1-1-2023

Barriers to mental health help-seeking among older adults with chronic diseases

Claire Adams
Edith Cowan University

Eyal Gringart
Edith Cowan University

Natalie Strobel
Edith Cowan University

10.1080/00050067.2023.2282540
Adams, C., Gringart, E., & Strobel, N. (2023). Barriers to mental health help-seeking among older adults with chronic diseases. Australian Psychologist. Advance online publication. https://doi.org/10.1080/00050067.2023.2282540

Routledge
Taylor & Francis Group

Australian Psychologist

ISSN: (Print) (Online) Journal homepage: https://www.tandfonline.com/loi/rapy20

Barriers to mental health help-seeking among older adults with chronic diseases

Claire Adams, Eyal Gringart & Natalie Strobel

To cite this article: Claire Adams, Eyal Gringart & Natalie Strobel (19 Nov 2023): Barriers to mental health help-seeking among older adults with chronic diseases, Australian Psychologist, DOI: 10.1080/00050067.2023.2282540

To link to this article: https://doi.org/10.1080/00050067.2023.2282540

AUSTRALIAN PSYCHOLOGIST
https://doi.org/10.1080/00050067.2023.2282540

ORIGINAL ARTICLE

OPEN ACCESS Check for updates

Barriers to mental health help-seeking among older adults with chronic diseases

Claire Adams [a,b], Eyal Gringart [a] and Natalie Strobel [b]

[a]School of Arts and Humanities, Edith Cowan University, Perth, Australia; [b]Kurongkurl Katitjin, Edith Cowan University, Perth, Australia

ABSTRACT

Objective: Older adults often delay seeking professional help, particularly for mental health problems. This is of great concern for older adults with chronic diseases, who are at risk of mental health declines. This study explored barriers to help-seeking among older adults with chronic diseases and identified factors that influence older adults' perceptions of such barriers.
Method: This was a cross-sectional study with 106 adults ≥65 years, diagnosed with cardiovascular disease, respiratory disease, and/or type 2 diabetes. Demographic variables and barriers to help-seeking were measured using self-report questionnaires.
Results: The most common barriers to help-seeking were wondering whether the mental health problem is significant enough to warrant treatment (51.9%) and not having a regular primary health care provider to speak with (39.6%). Participants who had sought help in the past had less endorsement of these barriers than those who had never sought help.
Conclusions: Many older adults with chronic diseases have difficulties knowing when to seek help, and apprehensions about disclosing mental health concerns. Integrated intervention is needed involving the community (e.g., reduce stigma), older adults with chronic diseases (e.g., increase mental health literacy), and physicians (e.g., increase training in ageing and mental health) to alleviate common barriers to help-seeking in this population.

KEY POINTS

What is already known about this topic:

(1) Adults aged 65 years and older with chronic diseases are at risk of mental health problems.
(2) Many older adults do not seek mental health help or delay seeking help, thus mental health problems often go undiagnosed and untreated.
(3) Attitudes and beliefs towards help-seeking influence whether older adults are willing to engage mental health-related services.

What this topic adds:

(1) The most common barriers to mental health help-seeking among older adults with chronic diseases are perceived need and fears around disclosing mental health concerns.
(2) Past use of mental health services, gender, marital status, number of chronic diseases, and quality of life influence perceived barriers to mental health help-seeking.
(3) Greater education for older adults and primary health care providers to increase mental health literacy and reduce stigma is likely to alleviate barriers to care and increase mental health help-seeking in this population.

ARTICLE HISTORY
Received 3 March 2022
Accepted 5 November 2023

KEYWORDS
Attitudes; barriers to care; help-seeking; health service utilisation; perceived need

Introduction

The majority of people 65 years and older have one or more chronic diseases, placing older adults at a high risk of mental health declines (Kingston et al., 2018; National Council on Aging, 2018). Mental health declines can lead to greater rates of morbidity, mortality and poorer chronic disease outcomes (Celano et al., 2016; Yohannes & Alexopoulos, 2014). Chronic diseases are long lasting conditions with enduring effects and are the main cause of death and disability worldwide, including in Australia (Australian Institute of Health and Welfare, 2020a). The four main chronic disease groups are cardiovascular and respiratory diseases, type 2 diabetes, and cancer (Australian Institute of Health and Welfare, 2021; World Health Organization, 2021). Prevention and management of chronic diseases and associated mental health problems among older adults are paramount to the well-being of this population (Chen et al., 2017; United Nations, 2019).

CONTACT Claire Adams claireadams.research@gmail.com
Supplemental data for this article can be accessed at https://doi.org/10.1080/00050067.2023.2282540

To facilitate healthy ageing and reduce the risk of poor health outcomes it is important that older adults with chronic diseases are willing to access mental health-related care when needed. It is also important that older adults with chronic diseases access care early, prior to the development of clinically relevant symptoms, to facilitate healthy ageing and to reduce the risk of severe mental health problems. This is consistent with an early intervention approach to mental health care, which has been shown to improve health outcomes (McGorry et al., 2018). Timely help-seeking can also greatly reduce the overall burden of disease, which increases in parallel with ageing (Prince et al., 2015). Whilst there is no commonly accepted definition of help-seeking, help-seeking can be considered a problem-focused, interpersonal interaction with a health-care professional (Cornally & Mccarthy, 2011). For the purposes of this study, mental health help-seeking was defined as seeking help from a primary health care provider (general practitioner, general practice nurse) for mental health concerns (feeling sad, empty, fearful, and/or anxious). This definition was chosen as older adults often have regular contact with primary health care services, and have reported a preference for seeking help for mental health concerns from primary health care providers over mental health professionals (Chai et al., 2021; Mackenzie et al., 2006).

Help-seeking is often delayed, and many older adults have low intentions to seek help for mental health concerns and low use of mental health-related services (Adams et al., 2021; Chai et al., 2021). For example, a recent study on depression in older adults reported a treatment gap between mental health diagnoses and treatment use of 79%, which is greater than general population estimates (Horackova et al., 2019). A range of barriers have been identified that prevent older adults from seeking mental health services, which are both extrinsic (e.g., structural barriers, ageism) and intrinsic (e.g., belief-based barriers, knowledge barriers) (Pepin et al., 2009). Despite evidence on help-seeking trends and barriers in the general population of older adults, few studies have examined barriers to help-seeking specific to older adults with chronic diseases (Johnson & Conner, 2019; Pass et al., 2019; Shtompel et al., 2014; Weinberger et al., 2011). It is likely that barriers may differ between older adults with and without chronic conditions, due to greater contact with health care services among people with chronic diseases and differences in the perceived need for mental health care between older adults with chronic diseases and those without (Australian Institute of Health and Welfare, 2020b; Garrido et al., 2009; Marengoni et al., 2011).

