NATIONAL MENTAL HEALTH LITERACY SURVEY: FINAL REPORT

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Conducted in partnership with
the Australian Catholic University

ACU
AUSTRALIAN CATHOLIC UNIVERSITY

Royal Flying Doctor Service

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This report has been prepared by the Royal Flying Doctor Service (RFDS) Research and Policy Unit in collaboration with the Australian Catholic University (ACU) using data from the RFDS national mental health literacy survey, in addition to data and evidence from multiple sources. The report has benefited from review by academic experts, and several RFDS and ACU staff. We are grateful for their assistance and would like to acknowledge the external experts and internal staff.

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About the Royal Flying Doctor Service (RFDS)

The RFDS is one of the largest and most comprehensive aeromedical organisations in the world. Using the latest in aviation, medical and communications technology, the RFDS delivers extensive primary healthcare and 24-hour emergency service to those who live, work and travel throughout Australia.

About the Australian Catholic University (ACU)

ACU is a publicly funded university, established in 1990. ACU has seven campuses based around Australia, and a campus in Rome, Italy. The University's Mission is focused on the dignity of the human person, the common good, and ethical and social justice considerations.

Commitment to Indigenous Reconciliation

The RFDS and ACU respect and acknowledge Aboriginal and Torres Strait Islander peoples as the First Australians, and our vision for reconciliation is a culture that strives for unity, equity and respect between Aboriginal and Torres Strait Islander peoples and other Australians.

The RFDS is committed to improved health outcomes and access to health services for all Aboriginal and Torres Strait Islander Australians. Our Reconciliation Action Plan (RAP) outlines our intentions to use research and policy to drive improvement. RFDS research and policy reports include Aboriginal and Torres Strait Islander data as part of a broader effort to improve health outcomes and access to health services for Indigenous Australians as a contribution to the 'Close the Gap' campaign. This research and policy report contributes to the aims of the RAP.

RFDS Research and Policy Unit

In mid-2015, the RFDS established a Research and Policy Unit, located in Canberra. The Unit's role is to gather evidence to support improvements in health outcomes for rural and remote communities, and for patients and communities cared for by the RFDS. The Research and Policy Unit can be contacted by phone on (02) 6269 5500 or by email at enquiries@rfds.org.au.

Research funding and collaboration

The RFDS of Australia received a grant from the Victorian Section of the RFDS to conduct a national mental health literacy (MHL) survey. The RFDS partnered with the School of Behavioural and Health Sciences at ACU (Melbourne) to undertake the research. The RFDS Clinical and Health Services Research Committee provided feedback on the methodology employed in the project.

Ethics

The ethical aspects of this study were approved by the Human Research Ethics Committee (HREC) at ACU (Ethics Register Number 2018-108E). The study design conformed to the National Health and Medical Research Council (NHMRC) National Statement on Ethical Conduct of Research Involving Humans (2007) (see: https://www.nhmrc.gov.au/guidelines-publications/e72).

Use of the term 'Indigenous'

The term 'Aboriginal and Torres Strait Islander peoples' is preferred in RFDS publications when referring to the separate Indigenous peoples of Australia. However, the term 'Indigenous Australians' is used interchangeably with 'Aboriginal and Torres Strait Islander peoples' in order to assist readability.[1]

Throughout this publication, the term 'Indigenous Australians' refers to all persons who identify as being of Aboriginal, Torres Strait Islander, or both Aboriginal and Torres Strait Islander origin.

Contents

Tables

Figures

Appendices

Abbreviations

ABS	Australian Bureau of Statistics
ACCHS	Aboriginal Community Controlled Health Services
ACU	Australian Catholic University
ASGS	Australian Statistical Geography Standard
BEACH	Bettering the Evaluation and Care of Health survey
CATT	Crisis and Assessment Team
CBT	Cognitive behavioural therapy
ED	Emergency department
GP	General practitioner
HREC	Human Research Ethics Committee
LGBTIQA+	Lesbian, gay, bisexual, transgender, gender diverse, intersex, queer, asexual and questioning
MBS	Medical Benefits Schedule
MHFA	Mental Health First Aid
MHL	Mental health literacy
MHLS	Mental Health Literacy Scale
NHMRC	National Health and Medical Research Council
NHS	National Health Survey
OR	Odds ratios
PANDA	Perinatal Anxiety and Depression Australia
PTSD	Post-traumatic stress disorder
RAP	Reconciliation Action Plan
REM	Rapid eye movement
RFDS	Royal Flying Doctor Service
SD	Standard deviation
SEIFA	Socio-Economic Indexes for Areas
SEWB	Social and emotional wellbeing

Foreword

Christine Morgan

Poor mental health literacy is a significant barrier to being able to access and receive support for mental health. Each year, one in five Australians aged 16–85 years experiences mental health distress. Less than half will seek help.

There are many reasons for low rates of help seeking.

Low recognition of mental distress, poor knowledge of available supports and treatments, and high levels of stigma and discrimination are all contributors. All can be addressed with better mental health literacy.

This important report presents the results of a national mental health literacy survey of 2,576 Australians, conducted by the Royal Flying Doctor Service in partnership with the Australian Catholic University.

This research helps to identify the Australians most likely to benefit from mental health literacy interventions. Population groups including men, Australians aged 60 years or older, Aboriginal and Torres Strait Islander Peoples, people without a bachelor's degree or higher level of education, and people who have not previously been diagnosed with a mental disorder can all benefit.

Improving mental health literacy is associated with early help seeking, which, in turn, is more likely to lead to improved long-term outcomes for individuals and across the community.

Mental health literacy campaigns that emphasise the positive outcomes of seeking help from mental health professionals, allied health workers and lived experience workers are critical. In addition to improving mental health literacy, we must work to improve access to both online and face-to-face mental health services. All these services are fundamental to good mental health and social and emotional wellbeing.

The Royal Flying Doctor Service is a critical provider of mental health and social and emotional wellbeing services in rural and remote Australia. The further we move from major capital cities, the fewer the services available. It is so important to support health service providers in their efforts to improve long term mental health outcomes for people in regional, rural and remote parts of Australia.

Improving mental health literacy is one of the fundamental components of making this significant difference to the availability and accessibility of mental health services for all Australians.

Christine Morgan
Chief Executive Officer / Commissioner
National Mental Health Commission

Executive summary

Each year, one in five (20%) Australians aged 16–85 years experiences a mental disorder, and almost half (45%) of all Australians will experience a mental disorder at some point during their lifetime.[2] Having a mental disorder is also one of a number of risk factors for suicide, which accounted for 3,046 deaths in 2018 in Australia.[3]

Despite the high prevalence of mental disorders, and high rates of suicide among selected age groups, more than half (54%) of all people with a mental disorder do not seek help.[4] Although there may be several barriers to help-seeking, one body of research has highlighted the important role of mental health literacy (MHL).[5] Previous research has indicated that poor MHL, comprising low recognition of mental disorders, poor knowledge of available treatments, increased levels of stigma and social distance, and perceived prejudice against people with mental disorders, is a significant barrier to receiving treatment for a mental illness.[6,7] Improving MHL has been shown to promote positive help-seeking attitudes and is significantly positively correlated with help-seeking behaviour.[8,9] Early help-seeking for mental disorders is important and has been shown to promote early intervention and treatment, which results in improved long-term outcomes.[5,10]

Through its primary healthcare platform, the Royal Flying Doctor Service (RFDS) delivers mental health services to residents of rural and remote Australian communities, who would not otherwise have access to these services. Additionally, the RFDS conducts aeromedical retrievals for people with acute mental disorders each year, and transports them to tertiary hospitals to receive definitive care. The RFDS is a therefore a critical provider of mental health services in rural and remote Australia. To better inform its role, in terms of prevention, early intervention, education and ongoing treatment for mental disorders, the RFDS sought to comprehensively understand the MHL of the communities it serves. The RFDS sought to identify whether any of the following factors were related to MHL: remoteness of residence, age, gender, sexual orientation, Indigenous status, education, previous experience of a mental disorder, and community belonging. Many of these factors have previously been shown to influence MHL.

The RFDS collaborated with the Australian Catholic University (ACU) to develop and distribute an online MHL survey. The survey incorporated the Mental Health Literacy Scale (MHLS), an Australian-developed, validated scale-based measure that assesses all aspects of MHL and enables researchers to identify areas of MHL where individuals and populations may require further support. The MHLS provides a methodologically robust and time-efficient means of assessing MHL.

2,422 Australians completed the survey. Respondents were located across all remoteness categories including major cities (43.9%); inner (30.2%) and outer regional (18.5%) areas; and remote (3.9%) and very remote (3.5%) areas. More than half (50.5%) of respondents were aged over 50 years. Almost three-quarters of the study cohort were female (74.7%) which is significantly higher than the overall Australian population of the same age. 89.7% of respondents were heterosexual and the remainder self-identified as lesbian, gay, bisexual, transgender, gender diverse, intersex, queer, asexual and questioning (LGBTIQA+). Similar to the overall Australian population, 97.2% of respondents were non-Indigenous and 2.8% were Indigenous. Educational attainment ranged from 'still attending school' (1%) to 'higher degree (Masters, PhD)' (16.1%), with 33.2% holding a bachelor's degree. The proportion of respondents with tertiary qualifications was significantly higher compared to the overall Australian population of similar age. More than half (52.3%) of all respondents had been diagnosed with a mental disorder, which is 2.6 times higher than the national prevalence (20.1%). Almost all respondents who were diagnosed with a mental disorder (96.9%) had received treatment for their disorder.

