1.05]	.869
Attitudes to seeking Professional Psychological help	0.11 (0.04)	1.12 [1.05, 1.20]	.001	0.15 (0.04)	1.16 [1.07, 1.26]	.001
Block 2: Need Factors						
DASS Stress				0.17 (0.05)	1.19 [1.09, 1.30]	<.001
Fear of Recurrence				0.24 (0.32)	1.27 [0.67, 2.38]	.467
Model Summary	$R^2 = 0.17$ Log likelihood = 138.9			$R^2 = 0.41$ Log likelihood = 113.0		

Note. N = 123. *OR* = Odds Ratio, 95% CI = 95% Confidence Interval, R^2 = Nagelkerke's Pseudo R^2

*p≤.05 (2-tailed), **p≤.01 (2-tailed).