Studies have found that having multiple chronic medical conditions increases the likelihood of seeking help from a mental health professional (Crabb & Hunsley, 2006; Garrido et al., 2011; Kerebih et al., 2017; Young et al., 2001). This includes a range of conditions such as asthma, arthritis, hypertension, migraines, diabetes, epilepsy, and heart disease. However, there are limited studies that have reported on barriers for older adults with chronic disease and mental health help-seeking. There are two studies, both qualitative, that investigated barriers to help-seeking among older adults with chronic diseases. Shtompel et al. (2014) found older adults aged 60–97 years held negative views of health professionals and did not perceive doctors as effective in the management of mental health issues. As a result, this stopped them from wanting to seek help. Johnson and Conner (2019) examined the perception of mental health stigma among older adults with chronic diseases aged 50–80 years who had sought help for mental health concerns and found that mental health stigma remained a major barrier to seeking help. In addition, participants reported normalisation of mental health problems, negative past experiences, and fear of disclosure prevented them from seeking help. These two qualitative studies, conducted in the United States, provide valuable insight into the beliefs of older adults with chronic diseases towards seeking professional help, however it is not clear what common barriers to seeking help exist in this population, and what influences older adults' perceptions of such barriers.

There are other factors such as demographics, physical comorbidities, past use of mental health services, current mental health status and quality of life, which can all influence the likelihood someone will access mental health services (Ajzen, 2002; Boerema et al., 2016; Crabb & Hunsley, 2006; Fernández-Ballesteros, 2011; Garrido et al., 2009; Komiti et al., 2006; Picco et al., 2016; Wang et al., 2007). Although many of these factors are logical and are supported in the literature, such as past use of mental health services and current mental health status, other factors, such as physical comorbidities and quality of life, have not been given as much attention. For instance, studies have found that having a higher number of chronic physical conditions is associated with an increased likelihood of seeking help for mental health problems (Crabb & Hunsley, 2006; Young et al., 2001). Other studies found people with comorbid conditions have greater physical limitations, financial constraints, low self-efficacy, and feel more overwhelmed, which can lead to poorer coping, poorer treatment adherence, and less acceptance and/or understanding of their

health problems (Bayliss et al., 2003; Rivera et al., 2018). This is likely to impede help-seeking. Furthermore, good quality of life has been found to be a protective factor against maladaptive health behaviours (Fernández-Ballesteros, 2011; Pophali et al., 2018), and as such is likely to be associated with help-seeking. Therefore, exploring the influence of all these factors on barriers to help-seeking may improve our understanding of help-seeking for older adults with chronic diseases.

The overall aim of the present study was to explore barriers to mental health help-seeking among older adults with chronic diseases. Consistent with an early intervention approach to health care, this study explored barriers to help-seeking in a general, non-clinical sample of older adults with chronic diseases. This is important as many older adults with chronic diseases are likely to experience mental health declines, even if they are not currently symptomatic. Further, whilst clinical samples have already been, by definition, diagnosed, the larger, non-clinical, portion of the population of older adults with chronic illnesses are unlikely to engage mental health help regardless of their needs (Adams et al., 2021). The research questions posed by the current study are: What are the most common barriers to mental health help-seeking among older adults with chronic diseases? What factors influence the most common barriers to mental health help-seeking?

Materials and methods

Participants

A total of 106 older adults, ≥65 years of age, living in Western Australia and diagnosed with chronic diseases, were included in this study. Participants with cardiovascular disease, respiratory disease, and/or type 2 diabetes were eligible. Chronic disease status was identified by participants general practitioner if the participant was recruited through a health clinic or independent living facility, or via self-report if they were recruited through a not-for-profit organisation, local government agency, or community group. All participants were asked to provide a list of their current medications to corroborate any self-reported medical conditions. Participants were excluded if they were not fluent in English and/or had a diagnosis of dementia or cognitive impairments. People with cancer were also excluded as cancer follows a different disease trajectory and cognitive impairments are often associated with cancer treatments.

Procedure

Cross-sectional data were collected between April 2017 and May 2018, using convenience sampling and snowballing procedures from five independent living facilities, three health centres, six not-for-profit organisations, two local government agencies and seven community groups in Perth, Western Australia. A member of the research team distributed a flyer with information about the research to potential participants at each recruitment site. Interested older adults could contact the researchers for further information via email or telephone. A member of the research team met with each interested and eligible participant in person, either in their homes or in a room on the university campus to explain the research and collect the study data. All participants were given an information letter and were asked to provide written informed consent prior to participation. Participants completed the measures via hard copy using a pen or pencil. Participants were also given the option of completing the measures at a later date and returning their responses in a reply-paid envelope. Ethics approval was granted by the human research ethics committee of Edith Cowan University (Ref: 14248 Adams).

Measures

Demographics. Participants provided information on their gender, age, level of education, marital status, employment status, and socio-economic status. Health-related information was also collected including the number and type of chronic diseases, degree of functional impairment, previous/current mental health conditions, and past use of mental health services.

Quality of life. Participants' overall quality of life was assessed using the World Health Organisation Quality of Life assessment (WHOQOL-BREF). The WHOQOL-BREF is an abbreviated version of the WHOQOL-100, which was designed to provide an international, cross-cultural measure of quality of life and promote a holistic approach to health (WHOQOL Group, 1998). The WHOQOL-BREF is a self-report scale containing 26 items; one item to assess overall quality of life, one item to assess overall satisfaction with health, and 24 items to measure the four quality of life domains; physical health, psychological health, social relationships and environment. The WHOQOL-BREF has been shown to be a suitable measure for use with older adults with Cronbach's alpha coefficients > 0.90 (Kalfoss et al., 2008; von Steinbüchel et al., 2006). Responses to each item are measured on a 5-point scale (1–5) with higher scores reflecting better quality

of life. The WHOQOL-BREF correlates highly with the WHOQOL-100 ($r = .89$ to $.95$), has adequate internal consistency (α ranging from .66 to .84) and test-retest reliability ($r = .66$ to $.87$) (WHOQOL Group, 1998). For the purposes of this research, only one item assessing overall quality of life was used in the analysis, to gain a global measure of participant's quality of life. This item states, "How would you rate your quality of life"? Response options range from very poor (1), poor (2), neither poor nor good (3), good (4), to very good (5).

Barriers to mental health help-seeking. The present study utilised data from the control beliefs segment of a Theory of Planned Behaviour (TPB) questionnaire, designed by the authors to measure the attitudinal and belief-based components of mental health help-seeking. The questionnaire was based on the TPB manual for health service researchers and Ajzen's sample TPB questionnaire in addition to previous studies (Ajzen, 2006; Francis et al., 2004). Reliability testing demonstrated acceptable internal consistency for each construct (α ranging from .69 to .87) (Adams et al., 2021). Barriers were rated on 7-point Likert type scales (1–7) from unlikely to likely. There were 24 items each representing a potential barrier to mental health help-seeking. Higher scores indicate stronger barriers to seeking mental health help. The Cronbach's alpha for the total scale was 0.76.