MHLS items were summed and scored according to the scoring protocol.[11] The MHLS has a possible score range of 35–160. Higher scores indicate better MHL. 1,905 (73.9%) respondents completed all items in the MHLS with the mean (SD) score of 133.65 (12.4), range 85–159. This was higher than the mean score for community respondents from research conducted by the scale developers. The mean MHLS score of their community sample was 127.38, SD 12.63, range 92–155.

Several factors were identified as contributing to significantly higher MHLS scores and better MHL in our research, including:

- Younger age (<60 years);
- Being female;
- Identifying as LGBTIQA+;
- Being non-Indigenous;
- Holding a bachelor's degree or higher level of education; and
- Having a previous diagnosis of a mental disorder.

As levels of MHL did not differ across remoteness categories, interventions to improve MHL are unlikely to require an approach that differs across remoteness areas. This is supported by previous research that found "no evidence to support the rollout of campaigns which are premised on the assumption that rural residents are less likely to recognise mental health problems, although the importance of recognition should not be ignored. Rather, such campaigns, at least in Australia, may be more appropriately and effectively focused on a message that emphasises which interventions are effective and the helpfulness of particular professionals such as psychologists and psychiatrists in the delivery of these".[12] Where there is poor access to services, MHL interventions should emphasise alternative methods of accessing services, such as through telehealth and the internet for the delivery of evidence-based treatments.[12]

Although MHL did not differ according to remoteness, the results of the MHL survey suggest that interventions to improve MHL are still needed, and that such interventions should specifically target:

- Males;
- Older Australians (aged 60 years or older);
- Indigenous Australians;
- People without a bachelor's degree or higher level of education;
- Non-LGBTIQA+ Australians; and
- People who have not previously been diagnosed with a mental disorder.

There is consistent evidence that MHL interventions need to be contextually developed and applied, and should contain a number of core components around improving knowledge, attitudes or stigma, and help-seeking efficacies.[13] There are several principles that should be considered when developing interventions to increase MHL. Interventions should be:[13]

- Context-specific (e.g. developed and applied in everyday life situations);
- Developmentally appropriate (e.g. tailored in its application across the lifespan);
- Effectively integrated into existing social and organisational structures (e.g. schools, community organisations);
- Implemented using valid and reliable psychometric tests;
- Culturally appropriate, including for Indigenous Australians and LGBTIQA+ communities;
- Locally led;
- Developed in consultation with consumers and carers; and
- Integrated into community health literacy initiatives.

In addition to interventions to improve MHL, it is vital that appropriate services are available to all Australians with a mental disorder. Around half of the respondents to the MHL survey had been diagnosed with a mental disorder and the majority had sought help. This suggests that help-seeking behaviour among respondents was high, and that services are accessed, when available.

However, appropriate services may not be readily available in some areas of Australia, especially in rural and remote areas, leading to delays in treatment.

The current research has also highlighted gaps in knowledge about mental health, and poorer MHL in some population groups. To ensure all people who would benefit from mental health services feel comfortable accessing them, a comprehensive strategy around improving MHL for groups with lower MHL should be implemented, in conjunction with improved access to mental health services.

Chapter 1: Introduction

Facilitating good mental health among the Australian public is an important public health challenge. Each year, one in five (20%) Australians aged 16–85 years experiences a mental disorder,[a] and almost half (45%) of all Australians will experience a mental disorder at some point during their lifetime.[2] Having a mental disorder is also a risk factor for suicide, which accounted for 3,046 deaths in 2018 in Australia.[3] In that year, suicide was the leading cause of death among people aged 15–44 years and the 14th leading cause of death in Australia.[3]

a The terms 'mental disorder' and 'mental illness' are used interchangeably throughout this report. A mental illness is a clinically diagnosable disorder that significantly interferes with a person's cognitive, emotional or social abilities.

Despite the high prevalence of mental disorders, and high rates of suicide among selected age groups, more than half (54%) of all people with a mental disorder do not seek help.[4] Recent research has sought to understand the reasons for poor rates of help-seeking for symptoms of mental disorders.[5] Although there may be several barriers to help-seeking, one body of research has highlighted the role of mental health literacy (MHL) in influencing help-seeking behaviour.[5]

Specifically, knowledge about mental health is essential in facilitating an understanding of, and addressing the needs of, individuals and communities.[14,15] Improving MHL has been shown to promote positive help-seeking attitudes[8] and is significantly positively correlated with help-seeking behaviour.[9] Research from the United Kingdom demonstrated that that individuals with higher Mental Health Literacy Scale (MHLS) scores were more likely to seek help overall for their mental health problems.[9]

MHL was originally defined as "knowledge and beliefs about mental disorders which aid their recognition, management or prevention. MHL includes the ability to recognise specific disorders; knowing how to seek mental health information; knowledge of risk factors and causes, of self-treatments, and of professional help available; and attitudes that promote recognition and appropriate help-seeking".[16] More recently, the construct has evolved to include "knowledge that benefits the mental health of a person or others including: knowledge of how to prevent a mental disorder; recognition of disorders when developing; knowledge of effective self-help strategies for mild-to-moderate problems; and first aid skills to help others".[17] Two key constructs, stigma and social distance, are also important components of MHL. Stigma was originally derived from the work of Goffman (1968) who defined it as "an attribute that is deeply discrediting" and that a person with such an attribute is "reduced in our minds from a whole and usual person to a tainted, discounted one".[18] More recently, stigma has been defined as "the co-occurrence of its components—labelling, stereotyping, separation, status loss, and discrimination", and for this stigmatisation to occur, "power must be exercised".[19] Social distance is defined as "the willingness to engage in relationships of varying intimacy with a person" and is a proxy measure of discrimination.[16]

MHL is an extension of the concept of 'health literacy', which is defined as the ability to gain access to, understand and use information in ways which promote and maintain good health.[20] Health literacy is recognised as important for social, economic and health development.[21] Good health literacy may help support health-promoting behaviours both at an individual and population level.[21]

Previous research has indicated that poor MHL, comprising low recognition of mental disorders, poor knowledge of available treatments, increased levels of stigma and social distance, and perceived prejudice against people with mental disorders, is a significant barrier to receiving treatment for a mental illness.[6,7] Specifically, "if an individual has little capacity to recognise symptoms or has a negative view of mental health problems and mental health services, they are unlikely to refer themselves to a mental health service if they develop a mental health problem".[22]

Early help-seeking for mental disorders is important and has been shown to promote early intervention and treatment, which results in improved long-term outcomes.[5,10] Notably, "low levels of mental health literacy have been identified as an important contributor to the mental health treatment gap".[23] For example, in Australia, the United Kingdom and the United States, the prevalence of mental disorders ranges from 14.9% to 24.6%, but the treatment gap is 40% to 65%.[23-26] Previous research has demonstrated that one of the main reasons for this gap is low levels of MHL.[23]

Recent research has demonstrated that although there have been limited improvements in MHL in some developed countries, MHL is poorer amongst the general public, compared to health professionals.[5] Poor MHL remains an urgent public health concern because it is known to influence the public's decision making in relation to their mental health.[5] Specifically, improving MHL "is an important consideration when promoting expedient and effective treatment seeking for psychological disorders".[27]

Improving MHL is especially important for people living in rural and remote Australia that are unable to access services through the Medical Benefits Schedule (MBS) and rely on organisations such as the Royal Flying Doctor Service (RFDS) to deliver mental health services. There is strong evidence that although rates of mental disorders are similar across remoteness areas, mental health acuity is higher for people living in rural and remote Australia compared to people living in major cities.[28,29]

Similarly, rates of suicide and self-harm are higher in rural and remote areas, and increase with increasing remoteness.[30] In 2018, people living in rural and remote Australia were 1.5 times more likely to die from suicide than people living in major cities.[3] The increasing rates of suicide with remoteness suggest that there are significant mental health issues that need to be addressed in remote and rural Australia.[31] Improving the MHL of all Australians is one method of facilitating more timely help-seeking of evidence-based interventions for mental disorders.[27]

However, in order to identify the types of evidence-based interventions needed to improve MHL, and to implement interventions of appropriate dose and intensity that target mechanisms that are more likely to improve mental health outcomes in a given population,[32] it is first necessary to measure the MHL of the population. Understanding the MHL of the population also facilitates understanding the types of services that are required in order to improve the mental health of individuals within the community.

Multiple studies have been undertaken in Australia and overseas to measure the MHL of the general public,[16,33] as well as specific population groups, such as rural and remote Australians,[12,34,35] police,[36] young people,[37] health professionals,[38,39] etc. Studies have also included comparisons of MHL between groups, such as between health professionals and the general public,[40] and across different cultures.[41] Within these groups, studies have further investigated factors that impact MHL, including age, gender, sexual orientation and gender identity, education and previous experience with a mental disorder.