Data screening

There were 107 participants who commenced the study and 106 who provided sufficient data for analysis. Thus, 106 participants were included. There were six missing data for five participants. The missing data were replaced by the mean for each item as less than five per cent of the data were missing (Aljuaid & Sasi, 2016). Six items included a percentage of not applicable responses (2.8% to 49.1%), as these items asked about participants' perceived support from significant others. Participants without the designated relation (partner/child/extended family/friends) responded with not applicable to that item. Frequencies were calculated based on the number of responses to each item. Assumptions of normality were met.

Statistical analyses

To identify the most common barriers to seeking professional help, frequency analyses were conducted. As the 7-point Likert type scales had a midpoint of 4, a barrier was considered to be endorsed if participants scored ≥ 5 on the 7-point scale. Frequencies of participants who scored ≥ 5 for each barrier were reported as counts and percentages. Subgroup analyses were conducted to identify the most common barriers to seeking professional help among participants who reported previous/current mental health conditions and those who reported no previous/current mental health conditions to understand differences between non-clinical (no history of mental health conditions) and clinical (history of mental health conditions) samples.

To identify factors that influence the most common barriers to seeking professional help, the two most common barriers to help-seeking, as identified by the frequency analyses, were chosen and analysed independently using multiple linear regression analyses. In the first regression model, the barrier that received the greatest endorsement from participants was entered as the independent variable in the model. In the second regression model, the barrier that received the second highest level of endorsement was entered as the independent variable in the model. Dependent variables were measured on the 7-point Likert type scale. In both models, demographic and health-related factors were entered as predictors. The demographic factors entered into the models included gender, education, marital status, and socio-economic status. The health-related factors included past use of mental health services, previous/current mental health conditions, number of chronic diseases and quality of life. The binary predictors in both models were gender, education, marital status, socio-economic status, past use of mental health services, and previous/current mental health conditions. The continuous predictors in both models were number of chronic diseases and quality of life. We used the rule of thumb reported in Wilson Van Voorhis and Morgan (2007) to determine the sample size for our models, which suggests a minimum ratio of 10 participants per variable is appropriate when conducting regression models using six or more predictors. Data were analysed using SPSS version 26.

Results

Sample description

There were 50 males (47.2%) and 56 females (52.8%) included in this study, with a mean age of 74.96 years (SD = 7.26, range 65–93 years). Most participants had one chronic disease diagnosis ($n = 72$, 67.9%), with type 2 diabetes most commonly reported ($n = 49$, 46.2%), followed by asthma ($n = 33$, 31.1%) and coronary heart disease ($n = 23$, 21.7%). There were 38 (35.8%)

participants who had been diagnosed with a mental health condition at some point in their lifetime and 33 participants (31.1%) had used mental health services in the past or had family and/or friends who used mental health services. Sample characteristics are presented in Table 1.

Table 1. Characteristics of participants ($N = 106$).

Variables	n (%)
Gender	
Male	50 (47.2%)
Female	56 (52.8%)
Age (years)	
65–74	59 (55.7%)
75–84	32 (30.2%)
85+	15 (14.2%)
Education	
School up to year 10	31 (29.2%)
Year 11 and above	75 (70.8%)
Marital status	
Married/de-facto	53 (50.0%)
Not in a current relationship	53 (50.0%)
Employment status	
Employed	11 (10.4%)
Retired/unable to work	95 (89.6%)
Socioeconomic status	
Lower	59 (55.7%)
Higher	47 (44.3%)
Number of chronic diseases	
One	72 (67.9%)
Two or more	34 (32.1%)
Functional impairment (Mean, SD)*	6.72 (6.45)
Diagnosed with a mental health condition (previous/current)	
Yes	38 (35.8%)
No	68 (64.2%)
Past use of mental health services (self/family/friend)	
Yes	33 (31.1%)
No	73 (68.9%)

*Measured using the World Health Organisation Disability Assessment Schedule 2.0 (WHODAS) 12-item version.

Common barriers to mental health help-seeking

The frequencies of endorsement of each barrier to mental health help-seeking are presented in Table 2.

Seen in Table 2, the most commonly reported barrier was "wondering whether the problem is significant enough to warrant treatment", with the majority of participants endorsing this barrier ($n = 55$, 51.9%). The second most common barrier was "not having a regular primary health care provider to speak", with more than a third of participants endorsing this barrier ($n = 42$, 39.6%). "Not feeling comfortable speaking with my primary health care provider" ($n = 41$, 38.7%), and "whether I can afford treatment" ($n = 41$, 38.7%), were also common barriers to seeking help. Additionally, among those who had a partner, 37.0% ($n = 20$) endorsed concerns about "what their husband/wife/partner would think".

Two items that had low endorsement as barriers included "thinking mental health problems cannot be treated" ($n = 2$, 1.9%) and "thinking all mental health problems are the result of my chronic disease" ($n = 2$, 1.9%).

Frequency analyses were also conducted for the subgroup of participants who reported previous/current mental health conditions (clinical sample) and the subgroup of participants who reported no previous/current mental health conditions (non-clinical). The

Table 2. Frequency of barriers to seeking professional help for mental health concerns.

Items	Endorsed barrier* n (%)
Wondering whether the problem is significant enough to warrant treatment	55 (51.9%)
Not having a regular primary health care provider to speak with	42 (39.6%)
Not feeling comfortable speaking with my primary health care provider	41 (38.7%)
Whether I can afford treatment	41 (38.7%)
What my husband/wife/partner would think of me	20 (37.0%)
Thinking that talking to a family member is just as helpful	28 (27.2%)
Having other sources of help (e.g., self-help, community groups)	26 (24.5%)
What my children would think of me	23 (24.2%)
Thinking that talking to a friend is just as helpful	23 (23.2%)
I would think less of myself because I could not solve the problem on my own	24 (22.6%)
Concerns that I will have to travel to receive treatment	23 (21.7%)
Admitting that I have a problem	21 (19.8%)
Not knowing whether seeking professional help will be effective	18 (17.0%)
Being unaware of what treatment is available (if any)	17 (16.0%)
Thinking that people of strong character can deal with and get over mental health problems themselves	17 (16.0%)
Being unsure of how to obtain treatment	14 (13.2%)
What my extended family would think of me	12 (12.9%)
Being afraid of the possible emotions I could experience	13 (12.3%)
Faith in God/praying is enough	12 (11.3%)
What my friends would think of me	10 (10.4%)
Not being confident that the matter would remain confidential	8 (7.5%)
Having to confide in someone	4 (3.8%)
Thinking all mental health problems are the result of my chronic disease	2 (1.9%)
Thinking mental health problems cannot be treated	2 (1.9%)

*Score ≥5 out of a possible score of 7.

most common barriers to mental health help-seeking remained the same, however, interestingly, participants with no previous/current mental health conditions endorsed the barrier "thinking that people of strong character can deal with and get over mental health problems themselves" more frequently ($n = 15$, 22.1%) than people who have previous/current mental health conditions ($n = 2$, 5.3%). Results are presented in Supplementary Tables S1 and S2.

Factors that influence the most common barriers to mental health help-seeking

Two multiple linear regressions were conducted to identify factors associated with the two most commonly endorsed barriers to mental health help-seeking. These barriers were "wondering whether the problem is significant enough to warrant treatment" and "not having a regular primary health care provider to speak with".

A multiple linear regression of demographic and health-related factors on "wondering whether the problem is significant enough to warrant treatment" accounted for 14.6% of the variance in this barrier. Past use of mental health services was the only variable significantly associated with endorsement of the barrier after controlling for all other variables in the model, $F(8,97) = 2.08$, $p = .045$. Participants who had used mental health services in the past (i.e., sought help) reported less endorsement of wondering whether the problem is significant enough to warrant treatment compared with those who had never used mental health services ($\beta = -.37$, $p = .001$).

A multiple linear regression of demographic and health-related factors on "not having a regular primary health care provider to speak with" accounted for 27.6% of the variance in this barrier. Gender, marital status, past use of mental health services, quality of life, and number of chronic diseases were significantly associated with endorsement of the barrier after controlling for all other variables in the model, $F(8,97) = 4.63$, $p < .001$. Past use of mental health services had the strongest association with the barrier "not having a regular primary health care provider to speak with"; participants who had used mental health services in the past reported less endorsement of this barrier compared with those who had never used mental health services ($\beta = -.36$, $p < .001$).

Number of chronic diseases and marital status had the equal second strongest association with the barrier "not having a regular primary health care provider to speak with". Participants with one chronic disease reported greater endorsement of the barrier "not having a regular primary health care provider to speak with" than those with two or more chronic diseases ($\beta = .25$, $p = .009$). Participants who were not in a current relationship reported greater endorsement of this barrier compared with those who were married/de-facto ($\beta = .25$, $p = .009$).

Gender and quality of life had the equal third strongest association with the barrier "not having a regular primary health care provider to speak with". Males reported less endorsement of "not having a regular primary health care provider to speak with" as a barrier compared with females ($\beta = -.22$, $p = .027$). Greater quality of life was associated with less endorsement of this barrier ($\beta = -.22$, $p = .027$).

Results of these regressions are displayed in Tables 3 and 4.

Discussion

The current study explored barriers to seeking professional help for mental health concerns among older adults with chronic diseases. Two research questions were posed: What are the most common barriers to mental health help-seeking among older adults with chronic diseases? What factors influence the most common barriers to mental health help-seeking?

Answering the first research question, the two most common barriers to mental health help-seeking, among the sample of the current study, were "wondering whether the mental health problem is significant enough to warrant treatment" and "not having a regular primary health care provider to speak with". The barrier "wondering whether a mental health problem is significant enough to warrant treatment" can be conceptualised as perceived need for treatment, which has been found to be a common barrier to mental health help-seeking in previous studies (Andrade et al., 2014; Wuthrich & Frei, 2015). "Not having a regular primary health care provider to speak with" as a barrier to seeking help suggests fears around disclosing mental health concerns in primary health care. Reluctance to disclose mental health concerns to others, including health professionals, has been identified as a barrier to help-seeking in the wider older adult population (Anderson et al., 2017; Polacsek et al., 2019). Older adults may only be willing to disclose mental health concerns to a provider they are familiar with and trust. Such provider-related barriers have been attributed to time and policy constraints that inhibit patient-provider communication (Lavingia et al., 2020).

With respect to the second research question, factors that influence the two most common barriers to mental health help-seeking identified in this study

Table 3. Multiple linear regression of demographic and health-related factors on the barrier "wondering whether the problem is significant enough to warrant treatment".

Variables	B	SE B	B	95% CI	*sr*
Model	5.52	1.30		[2.94, 8.11]	
Gender	−0.72	0.43	−.18	[−1.57, 0.13]	−.16
Education	−0.02	0.44	−.01	[−0.90, 0.85]	−.01
Marital Status	−0.02	0.40	−.01	[−0.82, 0.78]	−.01
Socio-economic status	−0.50	0.40	−.12	[−1.30, 0.30]	−.12
Past use of mental health services	−1.60	0.46	−.37**	[−2.52, −0.68]	−.32
Quality of life	−0.18	0.28	−.07	[−0.74, 0.38]	−.06
Number of chronic diseases	0.06	0.43	.01	[−0.80, 0.91]	.01
Previous/current mental health conditions	0.58	0.45	.14	[−0.32, 1.47]	.12
R^2				0.146	

*$p < .05$.**$p \leq .001$. B = unstandardised coefficient, SE = standard error, CI = confidence intervals, *sr* = semi-partial correlations. Binary variables = gender, education, marital status, socio-economic status, past use of mental health services, and previous/current mental health conditions. Continuous variables = quality of life and number of chronic diseases.

Table 4. Multiple linear regression of demographic and health-related factors on the barrier "not having a regular primary health care provider to speak with".

Variables	B	SE B	B	95% CI	*sr*
Model	5.49	1.26		[3.00, 8.00]	
Gender	−0.93	0.42	−.22*	[−1.75, −0.11]	−.19
Education	0.39	0.43	.08	[−0.46, 1.24]	.08
Marital Status	1.03	0.39	.25*	[0.26, 1.81]	.23
Socio-economic status	0.13	0.39	.03	[−0.65, 0.91]	.03
Past use of mental health services	−1.63	0.45	−.36**	[−2.53, −0.74]	−.31
Quality of life	−0.62	0.27	−.22*	[−1.16, −0.07]	−.19
Number of chronic diseases	1.10	0.42	.25*	[0.28, 1.93]	.23
Previous/current mental health conditions	0.81	0.44	.19	[−0.06, 1.68]	.16
R^2				0.276	

*$p < .05$. **$p \leq .001$. B = unstandardised coefficient, SE = standard error, CI = confidence intervals, *sr* = semi-partial correlations. Binary variables = gender, education, marital status, socio-economic status, past use of mental health services, and previous/current mental health conditions. Continuous variables = quality of life and number of chronic diseases.

include past use of mental health services, gender, marital status, number of chronic diseases, and quality of life. Past use of mental health services was the factor most strongly associated with both barriers; participants who had sought help in the past were, on average, less likely to endorse concerns about perceived need for treatment and disclosing mental health problems. It is unclear whether older adults who sought help in the past simply perceived less barriers to seeking help, or whether having sought help reduced barriers due to changes in attitudes and beliefs following mental health treatment. Nevertheless, these findings are encouraging, as they suggest once older adults have made the initial step to seek help, they are less likely to perceive barriers to help-seeking, and may indicate that they are more likely to seek help in future (Ajzen, 2002; Ouellette & Wood, 1998). This is consistent with earlier research indicating older Australians who had sought mental health help in the past report significantly more favourable attitudes towards help-seeking than those who had not (Woodward & Pachana, 2009).