Until recently, there have been no validated scale-based measures that assess all aspects of MHL. In 2015, Australian researchers developed a scale-based measure of MHL, called the Mental Health Literacy Scale (MHLS).[11] In addition to measuring all aspects of MHL, results from the MHLS enable researchers to identify areas of MHL where individuals and populations may require further support, and evaluate the effectiveness of interventions intended to improve MHL. The MHLS provides a methodologically robust and time-efficient means of assessing MHL.[11]

1.1 Purpose statement

Through its primary healthcare platform, the RFDS delivers mental health services to residents of rural and remote Australian communities, who would not otherwise have access to these services. In 2017–2018 the RFDS conducted 13,488 mental health consultations in rural and remote Australia through the primary health platform.[42] Additionally, the RFDS conducts around 850 aeromedical retrievals for people with acute mental disorders each year, and transports them to tertiary hospitals to receive definitive care.[29] The RFDS is therefore a critical provider of mental health services in rural and remote Australia. To better inform its role, in terms of prevention, early intervention, education and ongoing treatment for mental disorders, the RFDS needs to comprehensively understand the MHL of the communities it serves. Consequently, the RFDS sought to measure the MHL of a sample of the Australian general public, via an online and paper-based survey that incorporated the MHLS as part of its methodology.

In 2019, the RFDS commenced delivering additional mental health outreach services. These are delivered in areas of rural and remote Australia where there is the greatest need for evidence-based mental health services, and where there are no services provided under the MBS. These services will continue for four years and have been funded under the Australian Government's Stronger Rural Health Strategy. RFDS mental health professionals visit remote towns and properties to provide treatment, support and education about mental disorders for individuals and communities.

The current project was undertaken in partnership with the Australian Catholic University (ACU), and was developed to measure the MHL of a sample of the Australian general public and to identify factors that predicted MHL. The researchers sought to understand whether remoteness of residence was associated with MHL. Previous MHL research has yielded mixed findings, with some studies indicating that MHL does not vary according to remoteness of residence,[12,34,35] while others have found that people living in rural areas have poorer MHL than people living in major cities.[5] The current study provided an opportunity to clarify this relationship via important methodological improvements in measuring MHL.

The researchers also sought to identify whether any of the following factors were related to MHL: age, gender, sexual orientation, Indigenous status, education, previous experience of a mental disorder, and community belonging. Many of these factors have previously been shown to influence MHL.[5] This information is important for the RFDS and will enable the organisation to:

- Gain a comprehensive understanding of the MHL of a sample of the Australian population, including rural and remote Australians using the relatively new, methodologically robust, MHLS;
- Facilitate the development of targeted interventions to improve MHL, including in the rural and remote populations where RFDS services are provided;
- Facilitate service planning for future mental health programs by the RFDS to ensure these are delivered in areas of greatest need and targeted appropriately;
- Identify priority locations for future MHL interventions and provision of mental health services by the RFDS, or by the RFDS in partnership with other organisations serving these areas; and
- Recommend policy solutions to reduce the impact of mental disorders and suicide among the Australian public, including in rural and remote areas.

Chapter 2: Aims

The aim of the project was to conduct a national MHL survey, which incorporated the MHLS, to:

- Measure respondents' demographic characteristics (remoteness of residence, age, gender, Indigenous status, sexual orientation, level of education);
- Determine the MHL of respondents and identify their:
  - Ability to recognise mental disorders;
  - Knowledge of risk factors and causes;
  - Knowledge of treatments and where to seek information; and
  - Levels of stigma and social distance;
- Determine the mental health of survey respondents, including whether a respondent had:
  - Been diagnosed with a mental disorder;
  - Sought treatment; and
  - Type of treatment accessed;
- Identify which, if any factors, predict MHL; and
- Identify which groups of Australians, if any, have the poorest MHL and recommend targeted interventions to improve MHL.

The survey also incorporated questions to enable the researchers to identify:

- Whether respondents had previously received care from the RFDS for either a physical or mental illness;
- How far respondents would need to travel to access care for a mental disorder;
- How connected respondents were to their community;
- Causal attributions made by respondents regarding mental disorders; and
- Respondents' beliefs about the role of clinicians in maintaining patient confidentiality.

2.1 Hypotheses

It was hypothesised that some groups of Australians would have higher levels of MHL than other groups of Australians. It was hypothesised that the following factors would predict higher MHLS scores and better MHL:

- Remoteness (people in major cities will have higher MHLS scores and better MHL than people in rural and remote Australia);
- Age (younger people (<60 years) will have higher MHLS scores and better MHL than older people (60+ years);
- Gender (females will have higher MHLS scores and better MHL than males);
- Sexual orientation and gender identity (lesbian, gay, bisexual, transgender, gender diverse, intersex, queer, asexual and questioning (LGBTIQA+) people will have higher MHLS scores and better MHL than non-LGBTIQA+ people);
- Education (people with a bachelor's degree or higher level of education will have higher MHLS scores and better MHL than people without a bachelor's degree or higher level of education); and
- Experience with a mental disorder (people who have previously experienced a mental disorder will have higher MHLS scores and better MHL than those who have not previously experienced a mental disorder).

2.2 Structure of the report

The RFDS, in partnership with ACU, undertook a national MHL survey of a sample of Australians. The current report describes the research methodology and findings.

Chapter one introduces the research and describes its purpose. Chapter two presents the aims and hypotheses of the research. Chapter three provides the background to the research, including a definition of mental disorders and remoteness, and provides a brief review of previous MHL research. Chapter four includes a description of the methodology employed in the study. Chapter five presents the results of the MHL survey. Chapter six discusses the results and includes a comparison of findings from previous MHL survey studies. The final chapter summarises the research findings and outlines the clinical and policy implications of the findings.

Chapter 3: Background

3.1 Mental health, mental disorders and social determinants of health

Mental health describes a positive state of wellbeing that includes feeling good and functioning well.[43] When a person has high levels of mental health, they are able to cope with normal life stresses, work productively, contribute to their community and realise their potential.[43,44] High levels of mental health are associated with confidence and self-esteem, increased learning, creativity, improved physical health and life expectancy, and enable people to enjoy and appreciate other people, day-to-day life and their environment.[45-48]

Conversely, lower levels of mental health can cause distress and may affect a person's thinking, mood and behaviour.[46] This can lead to adverse impacts on day-to-day functioning, relationships, and physical health, and is a risk factor for premature death.[46]

A person with a clinically diagnosable condition related to their mental health is said to be experiencing a mental disorder, mental illness or mental or behavioural disorder[b]—these terms are often used interchangeably.[49]

There are several factors that may exacerbate mental health issues—these are different for everyone and may change over the lifespan.[50] Risk factors have been identified that may give rise to the onset and progression of a person's mental disorder. These risk factors include: family history; stressful events or changes in life circumstances (e.g. death of a partner, retirement, finishing school, pregnancy, trauma); age (prevalence rates of the most common mental disorders are highest in the early adult years); gender (women have higher rates of anxiety and depression than men); socioeconomic status (such as low income, unemployment, income inequality, low education, low social support); neighbourhood factors (such as inadequate housing, overcrowding, neighbourhood violence); physical health problems (including chronic diseases, poor diet, inadequate exercise); substance use; personality factors; changes in the brain; loneliness or isolation; domestic and family violence; bullying; unemployment; ethnicity (for Indigenous Australians, day-to-day and systemic racism and discrimination, disempowerment, cultural stresses and inhibited access to country) and sexuality (e.g. being LGBTIQA+).[29,50-55]

b The terms 'mental disorder,' 'mental illness' and 'mental and behavioural disorder' are used interchangeably in this report.