There were no other factors identified that influenced the barrier "perceived need for treatment", however, gender, marital status, number of chronic diseases, and quality of life all influenced participants' "fears around disclosing mental health concerns in primary health care". With regard to gender, surprisingly, females were more likely than males to endorse fears around disclosing mental health concerns. Past research suggests females are more likely to seek help for mental health problems than males (Mackenzie et al., 2006; Stead et al., 2010), and we would therefore expect females to have lower endorsement of barriers to seeking help. However, the source of help is relevant to consider. For example, in Australia, a general practitioner is often the first point of contact when seeking mental health help (Healthdirect, 2019; Steel et al., 2006). Therefore, older females with chronic diseases may be more likely to seek help as they are able to speak with their regular health care provider to access treatment.

Females may also find sufficient support from their social networks, and thus be more likely to, and comfortable with, disclosing mental health concerns to family and friends than to health professionals (Milner et al., 2016; Taylor, 2012). The literature suggests females across age groups have higher levels of social support than males, and that social support has a positive impact on mental health (Harandi et al., 2017; Milner et al.,

2016). It is also possible that self-selection bias occurred, as evidence suggests people who hold less mental health stigma, and who are more willing to discuss mental health concerns, are more likely to participate in mental health research (Iflaifel et al., 2023; Woodall et al., 2010). We expect this effect to be greater on males than females, as females are typically more likely to participate in health research and hold less stigmatised attitudes towards mental illness than males (Glass et al., 2015; Pattyn et al., 2015). Thus, it is possible there was an overrepresentation of older males in this study who are more willing to disclose mental health concerns and who hold less barriers to help-seeking than older males in the general population, resulting in lower endorsement of fears around disclosing mental health concerns than expected.

The present study also found marital status had a significant influence on participants' "fears around disclosing mental health concerns in primary health care". Older adults with chronic diseases who were not in a current relationship were more likely to endorse fears around disclosing compared with those who were married/de-facto. This is a novel finding. The literature suggests people who are not partnered are more likely to seek help, often due to having less informal support (Jackson et al., 2007; Waite & Lehrer, 2003). Our findings, however, suggest those who are not partnered would benefit from having an established relationship with a primary health care provider to disclose concerns. This may be due to idiosyncratic conceptualisations of living alone and maintaining independence or being less accustomed to sharing their concerns with external persons. Conversely, older adults who are married/de-facto may find validation and support from their partners and be more familiar with sharing their concerns with others.

Furthermore, health-related factors including number of chronic diseases and quality of life had a significant influence on participants' fears around disclosing mental health concerns. Participants with one chronic disease were more likely, on average, to endorse "fears around disclosing" than those with two or more chronic diseases. This stands to reason, as older adults with physical comorbidities are likely to have more regular contact with primary health care services (Hopman et al., 2015), thereby increasing familiarity with services and alleviating this barrier to help-seeking. Interestingly, participants' who reported lower quality of life were more likely to endorse "fears around disclosing mental health concerns in primary health care" than those with higher quality of life. Quality of life is a subjective experience, defined as an individual's evaluation of their position in life in relation to their goals, expectations, standards and concerns (WHOQOL Group, 1998). The inverse association between quality of life and fears around disclosing may therefore be explained by psychological factors such as depressive symptoms, low self-esteem, or an injured sense of self-efficacy, all of which can lead to negative self-evaluations, however, these constructs were not measured in our study, and more research is needed.

The present study has important real-life implications for older adults with chronic diseases. We identified the two most prevalent barriers to seeking mental health help in this sample, endorsed by more than 39% of participants, revealing important areas for intervention. However, many of the potential barriers reported in this study may be meaningful to this population. For example, whilst acknowledging that our sample may not be representative, the barrier "what my friends would think of me" was endorsed by 10.4% of participants, which represents 304,000 people if considering the whole population of older adults with chronic conditions in Australia (Australian Institute of Health and Welfare, 2018, 2020a). Therefore, this may still be an important barrier to seeking help, likely to influence help-seeking intentions and behaviour. We, therefore, argue that most of the barriers presented in this paper need to be addressed to increase engagement with mental health-related services. Hence, this study constructs the foundation for future research to promote help-seeking and address barriers to treatment among older adults with chronic diseases.

There are several limitations to the present study. Firstly, the amount of variance explained in "wondering whether the problem is significant enough to warrant treatment" and "not having a regular primary health care provider to speak with" was low (14.6% and 27.6% respectively). This suggests there are other factors that influence each of these barriers, which were not included in the present models. Factors such as ethnicity and culture have been shown to influence help-seeking barriers, attitudes, and beliefs in past research (Johnson & Conner, 2019), however, we did not collect these data. Moreover, the sample size for our study was sufficient yet small, thus there is potential for estimation error, and the generalisability of the results is limited. A larger sample may improve our ability to identify significant factors that influence barriers to help-seeking and increase confidence in our results. Additionally, as this was a cross-sectional study, we could only investigate associations and casual inferences could not be drawn.

The present study was also limited by participants' overall level of functional impairment, which was low.

- Educational interventions at the individual and community level tailored to older adults, to increase their awareness of symptoms of mental health problems and knowledge of when help is needed (e.g., written material such as brochures or flyers, decision-aids, mass media campaigns).
- Increasing access to, and requirements for, formal mental health training among primary health care providers, particularly those tailored to older adult's mental health, to maximise their ability to discuss, recognise, diagnose, and treat mental health problems.
- Improved dissemination of research findings to key stakeholders (e.g., researchers, clinicians, patients) to help promote informed communication between these groups on mental health prevention and treatment.

Figure 1. Recommendations for ways to address barriers to mental health help-seeking.

Consequently, this variable was not included in the analyses, meaning the association between functional impairment and perceived barriers to help-seeking remains unclear. This may be due to self-selection bias, as participants who had greater functional ability may be more willing and able to take part in the study. Nevertheless, it was important to allow people to self-select to ensure voluntary participation. It is also important to note that data collection took place before the COVID-19 outbreak. Recent evidence suggests people with chronic diseases are less likely to seek health care during the COVID-19 pandemic than prior to the outbreak (Malhotra et al., 2020). Additional barriers may therefore exist during/post the COVID-19 pandemic that restrict help-seeking, which would not have been identified in the present study. Despite these limitations, the present study provides a first step in exploring what barriers to help-seeking exist in older adults with chronic diseases.

Conclusions

The present study can inform clinicians, researchers, and policy makers on ways to improve mental health help-seeking and generate greater awareness of the mental health needs of older adults with chronic diseases. Ways to address the main barriers to help-seeking identified in this study are presented in Figure 1. Namely, the current results indicate more work is needed to improve older adults with chronic diseases perceived need for treatment and willingness to disclose mental health concerns in primary health care. Integrated interventions are recommended, involving the community (e.g., reduce stigma), older adults with chronic diseases (e.g., increase mental health literacy, promote positive attitudes towards help-seeking), and primary health care providers (e.g., increase training opportunities in ageing and mental health), to help reduce barriers to care, increase help-seeking, and ultimately improve health outcomes.

Acknowledgements

The authors would like to thank the Edith Cowan University Health Centre for the research support provided, and Dr Therese Fisher for her assistance with participant recruitment and for providing clinical expertise. We would also like to thank the research participants who contributed their data to this study.

Disclosure statement

No potential conflict of interest was reported by the author(s).

ORCID

Claire Adams http://orcid.org/0000-0002-0667-8088
Eyal Gringart http://orcid.org/0000-0002-6683-3879
Natalie Strobel http://orcid.org/0000-0002-2962-5704

Data availability statement

The data that support the findings of this study are available from the corresponding author upon reasonable request.

References

Adams, C., Gringart, E., Strobel, N., & Masterman, P. (2021). Help-seeking for mental health problems among older adults with chronic disease: An application of the theory of planned behaviour. *Australian Journal of Psychology*, *73* (4), 426–437. https://doi.org/10.1080/00049530.2021.1952850

Ajzen, I. (2002). Residual effects of past on later behavior: Habituation and reasoned action perspectives. *Personality and Social Psychology Review*, *6*(2), 107–122. https://doi.org/10.1207/S15327957PSPR0602_02

Ajzen, I. (2006). *Constructing a theory of planned behavior questionnaire*. University of Massachusetts Amherst. https://people.umass.edu/aizen/pdf/tpb.measurement.pdf

Aljuaid, T., & Sasi, S. (2016). Proper imputation techniques for missing values in data sets. *In Proceedings of the 2016 International Conference on Data Science and Engineering (ICDSE)* (pp. 1–5). Institute of Electrical and Electronics Engineers. https://doi.org/10.1109/ICDSE.2016.7823957

Anderson, K., Wickramariyaratne, T., & Blair, A. (2017). Help-seeking intentions for anxiety among older adults. *Australian Journal of Primary Health*, *23*(5), 489–495. https://doi.org/10.1071/PY15185

Andrade, L. H., Alonso, J., Mneimneh, Z., Wells, J. E., Al-Hamzawi, A., Borges, G., Bromet, E., Bruffaerts, R., De Girolamo, G., De Graaf, R., Florescu, S., Gureje, O., Hinkov, H. R., Hu, C., Huang, Y., Hwang, I., Jin, R., Karam, E. G., Kovess-Masfety, V., … Kessler, R. C. (2014). Barriers to mental health treatment: Results from the WHO world mental health surveys. *Psychological Medicine*, *44*(6), 1303–1317. https://doi.org/10.1017/S0033291713001943

Australian Institute of Health and Welfare. (2018). *Older Australia at a glance. Australia's changing age & gender profile*. https://www.aihw.gov.au/reports/older-people/older-australia-at-a-glance/contents/demographics-of-older-australians/australia-s-changing-age-and-gender-profile

Australian Institute of Health and Welfare. (2020a). *Australia's health 2020. Chronic conditions and multimorbidity*. https://www.aihw.gov.au/reports/australias-health/chronic-conditions-and-multimorbidity

Australian Institute of Health and Welfare. (2020b). *Experiences in health care for people with chronic conditions. How GPs and other specialists communicate with their patients. 2017–2018*. (Cat. No. CHC 6). https://www.aihw.gov.au/getmedia/aae36b29-aab2-45b4-9eb4-657f434837aa/aihw-chc-6.pdf.aspx?inline=true

Australian Institute of Health and Welfare. (2021). *Australian burden of disease study 2018 – key findings*. https://www.aihw.gov.au/reports/burden-of-disease/burden-of-disease-study-2018-key-findings/contents/about

Bayliss, E. A., Steiner, J. F., Fernald, D. H., Crane, L. A., & Main, D. S. (2003). Descriptions of barriers to self-care by persons with comorbid chronic diseases. *Annals of Family Medicine*, *1*(1), 15–21. https://doi.org/10.1370/afm.4

Boerema, A. M., Kleiboer, A., Beekman, A. T. F., van Zoonen, K., Dijkshoorn, H., & Cuijpers, P. (2016). Determinants of help-seeking behavior in depression: A cross-sectional study. *BMC Psychiatry*, *16*(1), 1–9. https://doi.org/10.1186/s12888-016-0790-0

Celano, C. M., Daunis, D. J., Lokko, H. N., Campbell, K. A., & Huffman, J. C. (2016). Anxiety disorders and cardiovascular disease. *Current Psychiatry Reports*, *18*(11), 101–121. https://doi.org/10.1007/s11920-016-0739-5

Chai, Y. H., Tong, S. F., & Khairuddin, W. (2021). Intention to seek professional help for depression and its associated factors among elderly patients in Tenkera health clinic, Melaka, Malaysia. *The Medical Journal of Malaysia*, *76*(1), 61–67. https://pubmed.ncbi.nlm.nih.gov/33510111/

Chen, C. M., Lee, I. C., Su, Y. Y., Mullan, J., & Chiu, H. C. (2017). The longitudinal relationship between mental health disorders and chronic disease for older adults: A population-based study. *International Journal of Geriatric Psychiatry*, *32*(9), 1017–1026. https://doi.org/10.1002/gps.4561

Cornally, N., & Mccarthy, G. (2011). Help-seeking behaviour: A concept analysis. *International Journal of Nursing Practice*, *17*(3), 280–288. https://doi.org/10.1111/j.1440-172X.2011.01936.x

Crabb, R., & Hunsley, J. (2006). Utilization of mental health care services among older adults with depression. *Journal of Clinical Psychology*, *62*(3), 299–312. https://doi.org/10.1002/jclp.20231

Fernández-Ballesteros, R. (2011). Quality of life in old age: Problematic issues. *Applied Research in Quality of Life*, *6*(1), 21–40. https://doi.org/10.1007/s11482-010-9110-x