3.2 Prevalence of mental disorders

3.2.1 Australia

Each year, one in five (20%) Australians aged 16–85 years experiences a mental disorder. Of these people, 11.5% have one disorder and 8.5% have two or more disorders. Anxiety disorders (14.4%), affective disorders (such as depression) (6.2%) and substance use disorders (5.1%) are the most prevalent mental disorders.[2,56] Each year, about 0.45% of Australians will experience a less common mental disorder, such as psychosis, schizophrenia or bipolar disorder.[57] Around 2–3% of Australians have a severe mental disorder, 4–6% of Australians have a moderate disorder and 9–12% have a mild disorder.[58]

In 2017–2018, 4.2 million Australians received a prescription for a mental health–related issue.[58] During the same time period, there were 286,985 hospital emergency department (ED) presentations for mental and behavioural disorders.[56,59] The population-rate of mental health–related ED presentations for males (121.7 per 10,000 population) was higher than the rate for females (110.0 per 10,000 population).[56,59] More than half (53.5%) of mental health–related ED presentations had a principal diagnosis of either 'mental and behavioural disorders due to psychoactive substance use' or 'neurotic, stress-related and somatoform disorders'.[56,59] More than one-third (34.5%) of patients who presented to the ED with mental and behavioural disorders were subsequently admitted.[56,59]

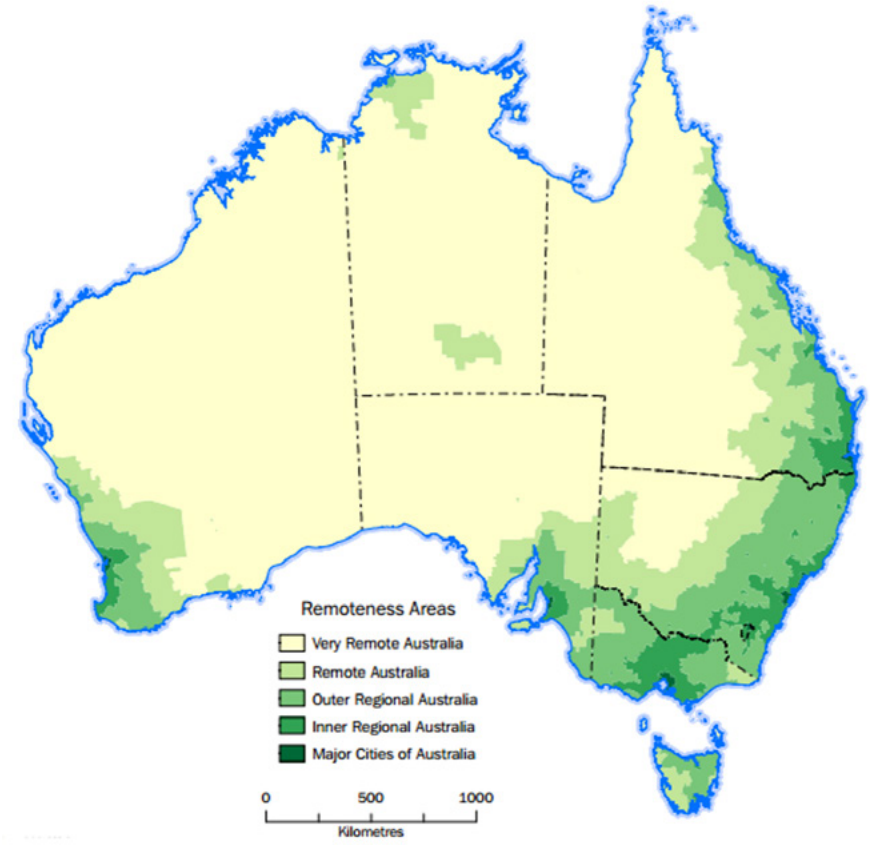
In 2017–2018, there were 336,000 separations[c] for mental healthcare.[60] More than half (58%) of these separations occurred in private hospitals.[60] 84% of mental healthcare separations in public hospitals involved a stay of at least one night.[60] More than half of all mental healthcare separations were for females.[60] The majority (95%) of mental healthcare separations had a principal diagnosis in the International Statistical Classification of Diseases and Related Health Problems, Tenth Revision, Australian Modification (ICD-10-AM) chapter mental and behavioural disorders, with 39% of these for mood (affective) disorders, which includes depression and bipolar disorder.[60]

c Separation is the term "used to refer to the episode of admitted patient care, which can be a total hospital stay (from admission to discharge, transfer or death) or a portion of a hospital stay beginning or ending in a change of type of care (for example, from acute to rehabilitation care). A same-day separation occurs when a patient is admitted to and separated from the hospital on the same date. An overnight separation occurs when a patient is admitted to and separated from the hospital on different dates. 'Separation' also means the process by which an admitted patient completes an episode of care by being discharged, dying, transferring to another hospital or changing type of care" (47).

3.2.2 Rural and remote mental health

The term 'rural and remote' is used to encompass all areas outside Australia's major cities. This includes areas classified as inner regional (RA2), outer regional (RA3), remote (RA4) and very remote (RA5) under the Australian Statistical Geography Standard (ASGS)[d] (Figure 3.1).

Figure 3.1. Remoteness areas of Australia



The evidence suggests that the prevalence of mental disorders in rural and remote Australia is similar to that in major cities.[2] While the prevalence of mental disorders is similar throughout Australia, rates of suicide and self-harm are higher in rural and remote areas, and increase with increasing remoteness.[30] Farmers, young men, older people and Indigenous Australians in remote areas are at greatest risk of completing suicide.[30,62] In 2010–2011, residents in very remote areas were almost twice as likely as those in major cities to die from suicide.[30]

Around two-thirds (65.6%) of mental health–related ED presentations in 2017–2018 were for people from major cities, with 3.7% for people from remote and very remote areas.[56,59] However, the rate of mental health–related ED presentations (per 10,000 population) for patients living in remote and very remote areas (203.6) was twice as high as for people living in major cities (101.3),[56,59] despite the fact that accessing an ED is significantly more complex for people in rural and remote Australia.

People living in very remote (814.6 per 1,000 population) areas were almost twice as likely as people living in major cities (415.0 per 1,000 population) to undergo a separation for any illness in 2017–2018.60 In 2016–2017, patients living in major cities (68.3 per 10,000 population) were 1.8 times as likely as people living in remote and very remote areas (37.2 per 10,000 population) to undergo an overnight mental health–related separation with specialised psychiatric care.[56]

d For more information on how the RFDS defines rural and remote Australia, go to: https://www.flyingdoctor.org.au/what-we-do/research/defining-rural-remote/.

Specifically, around 960,000 people in rural and remote Australia experience a mental disorder each year.[63] Although people living in rural areas score better on indicators for happiness,[64] and report higher levels of civic participation, social cohesion, social capital, volunteering and informal support from friends, neighbours and the community,[31] they experience unique circumstances that may impact on their mental health and wellbeing, including, for example, flood, fire, drought and economic variability, and these increase with increasing remoteness.[29,63] Despite greater exposure to some mental health risk factors, such as socioeconomic disadvantage, poor access to mental health services, high-risk occupations such as farming and exposure to environmental adversity, research has failed to consistently demonstrate higher rates of mental disorders amongst rural and remote Australians.[29,65] However, there is strong evidence mental health acuity is higher for people living in rural and remote Australia compared to people living in major cities.[28,29]

Additionally, people in rural and remote communities are less likely to seek help than their counterparts in major cities, for a range of reasons, including: poor availability of, and access to, primary healthcare and hospital services; limited supply of specialist professionals and mental health services, including fewer psychiatrists, psychologists and mental health nurses per head of population; a reluctance to seek help for mental disorders; concerns about stigma and privacy; distance and cost associated with travel to access services; perceived relative importance of other events, such as harvest time; and cultural barriers, especially for Indigenous Australians.[29,31,63,66]

Analysis of data regarding access to Medicare-subsidised mental health–specific services in 2016–2017 demonstrated that people living in inner regional areas were most likely to receive Medicare-subsidised mental health–specific services, followed by those living in major cities.[58] The rate of people receiving services decreased as remoteness increased, with people living in very remote areas least likely to receive Medicare-subsidised mental health–specific services.[58]

Poor access to mental health services is a well-recognised barrier to care for people in rural and remote areas. The National Mental Health Commission identified that “at a population level mental illness disproportionately affects those who already experience some level of disadvantage and who are often those with the least access to mental health support. Those living in rural, regional and remote communities have lower access to support for health problems compared with metropolitan areas”.[67]

3.2.3 Indigenous mental health

The mental health of Indigenous Australians warrants particular attention. Many Indigenous Australians conceptualise mental health differently to non-Indigenous Australians—they take a holistic view of overall health, with cultural, spiritual and social wellbeing acknowledged as integral components of overall health.[29] The term ‘social and emotional wellbeing’ (SEWB) is the framework through which mental health of Indigenous Australians is often described.[29,68] Indigenous Australians are impacted by additional social determinants of health that may influence their mental health and SEWB. These relate to the loss of language and connection to the land, environmental deprivation, spiritual, emotional and mental disconnectedness, a lack of cultural respect, lack of opportunities for self-determination, poor educational attainment, reduced opportunities for employment, poor housing and negative interactions with government systems.[29,68-70]

In 2017–2018, Indigenous Australians, who account for 3.3% of the Australian population, accounted for 10.9% of mental health–related ED presentations.[56,59] The rate of ED presentations for Indigenous Australians (455.9 per 10,000 population) was 4.3 times that of non-Indigenous Australians (106.8 per 10,000 population).[56,59]

Indigenous Australians (147.5 per 10,000 population) were 2.3 times as likely as non-Indigenous Australians (64.4 per 10,000 population) to undergo an overnight mental health–related separation with specialised psychiatric care in 2016–2017.[56]

3.3 Mental health literacy (MHL)

When considered in the complexity of rural and remote and Indigenous mental health or SEWB, having contemporary data on MHL by remoteness is important. Similarly, identifying the additional factors that impact MHL is crucial. Understanding Australians' knowledge of mental disorders has the potential to guide interventions to improve MHL. Such interventions aim to provide accurate, non-stigmatised information about mental disorders and recovery.[71] This knowledge also facilitates better targeting of services to improve mental health, for people experiencing a mental disorder.

A large number of mental health literacy studies have been conducted and reported on in the literature since the term 'mental health literacy' was first introduced in 1997. Results from these studies are presented at 3.4.