Francis, J., Eccles, M. P., Johnston, M., Walker, A. E., Grimshaw, J. M., Foy, R., Kaner, E. F. S., Smith, L., & Bonetti, D. (2004). *Constructing questionnaires based on the theory of planned behaviour: A manual for health services researchers*. Centre for Health Services Research. http://openaccess.city.ac.uk/1735/

Garrido, M. M., Kane, R. L., Kaas, M., & Kane, R. A. (2009). Perceived need for mental health care among community-dwelling older adults. *Journals of Gerontology - Series B Psychological Sciences & Social Sciences*, *64*(6), 704–712. https://doi.org/10.1093/geronb/gbp073

Garrido, M. M., Kane, R. L., Kaas, M., & Kane, R. A. (2011). Use of mental health care by community-dwelling older adults. *Journal of the American Geriatrics Society*, *59*(1), 50–56. https://doi.org/10.1111/j.1532-5415.2010.03220.x

Glass, D. C., Kelsall, H. L., Slegers, C., Forbes, A. B., Loff, B., Zion, D., & Fritschi, L. (2015). A telephone survey of factors affecting willingness to participate in health research surveys. *BMC Public Health*, *15*(1), 1017. https://doi.org/10.1186/s12889-015-2350-9

Harandi, T. F., Taghinasab, M. M., & Nayeri, T. D. (2017). The correlation of social support with mental health: A meta-analysis. *Electronic Physician*, *9*(9), 5212–5222. https://doi.org/10.19082/5212

Healthdirect. (2019). *Talking to your doctor (GP) about mental health*. Australian Government. Department of Health. https://www.healthdirect.gov.au/talking-to-your-doctor-gp-about-mental-health

Hopman, P., Heins, M. J., Rijken, M., & Schellevis, F. G. (2015). Health care utilization of patients with multiple chronic diseases in the Netherlands: Differences and underlying factors. *European Journal of Internal Medicine*, *26*(3), 190–196. https://doi.org/10.1016/j.ejim.2015.02.006

Horackova, K., Kopecek, M., Machů, V., Kagstrom, A., Aarsland, D., Motlova, L. B., & Cermakova, P. (2019). Prevalence of late-life depression and gap in mental health service use across European regions. *European Psychiatry*, *57*, 19–25. https://doi.org/10.1016/j.eurpsy.2018.12.002

Iflaifel, M., Hall, C. L., Green, H. R., Willis, A., Rennick-Egglestone, S., Juszczak, E., Townsend, M., Martin, J., & Sprange, K. (2023). Widening participation - recruitment methods in mental health randomised controlled trials: A qualitative study. *BMC Medical Research Methodology*, *23*(1), 211. https://doi.org/10.1186/s12874-023-02032-1

Jackson, H., Judd, F., Komiti, A., Fraser, C., Murray, G., Robins, G., Pattison, P., & Wearing, A. (2007). Mental health problems in rural contexts: What are the barriers to seeking help from professional providers? *Australian*

Psychologist, *42*(2), 147–160. https://doi.org/10.1080/00050060701299532

Johnson, A., & Conner, K. (2019). It gets better with time: The perception of stigma among older adults with chronic physical illness and in recovery from mental health condition. *American Journal of Undergraduate Research*, *15*(4), 79–90. https://doi.org/10.33697/ajur.2019.009

Kalfoss, M. H., Low, G., & Molzahn, A. E. (2008). The suitability of the WHOQOL-BREF for Canadian and Norwegian older adults. *European Journal of Ageing*, *5*(1), 77–89. https://doi.org/10.1007/s10433-008-0070-z

Kerebih, H., Abera, M., & Soboka, M. (2017). Pattern of help seeking behavior for common mental disorders among urban residents in Southwest Ethiopia. *Quality in Primary Care*, *25*(4), 208–216. https://primarycare.imedpub.com/pattern-of-help-seeking-behavior-for-commonmental-disorders-among-urban-residents-insouthwest-ethiopia.php?aid=20276

Kingston, A., Robinson, L., Booth, H., Knapp, M., & Jagger, C. (2018). Projections of multi-morbidity in the older population in England to 2035: Estimates from the population ageing and care simulation (PACSim) model. *Age and Ageing*, *47*(3), 374–380. https://doi.org/10.1093/ageing/afx201

Komiti, A., Judd, F., & Jackson, H. (2006). The influence of stigma and attitudes on seeking help from a GP for mental health problems: A rural context. *Social Psychiatry and Psychiatric Epidemiology*, *41*(9), 738–745. https://doi.org/10.1007/s00127-006-0089-4

Lavingia, R., Jones, K., & Asghar-Ali, A. A. (2020). A systematic review of barriers faced by older adults in seeking and accessing mental health care. *Journal of Psychiatric Practice*, *26*(5), 367–382. https://doi.org/10.1097/PRA.0000000000000491

Mackenzie, C. S., Gekoski, W. L., & Knox, V. J. (2006). Age, gender, and the underutilization of mental health services: The influence of help-seeking attitudes. *Aging and Mental Health*, *10*(6), 574–582. https://doi.org/10.1080/13607860600641200

Malhotra, C., Chaudhry, I., Ozdemir, S., & Finkelstein, E. A. (2020). Reduced health-care utilization among people with chronic medical conditions during coronavirus disease 2019. *Proceedings of Singapore Healthcare*, *30*(3), 254–257. https://doi.org/10.1177/2010105820964533

Marengoni, A., Angleman, S., Melis, R., Mangialasche, F., Karp, A., Garmen, A., Meinow, B., & Fratiglioni, L. (2011). Aging with multimorbidity: A systematic review of the literature. *Ageing Research Reviews*, *10*(4), 430–439. https://doi.org/10.1016/j.arr.2011.03.003

McGorry, P. D., Ratheesh, A., & O'Donoghue, B. (2018). Early intervention—An implementation challenge for 21st century mental health care. *JAMA Psychiatry*, *75*(6), 545–546. https://doi.org/10.1001/jamapsychiatry.2018.0621

Milner, A., Krnjacki, L., & LaMontagne, A. D. (2016). Age and gender differences in the influence of social support on mental health: A longitudinal fixed-effects analysis using 13 annual waves of the HILDA cohort. *Public Health*, *140*, 172–178. https://doi.org/10.1016/j.puhe.2016.06.029

National Council on Aging. (2018). *Fact sheet: Healthy aging*. https://www.ncoa.org/resources/fact-sheet-healthy-aging/

Ouellette, J. A., & Wood, W. (1998). Habit and intention in everyday life: The multiple processes by which past behavior predicts future behavior. *Psychological Bulletin*, *124*(1), 54–74. https://doi.org/10.1037/0033-2909.124.1.54

Pass, L. E., Kennelty, K., & Carter, B. L. (2019). Self-identified barriers to rural mental health services in Iowa by older adults with multiple comorbidities: Qualitative interview study. *British Medical Journal Open*, *9*(11), 1–11. https://doi.org/10.1136/bmjopen-2019-029976

Pattyn, E., Verhaeghe, M., & Bracke, P. (2015). The gender gap in mental health service use. *Social Psychiatry and Psychiatric Epidemiology*, *50*(7), 1089–1095. https://doi.org/10.1007/s00127-015-1038-x

Pepin, R., Segal, D. L., & Coolidge, F. L. (2009). Intrinsic and extrinsic barriers to mental health care among community-dwelling younger and older adults. *Aging & Mental Health*, *13*(5), 769–777. https://doi.org/10.1080/13607860902918231

Picco, L., Abdin, E., Chong, S. A., Pang, S., Shafie, S., Chua, B. Y., Vaingankar, J. A., Ong, L. P., Tay, J., & 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

Polacsek, M., Boardman, G. H., & McCann, T. V. (2019). Help-seeking experiences of older adults with a diagnosis of moderate depression. *International Journal of Mental Health Nursing*, *28*(1), 278–287. https://doi.org/10.1111/inm.12531

Pophali, P., Larson, M. C., Robinson, D. P., Allmer, C., Rosenthal, A. C., Farooq, U., Link, B. K., Maurer, M. J., Cerhan, J. R., & Thompson, C. A. (2018). Association of health behaviors and quality of life in lymphoma survivors. *Blood*, *132*(Suppl 1), 4838–4838. https://doi.org/10.1182/blood-2018-99-111738

Prince, M. J., Wu, F., Guo, Y., Gutierrez Robledo, L. M., O'Donnell, M., Sullivan, R., & Yusuf, S. (2015). The burden of disease in older people and implications for health policy and practice. *The Lancet*, *385*(9967), 549–562. https://doi.org/10.1016/S0140-6736(14)61347-7

Rivera, E., Corte, C., Steffen, A., De Von, H. A., Collins, E. G., & McCabe, P. J. (2018). Illness representation and self-care ability in older adults with chronic disease. *Geriatrics (Switzerland)*, *3*(3), 1–14. https://doi.org/10.3390/geriatrics3030045

Shtompel, N., Whiteman, K., & Ruggiano, N. (2014). Negative feelings and help seeking among older adults with chronic conditions. *Journal of Gerontological Social Work*, *57*(8), 810–824. https://doi.org/10.1080/01634372.2014.898008

Stead, R., Shanahan, M. J., & Neufeld, R. W. J. (2010). "I'll go to therapy, eventually": Procrastination, stress and mental health. *Personality and Individual Differences*, *49*(3), 175–180. https://doi.org/10.1016/j.paid.2010.03.028

Steel, Z., Mcdonald, R., Silove, D., Bauman, A., Sandford, P., Herron, J., & Minas, I. H. (2006). Pathways to the first contact with specialist mental health care. *Australian and New Zealand Journal of Psychiatry*, *40*(4), 347–354. https://doi.org/10.1080/j.1440-1614.2006.01801.x

Taylor, S. E. (2012). Social support: A review. In H. S. Friedman (Ed.), *The oxford handbook of health psychology* (pp. 190–214). Oxford University Press.

United Nations. (2019). *World population ageing 2019*. Highlights. https://www.un.org/en/development/desa/population/publications/pdf/ageing/WorldPopulationAgeing2019-Highlights.pdf

von Steinbüchel, N., Lischetzke, T., Gurny, M., & Eid, M. (2006). Assessing quality of life in older people: Psychometric properties of the WHOQOL-BREF. *European Journal of Ageing*, *3*(2), 116–122. https://doi.org/10.1007/s10433-006-0024-2

Waite, L. J., & Lehrer, E. L. (2003). The benefits from marriage and religion in the United States: A comparative analysis. *Population and Development Review*, *29*(2), 255–275. https://doi.org/10.1111/j.1728-4457.2003.00255.x

Wang, P. S., Aguilar-Gaxiola, S., Alonso, J., Angermeyer, M. C., Borges, G., Bromet, E. J., Bruffaerts, R., de Girolamo, G., de Graaf, R., Gureje, O., Haro, J. M., Karam, E. G., Kessler, R. C., Kovess, V., Lane, M. C., Lee, S., Levinson, D., Ono, Y., Petukhova, M., … Wells, J. E. (2007). Worldwide use of mental health services for anxiety, mood, and substance disorders: Results from 17 countries in the WHO world mental health surveys. *The Lancet*, *370*(9590), 841–850. https://doi.org/10.1016/S0140-6736(07)61414-7

Weinberger, M. I., Bruce, M. L., Roth, A. J., Breitbart, W., & Nelson, C. J. (2011). Depression and barriers to mental health care in older cancer patients. *International Journal of Geriatric Psychiatry*, *26*(1), 21–26. https://doi.org/10.1002/gps.2497

WHOQOL Group. (1998). Development of the World Health Organization WHOQOL-BREF quality of life assessment. *Psychological Medicine*, *28*(3), 551–558. https://doi.org/10.1017/s0033291798006667

Wilson Van Voorhis, C. R., & Morgan, B. L. (2007). Understanding power and rules of thumb for determining sample sizes. *Tutorials in Quantitative Methods for Psychology*, *3*(2), 43–50. https://doi.org/10.20982/tqmp.03.2.p043

Woodall, A., Morgan, C., Sloan, C., & Howard, L. (2010). Barriers to participation in mental health research: Are there specific gender, ethnicity and age related barriers? *BMC Psychiatry*, *10*(1), 103. https://doi.org/10.1186/1471-244X-10-103

Woodward, R., & Pachana, N. A. (2009). Attitudes towards psychological treatment among older Australians. *Australian Psychologist*, *44*(2), 86–93. https://doi.org/10.1080/00050060802583610

World Health Organization. (2021). *Noncommunicable diseases*. https://www.who.int/news-room/fact-sheets/detail/noncommunicable-diseases

Wuthrich, V. M., & Frei, J. (2015). Barriers to treatment for older adults seeking psychological therapy. *International Psychogeriatrics*, *27*(7), 1227–1236. https://doi.org/10.1017/S1041610215000241

Yohannes, A. M., & Alexopoulos, G. S. (2014). Depression and anxiety in patients with COPD. *European Respiratory Review*, *23*(133), 345–349. https://doi.org/10.1183/09059180.00007813

Young, A. S., Klap, R., Sherbourne, C. D., & Wells, K. B. (2001). The quality of care for depressive and anxiety disorders in the United States. *Archives of General Psychiatry*, *58*(1), 55–61. https://doi.org/10.1001/archpsyc.58.1.55