3.4 Measuring MHL

MHL is often assessed by presenting respondents with a questionnaire, which includes a case vignette depicting a person with a mental disorder (e.g. major depressive disorder, early schizophrenia, chronic schizophrenia, suicidal depression, anxiety), and asking them to respond to open-ended or forced-choice questions about the person in the vignette.[72] This is also known as the vignette interview. Alternatively, studies may use diagnostic labels as a stimulus for determining beliefs about mental disorders. In the latter case, respondents are either provided with the diagnosis of the person in a vignette, or they are asked about a named mental disorder, and required to answer a series of questions related to the disorder.

Respondents are usually asked to identify the problem described in unlabelled vignettes and may be asked to nominate the best sources of help for a person in a vignette or with a labelled problem. They may also be asked to rate whether various treatments would be helpful, to indicate their beliefs about risk factors, to provide their views about prognosis, to indicate their willingness to relate to, and attitudes toward, a person with the problem, to describe any personal contact they may have had with persons with similar symptoms to those described in the vignette or labelled condition, and to say whether they themselves had experienced such a problem.[72]

However, there are limitations to these approaches. The vignette interview is time-consuming to administer and has no scale-based scoring system.[73] It is therefore difficult to determine the extent to which respondents meet an established level of MHL.[72] To address these limitations, the current project incorporated the Mental Health Literacy Scale (MHLS) as part of its methodology.

Although the MHLS does not have a 'benchmark score,' that enables researchers to determine whether a person has 'good' MHL, an overall MHL score is generated for each respondent, which enables comparison between groups of respondents.

The MHLS has substantial methodological advantages in comparison to existing measures of MHL such as the vignette interview.[11] It has good psychometric properties and is easily administered and scored.[11] It is methodologically robust and has demonstrated good internal and test–retest reliability, and good validity and sensitivity.[11] It is a time-efficient means of assessing an individual's level of MHL.[11]3.5 Findings from previous MHL research

3.5 Findings from previous MHL research

3.5.1 MHL of the Australian general public

Multiple MHL surveys have been conducted in Australia, and internationally, since the construct was first proposed by Jorm and colleagues in 1997.[16] Initial results from a survey of the Australian general public in 1995 demonstrated that the general public:

- Had gaps in their knowledge regarding the symptoms of mental disorders;[5]
- Emphasised self-help over traditional and evidence-based medical treatments;[5,16]
- More often rated standard psychiatric treatments, such as antidepressants, antipsychotics, electroconvulsive therapy, and admission to a psychiatric ward as harmful rather than helpful;[16]
- Typically favoured psychosocial explanations over biological explanations in relation to the onset of a range of mental disorders;[5]
- More strongly emphasised social, environment and life events rather than biological factors when explaining the causation of different mental disorders, such as depression and schizophrenia;[5] and
- Had a poor understanding of mental health that impeded them seeking, and receiving, treatment.[5]

However, national monitoring of MHL by the Australian government, through subsequent MHL surveys (e.g. in 2003–2004, 2006, 2011), has shown "substantial improvements in population mental health literacy since 1995".[33,74,75]

For example, results of the 2011 survey of the general public in Australia[33] demonstrated that:

- Almost 75% of respondents used the correct label for depression;[33,75]
- Around one-third of respondents correctly labelled the schizophrenia and post-traumatic stress disorder vignettes;[33,75]
- Around 10% of respondents were able to correctly label social phobia;[33,75]
- General practitioners (GPs), counsellors, antidepressants, antipsychotics (for schizophrenia) and lifestyle interventions such as physical activity, relaxation and getting out more were rated as helpful treatments for the disorders;[33,75] and
- Respondents were optimistic about recovery following treatment, although relapse was seen as likely.[33,75]

Analysis of results from the 1995 and 2011 surveys of the Australian general public demonstrated:

- Increased rates of correct identification of depression between 1995 and 2011;[75]
- Increased rates of correct identification of the early schizophrenia vignette as 'psychosis' or 'schizophrenia' between 1995 and 2003–2004 and between 1995 and 2011;[75]
- Increased beliefs in the likely helpfulness of GPs, pharmacists, counsellors, social workers, telephone counselling, psychiatrists, psychologists and close friends between 1995 and 2011;[75] and
- The general public moved closer to the beliefs of health professionals regarding the likely helpfulness of GPs, psychiatrists and counsellors, and regarding the likely helpfulness of medications, including antidepressants and antipsychotics, between 1995 and 2011.[75]

Analysis of results from the 2003–2004 and 2011 surveys of the Australian general public regarding stigma and social distance demonstrated:

- Reduction in the desire for social distance from those with mental disorders;[75] and
- Increases in beliefs about dangerousness and unpredictability of people with mental disorders.[75]

3.5.2 MHL of health professionals in Australia

Results from MHL surveys comparing the MHL of the Australian general public to health professionals demonstrated large differences in beliefs about the helpfulness of treatments for mental disorders between the groups.[40] When compared with health professionals, the general public generally had poorer knowledge and beliefs about mental disorders,[40] including less favourable beliefs about the helpfulness of evidence-based treatments, less favourable beliefs about the helpfulness of some healthcare professionals, and higher levels of stigma and discrimination.[76]

However, recent research has indicated that the gaps between public and professional views about mental disorders have considerably reduced, with the general public moving closer to the beliefs of health professionals,[33,74] and demonstrating increases in beliefs about the helpfulness of GPs, psychiatrists and counsellors, and beliefs in the likely helpfulness of medications, particularly antidepressants and antipsychotics.[75]

Chapter 4: Methods

In 2018, the RFDS, in partnership with ACU, sought to measure the MHL of a sample of the Australian general public. To achieve this, we developed an online MHL survey. The survey comprised 71 questions including:

> Demographic questions;
> The MHLS (35 questions);
> Additional mental illness diagnosis and help-seeking questions;
> Questions about care received from the RFDS;
> Travel distance to nearest services for a mental disorder;
> Respondent's community connections; and
> Revised Causal Dimension Scale (CDS-II).

The survey was developed using SurveyMonkey—a cloud-based online survey development tool that collects data and displays responses in real time (see Appendix 1). Paper-based copies of the survey were available to respondents who did not have access to the internet.

Sampling covered all states and territories and all remoteness categories. The postcode for each respondent's place of residence was used to classify their location according to the 2011 ASGS.

4.1 Survey questions

4.1.1 Demographic questions

In order to capture the potential impact of some of the social determinants of health on the MHL of respondents, respondents were asked several demographic questions regarding their age, sexual orientation and gender identity, Indigenous status, town of residence, postcode of residence, state/territory of residence and level of education.

4.1.2 Mental Health Literacy Scale (MHLS)

The MHLS[11] was developed in 2015 by O'Connor and Casey[11] and was used with permission. Respondents were asked to complete the 35 questions in the MHLS, which addressed:

- Ability to recognise disorders (social phobia, generalised anxiety disorder, major depressive disorder, personality disorders, persistent depressive disorder (dysthymia), agoraphobia, bipolar disorder and substance use disorder) (8 questions);
- Knowledge of where to seek information (4 questions);
- Knowledge of risk factors and causes (2 questions);
- Knowledge of self-treatment (2 questions);
- Knowledge of professional help available (3 questions); and
- Attitudes that promote recognition or appropriate help-seeking behaviour (16 questions). This included nine questions regarding stigma and seven regarding social distance.

All questions were forced-choice. Responses were rated on either a four- or five-point Likert scale, depending on the questions asked (Table 4.1).

Table 4.1. MHLS questions, measurement and response categories

Questions	Response Measurement	Response categories
Ability to recognise disorders (questions 1–8)	4-point Likert scale	> Very unlikely > Unlikely > Likely > Very likely
Knowledge of where to seek information (questions 16–19)	5-point Likert scale	> Strongly disagree > Disagree > Neither agree nor disagree > Agree > Strongly agree
Knowledge of risk factors and causes (questions 9–10)	4-point Likert scale	> Very unlikely > Unlikely > Likely > Very likely
Knowledge of self-treatment (questions 11–12)	4-point Likert scale	> Very unhelpful > Unhelpful > Helpful > Very helpful
Knowledge of professional help available (questions 13–15)	4-point Likert scale	> Very unlikely > Unlikely > Likely > Very likely
Attitudes that promote recognition or appropriate help-seeking behaviour (questions 20–35)	5-point Likert scale	> Definitely unwilling > Unwilling > Neither willing nor unwilling > Willing > Definitely willing

Questions were scored based on responses. Total score was produced by summing all items (some questions were reverse scored).[11] Questions with a 4-point scale were rated 1–very unlikely/unhelpful, 4–very likely/helpful; and for a 5-point scale were rated 1–strongly disagree/definitely unwilling, 5–strongly agree/definitely willing. Reverse scored items included questions 10, 12, 15 and 20–28. Scores could potentially range from 35 to 160. A higher score indicated better MHL.[11]

All vignettes provided in the survey were accurate representations of the mental illnesses stated in the vignettes.

4.1.3 Help-seeking by self and family/friends

Respondents were asked 10 questions regarding their help-seeking intentions for themselves, and family/friends, for a range of mental disorders.

4.1.4 Mental illness diagnosis and help-seeking

Respondents were asked about their previous experience with a mental disorder, including whether they had previously been diagnosed with a mental disorder (lived experience), whether treatment was sought and the type of treatment received.

4.1.5 Care received from RFDS

Respondents were asked whether they had received care from RFDS and for what kind of illness (physical, mental, both).

4.1.6 Travel distance to nearest care for a mental disorder

Respondents were asked how far they would need to travel to access care for a mental disorder. Responses categories were: less than 1 hour; 1 hour to less than 2 hours; 2 hours to less than 3 hours; 3 hours to less than 4 hours; 4 hours to less than 5 hours; 5 hours or more.

4.1.7 Community connections

Respondents were asked three questions about their connection to the community, including whether they felt connected to their community, whether they would like to be more connected and whether there were options for them to be more connected.

4.1.8 Revised Causal Dimension Scale (CDS-II)

The CDS-II was incorporated into the MHL survey. It is a measure that was originally designed to assess how a person perceives the causes he or she has stated for an event.[11] It included questions on causality, stability, personal control and external control for several mental disorders. Responses to the CDS-II were analysed by students from ACU for their fourth-year psychology course (Honours), and are not included in this report as they are reported separately.

4.2 Participant inclusion and exclusion criteria

All Australian adults with the capacity to consent to participating in the MHL survey were eligible to participate. Table 4.2 describes the inclusion and exclusion criteria.

Table 4.2. Participant inclusion and exclusion criteria

Inclusion criteria	Exclusion criteria
> Aged 18 years or older > Capacity to consent to participate > May or may not have a mental disorder or previous experience with a mental disorder in self and others > May or may not be receiving treatment for a mental disorder at present > Access to the internet or attended an RFDS primary healthcare clinic, where paper-based versions of the survey were available	> Aged <18 years > No capacity to consent to participate—low psychological resources, dementia

4.3 Sampling procedure

The research team implemented snowball sampling across all remoteness areas. The survey was distributed through RFDS digital media channels, ACU digital media channels and other stakeholders' digital media channels (e.g. National Farmers' Federation; National Rural Health Alliance, primary health networks, Indigenous organisations, etc.).

People could also participate by completing a paper-based copy of the survey that was available from RFDS primary healthcare clinics.

The web link was sent to multiple organisations who were asked to place it on their social media and digital channels, with a description of the survey and an invitation for people to participate in the survey. The web link and associated details were also provided to internal staff within the RFDS, who were asked to distribute it within their networks.

Participation was voluntary and respondents were instructed to leave a response field blank if they did not wish to answer a question. Informed consent was required prior to completing the survey. Specifically, respondents were asked three pre-survey questions, regarding whether they had read and understood the participant information sheet and whether they wished to participate. Any respondents who answered 'no' to these questions were automatically redirected to the end of the survey and were unable to complete the survey.

No identifying information was collected regarding a person's name, address or contact details.

Five $100 Coles charity gift cards were offered as an incentive to participate in the survey. Respondents who completed the survey, and wished to be included in the draw to receive one of the gift cards, entered their email address into a separate database. At the completion of the study, five people were randomly chosen and provided with the gift vouchers.

4.4 Resources to improve mental health

After completing the survey, respondents were provided with telephone contact details for Lifeline and BeyondBlue, as well as a link to the e-Mental Health in Practice (eMHPrac) website, which is funded by the Australian Government in partnership with the Black Dog Institute, University Centre for Rural Health North Coast, Menzies School of Health Research and Queensland University of Technology.[77] eMHPrac lists evidence-based online resources (such as e-mental health interventions) and telehealth services aimed at improving mental health.[77] Some of the programs, services, tools or applications listed on the website are self-driven, while others may include real-time or delayed interaction or guidance with a clinician or other support person.[77]

Several online evidence-based interactive self-help programs, such as moodgym,[e] could be accessed by respondents immediately, at any time and from any place.

Evidence-based culturally appropriate resources were also accessible through eMHPrac. For example, the AIMhi Stay Strong App is an example of a culturally adapted e-mental health intervention for Indigenous Australians. Similarly, iBobbly is a suicide prevention app designed especially for use by Indigenous people on mobile phones or tablet devices.

e For more information, see: https://moodgym.com.au/.

4.5 Ethics

The ethical aspects of this study were approved by the ACU Human Research Ethics Committee (HREC) (Ethics Register Number 2018-108E). The study design conformed to the National Health and Medical Research Council (NHMRC) National Statement on Ethical Conduct of Research Involving Humans (2007) (see https://www.nhmrc.gov.au/guidelines-publications/e72).

4.6 Data analysis

Data were entered into Microsoft Excel 2016 and exported into IBM SPSS Statistics for Windows, Version 25.0, and Stata15 for further analysis and reporting.

Data from the 2016 Census and Socio-Economic Indexes for Areas (SEIFA) were extracted from the Australian Bureau of Statistics (ABS). Data cubes were used to extract relevant population statistics for the age-matched population (aged 18 years and over). Participants' postcodes were used to identify areas with lower socioeconomic status, classified as the lowest quintile (first and second decile), based on SEIFA Index of Relative Socio-Economic Advantage and Disadvantage.

Data from the Australian National Health Survey (NHS) were examined to compare the prevalence of mental disorders among study respondents to the Australian population.

Descriptive statistics were used to summarise the responses and results were reported as number (n) and percentage (%), for categorical data, or mean (m) and standard deviation (SD) for continuous variables. Multivariate logistic and linear regression models were used to assess the impact of various demographic factors on MHL, stigma and other outcomes of interest. Levels of statistical significance were set at $p<0.05$.

All analyses used unweighted data and excluded missing cases (e.g. where age/gender was unknown).

Not all respondents answered all questions, therefore the number of responses to questions was variable.

Chapter 5: Results

The following section describes the results from the national MHL survey.

The survey was conducted Australia-wide, over a nine-week period between 26 May and 31 July 2018. A total of 2,576 respondents participated. Of these, 10 respondents answered ‘no’ to at least one of the three pre-survey (informed consent) questions, regarding whether they had read the participant information sheet, had understood the participant information sheet and whether they wished to participate. The 10 respondents who answered ‘no’ to these questions were automatically redirected to the end of the survey and were unable to complete the survey. A further 144 people consented, but did not answer any questions. The final sample size, excluding those who did not consent or did not provide any responses beyond the consent, was 2,422.

5.1 Demographic data

Respondents from all states and territories participated in the study. The vast majority came from Queensland (22.1%), New South Wales (20.6%) and Victoria (19.0%) (see Figures 5.1 and 5.2). The remaining states and territories were also well represented.

Figure 5.1. State or territory of respondents

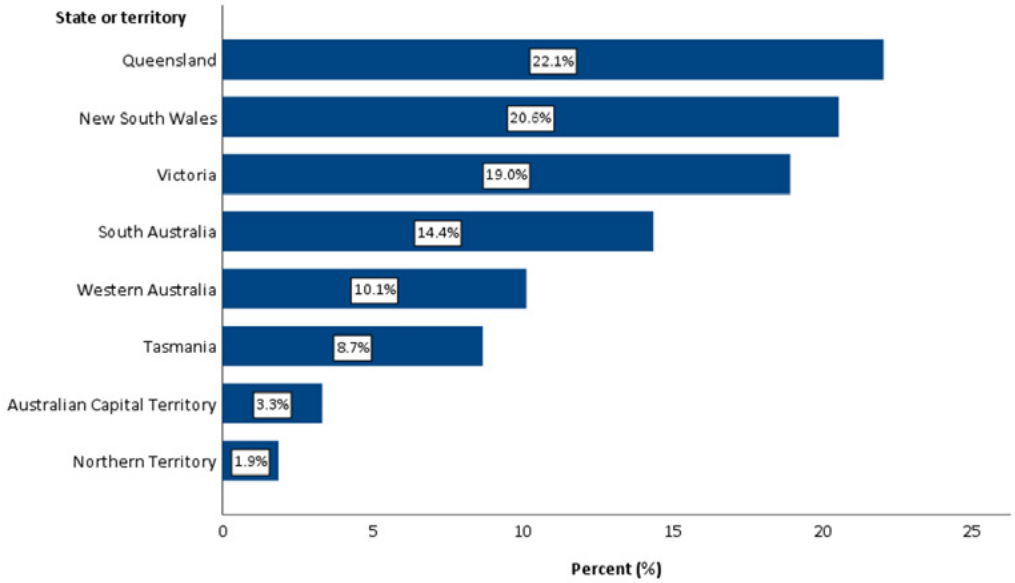
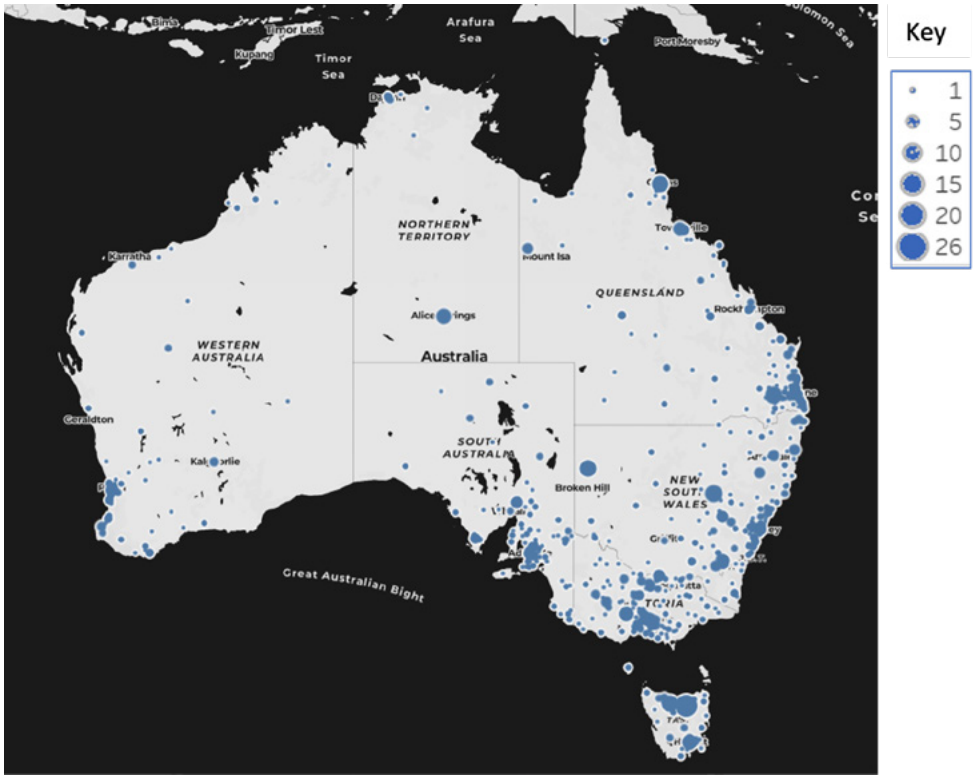


Figure 5.2. Usual place of residence of respondents



Additional demographic data are presented in Table 5.1 and summarised below:

- Respondents were located across all remoteness categories.
  - 43.9% were from major cities;
  - 48.7% were from inner (30.2%) and outer regional (18.5%) areas; and
  - 7.4% were from remote (3.9%) and very remote (3.5%) areas.
- Respondents were aged 18 years or older, with 50.5% aged 50 years and over.
- Almost three-quarters (74.7%) of the study cohort were female which is significantly higher than the overall Australian population of the same age (51.2%, $p<0.001$).
- 89.7% of respondents were heterosexual and the remainder self-identified as LGBTIQA+.
- Similar to the overall Australian population, 97.2% of respondents were non-Indigenous and 2.8% were Indigenous.
- Educational attainment ranged from 'still attending school' (1%) to 'higher degree (Masters, PhD)' (16.1%), with 33.2% holding a bachelor's degree. The proportion of respondents with tertiary qualifications was higher compared to the overall Australian population (30.9%, $p<0.001$) of similar age.
- More than half of all respondents had been diagnosed with a mental disorder (52.3%), which is 2.6 times higher than the national prevalence (20.1%).
- Almost all respondents who were diagnosed with a mental disorder (96.9%) had received treatment for their disorder.

Table 5.1. Demographic characteristics of MHL survey respondents (2018) compared to the general population from the 2016 Census, for adults aged 18+ years

Characteristics	Study cohort (n=2,422)		2016 Census data for those aged 18+ (n=18,190,220)
	Number (n)	Percent (%)*	Percent (%)
State of residence			
ACT	80	3.3	1.7
NSW	495	20.6	32.0
NT	45	1.9	0.9
QLD	531	22.1	19.5
SA	346	14.4	7.3
TAS	209	8.7	2.2
VIC	456	19.0	25.5
WA	244	10.1	10.5
Remoteness category			
Major city	1,037	43.9	–
Inner regional	717	30.3	–
Outer regional	436	18.4	–
Remote	92	3.9	–
Very remote	83	3.5	–
Age group			
18–19	56	2.3	3.2
20–24	207	8.6	8.6
25–29	159	6.6	9.1
30–34	156	6.4	9.4
35–39	161	6.7	8.6
40–44	179	7.4	8.7
45–49	279	11.5	8.7
50–54	276	11.4	8.4
55–59	325	13.4	8
60–64	287	11.9	7
65–69	186	7.7	6.5
70–74	97	4.0	4.9
75+	51	2.1	8.8
Age group (consolidated)			
<60	1,798	74.3	72.7
60+	621	25.7	27.2
Indigenous status			
Non-Indigenous	2,342	97.2	97.2
Aboriginal	59	2.4	2.4
Torres Strait Islander	3	0.1	0.1
Aboriginal and Torres Strait Islander	5	0.2	0.2
Indigenous status (consolidated)			
Non-Indigenous	2,342	97.2	–
Indigenous	67	2.8	2.8
Gender			
Male	597	24.7	48.8
Female	1,801	74.7	51.2
Other	15	0.6	–

Characteristics	Study cohort (n=2,422)		2016 Census data for those aged 18+ (n=18,190,220)
	Number (n)	Percent (%)*	Percent (%)
Sexuality			
Heterosexual	2,167	89.7	–
Gay	47	1.9	–
Lesbian	55	2.3	–
Bisexual	111	4.6	–
Other	36	1.5	–
Sexuality (consolidated)			
Heterosexual	2,167	89.7	–
Non-heterosexual	249	10.3	–
Education			
Still at school	24	1.0	–
Left school before completing year 12	211	8.8	–
Secondary school certificate	263	10.9	15.7
Trade certificate/ apprenticeship	145	6.0	15.8
Other certificate	262	10.9	–
Associate/Undergrad diploma	272	11.3	8.9
Bachelor's degree	800	33.2	22.0
Higher degree (Masters, PhD)	388	16.1	
Other	44	1.8	–
Education (consolidated)			
Higher education (bachelor's or higher degree)	1,188	49.3	22.0
No	1,221	50.7	78.0
History of mental illness			
Yes	1,255	52.3	–
No	1,077	44.8	–
Don't know	70	2.9	–
History of mental illness (consolidated)			
Yes	1255	52.2	–
No/don't know	1,147	47.8	–
Treatment received (if diagnosed)			
Yes	1,217	96.9	–
No	38	3.1	–
SEIFA (advantage–disadvantage area)			
Lowest quintile (0–20%)	474	20.2	–
Other	1,871	79.8	–

*Of those with available data.

In terms of gender differences, the results show clear differences in the educational qualifications, and diagnosis of a mental disorder, of males versus females.[f]

There were significant gender differences in levels of education between males and females ($p < 0.05$). Females were significantly more likely to hold a bachelor's degree than males—36.7% versus 22.7%—while males were significantly more likely to hold a trade certificate/ apprenticeship than females—14.1% versus 3.2%.

There were significant gender differences in diagnosis of a mental disorder between males and females ($p < 0.05$). Females were significantly more likely to be diagnosed with a mental disorder than males—55.4% versus 42.3%.

5.2 MHLS

MHLS items were summed and scored according to the protocol developed by O'Connor and Casey.[11] The MHLS has a possible score range of 35–160. Higher scores indicate better MHL.[11]

1,905 (73.9%) respondents completed all items in the MHLS with the mean (SD) score of 133.65 (12.4).

The impact of demographic factors on MHLS score is presented in Table 5.2 and demonstrates that:

- Respondents aged 60 years and over had significantly lower MHLS scores compared to those aged under 60 years (129.5 vs 135.0, $p<0.001$);
- Females had significantly higher MHLS scores than males (135.2 vs 128.2, $p<0.001$);
- Respondents who identified as LGBTIQA+ had significantly higher MHLS scores than non-LGBTIQA+ respondents (138.5 vs 133.1, $p<0.001$);
- Indigenous Australians had significantly lower MHLS scores than non-Indigenous Australians (129.5 vs 133.8, $p<0.05$);
- Respondents with a bachelor's degree or higher level of education had significantly higher MHLS scores than respondents without a tertiary education (136.2 vs 131.0, $p<0.05$);
- Respondents with a previous diagnosis of a mental disorder had significantly higher MHLS scores than respondents who had not been diagnosed with a mental disorder (136.1 vs 130.6, $p<0.001$); and
- There was no impact of remoteness on MHLS scores.

f Due to the small number of respondents who identified as 'other' (n=15), they were excluded from all further analyses.

Table 5.2. Impact of demographic factors on MHLS score

Demographic factors	Number (n)	MHLS score mean (SD)	Regression	
			B (95%CI)	*p*
Age				
<60	1,441	135.0 (12.0)	0[1]	
60+	461	129.5 (13.1)	–3.1 (–4.4 to –1.9)	<0.001
Gender				
Male	449	128.5 (13.5)	0[1]	
Female	1,436	135.2 (11.5)	5.1 (3.9 to 6.4)	<0.001
LGBTIQA+				
No	1,693	133.1 (12.4)	0[1]	
Yes	209	138.5 (10.7)	4.6 (2.8 to 6.3)	<0.001
Indigenous				
No	1,845	133.8 (12.3)	0[†]	
Yes	52	129.5 (13.1)	–2.9 (–5.8 to –0.1)	<0.05
Bachelor's degree or higher level of education				
No	935	131.0 (12.9)	0[†]	
Yes	967	136.2 (11.2)	4.1 (3.0 to 5.1)	<0.001
Remoteness				
Major city	808	133.9 (12.0)	0[†]	
Inner regional	572	134.3 (12.4)	0.6 (–0.7 to 1.8)	0.366
Outer regional	353	132.1 (12.7)	–1.4 (–2.8 to 0.03)	0.055
Remote	76	136.0 (13.2)	1.8 (–0.8 to 4.5)	0.178
Very remote	73	131.3 (12.6)	–2.1 (–4.9 to 0.6)	0.130
Previous diagnosis of mental disorder				
No	872	130.8 (12.6)	0[†]	
Yes	1,026	136.1 (11.6)	4.2 (3.2 to 5.3)	<0.001

[†]Reference category.

The results are based on multivariable regression analysis. Those with missing data were excluded.

5.2.1 Recognition of mental disorders

As part of the MHLS, respondents were asked to identify the likelihood that the vignettes presented were representative of the conditions they described (Table 5.3). Almost one in five respondents (18.6%) thought that the depression vignette was unlikely to represent the stated disorder. Generally, respondents thought it was likely that the vignettes accurately represented the stated mental disorders (81.4%–98.3%). Around one in ten respondents thought that the social phobia (11.1%), agoraphobia (10.2%) and personality disorders (8.5%) vignettes were unlikely to represent the stated disorders.

Table 5.3. Percentage of respondents who thought the vignettes provided in the survey were unlikely ('very unlikely' or 'unlikely') and likely ('very likely' and 'likely') to represent the stated disorders

Disorder	Unlikely (%)	Likely (%)
Social phobia	11.1	88.9
Generalised anxiety disorder	3.1	96.8
Major depressive disorder	18.6	81.4
Agoraphobia	10.2	89.8
Bipolar disorder	1.7	98.3
Substance abuse disorder	3.2	96.8
Personality disorders	8.5	91.5
Dysthymia	3.7	96.3

Table 5.4 shows the odds ratios (ORs) from multiple logistic regression analyses predicting recognition of the eight mental disorders by survey respondents. Predictors of recognition for seven of the eight mental disorders were identified.

Using a significance level of $p<0.05$, the main predictors of recognition of different mental disorders were related to age, gender, sexuality, education, previous diagnosis of a mental disorder and remoteness of residence.

Respondents aged 60+ years were significantly more likely than respondents aged <60 years to recognise substance abuse disorder (OR 2.1) but less likely to recognise personality disorder (OR 0.6).

Females were significantly more likely than males to recognise generalised anxiety disorder (OR 2.7), agoraphobia (OR 1.8), bipolar disorder (OR 2.7), substance abuse disorder (OR 2.1) and personality disorder (OR 1.6). Generally, females were 1.7 times more likely to recognise dysthymia compared to males, but this fell short of statistical significance ($p=0.051$).

Respondents who identified as LGBTIQA+ were more likely than heterosexual respondents to recognise major depressive disorder (OR 1.8).

Respondents with a bachelor's degree or higher level of education were significantly more likely than those without a high level of education to recognise generalised anxiety disorder (OR 1.9) and substance use disorder (OR 1.7) and significantly less likely to recognise agoraphobia (OR 0.7).

Respondents with a previous diagnosis of a mental disorder were significantly more likely than respondents who had never been diagnosed with a mental disorder to recognise major depressive disorder (OR 1.3) and personality disorder (OR 1.4).

Respondents living in very remote Australia were significantly less likely than respondents in major cities to recognise social phobia (OR 0.4) and respondents in outer regional areas were significantly less likely than respondents in major cities to recognise bipolar disorder (OR 0.4).

Indigenous status did not predict recognition of mental disorders.

Table 5.4. Odds ratios (and 95% confidence intervals) from logistic regression analyses predicting recognition of eight mental disorders by survey respondents

Disorder Predictor	Social phobia	Generalised anxiety disorder	Major depressive disorder	Agoraphobia	Bipolar disorder	Substance abuse disorder	Personality disorder	Dysthymia
Age								
<60 years	1.0[†]	1.0[†]	1.0[†]	1.0[†]	1.0[†]	1.0[†]	1.0[†]	1.0[†]
60+ years	0.8 (0.6–1.1)	1.0 (0.6–1.8)	0.8 (0.6–1.1)	1.2 (0.9–1.8)	1.5 (0.7–3.6)	**2.1 (1.1–4.1)***	**0.6 (0.4–0.8)****	0.9 (0.5–1.6)
Gender								
Male	1.0[†]	1.0[†]	1.0[†]	1.0[†]	1.0[†]	1.0[†]	1.0[†]	1.0[†]
Female	1.0 (0.7–1.4)	**2.7 (1.6–4.6)*****	0.8 (0.6–1.1)	**1.8 (1.3–2.4)*****	**2.7 (1.3–5.6)****	**2.1 (1.2–3.6)****	**1.6 (1.1–2.2)****	1.7 (1.0–2.8)
Sexuality								
Heterosexual	1.0[†]	1.0[†]	1.0[†]	1.0[†]	1.0[†]	1.0[†]	1.0[†]	1.0[†]
LGBTIQA+	1.6 (0.9–2.9)	1.7 (0.6–4.8)	**1.8 (1.2–2.9)****	1.2 (0.7–2.0)	1.4 (0.4–4.8)	1.3 (0.6–3.2)	0.9 (0.5–1.6)	1.3 (0.6–3.2)
Education								
No bachelor's degree or higher level of education	1.0[†]	1.0[†]	1.0[†]	1.0[†]	1.0[†]	1.0[†]	1.0[†]	1.0[†]
Bachelor's degree or higher level of education	1.1 (0.8–1.4)	**1.9 (1.1–3.4)***	0.9 (0.7–1.2)	**0.7 (0.5–0.97)***	1.6 (0.8–3.3)	**1.7 (1.0–2.8)***	1.1 (0.8–1.5)	0.8 (0.5–1.6)
Indigenous status								
Non-Indigenous	1.0[†]	1.0[†]	1.0[†]	1.0[†]	1.0[†]	1.0[†]	1.0[†]	1.0[†]
Indigenous	1.2 (0.5–3.0)	0.4 (0.1–1.2)	0.6 (0.3–1.1)	1.6 (0.6–4.4)	0.3 (0.1–1.1)	0.7 (0.2–2.3)	1.2 (0.4–3.5)	1.0 (0.2–4.1)
Diagnosis of mental disorder								
No previous diagnosis of a mental disorder	1.0[†]	1.0[†]	1.0[†]	1.0[†]	1.0[†]	1.0[†]	1.0[†]	1.0[†]
Previous diagnosis of a mental disorder	1.3 (0.99–1.7)	1.0 (0.6–1.7)	**1.3 (1.1–1.7)***	1.1 (0.8–1.5)	1.1 (0.5–2.1)	0.8 (0.5–1.3)	**1.4 (0.02–1.9)***	1.4 (0.9–2.2)
Remoteness								
Major city	1.0[†]	1.0[†]	1.0[†]	1.0[†]	1.0[†]	1.0[†]	1.0[†]	1.0[†]
Inner regional	1.0 (0.7–1.3)	0.7 (0.4–1.3)	0.8 (0.6–1.1)	1.0 (0.7–1.5)	0.8 (0.3–2.0)	0.7 (0.4–1.2)	0.9 (0.6–1.3)	1.3 (0.7–2.3)
Outer regional	1.1 (0.8–1.7)	0.8 (0.4–1.5)	1.2 (0.9–1.7)	0.7 (0.5–1.1)	**0.4 (0.2–0.9)***	0.6 (0.3–1.1)	1.0 (0.6–1.5)	1.3 (0.6–2.4)
Remote	1.9 (0.7–4.7)	1.0 (0.2–4.3)	0.7 (0.4–1.2)	0.6 (0.3–1.2)	0.5 (0.1–2.2)	2.2 (0.3–16.6)	1.3 (0.5–3.3)	1.1 (0.3–3.6)
Very remote	**0.4 (0.3–0.8)***	0.6 (0.2–2.1)	0.8 (0.5–1.5)	0.8 (0.4–1.6)	N/A	1.1 (0.2–4.6)	0.7 (0.3–1.4)	0.6 (0.2–1.5)

[†]Reference category; values highlighted in bold are statistically significant: *p<0.05, **p<0.01, ***p<0.001.

5.2.2 Knowledge of where to seek information

The majority of respondents agreed that they were:

- Confident knowing where to seek information about mental illness;
- Confident using the computer or telephone to seek information about mental illness; and
- Confident they had access to resources (Table 5.5).

However, one in eight respondents (12.1%) disagreed that they were confident 'attending face-to-face appointments to seek information about a mental illness', such as visiting the GP.

Table 5.5. Percentage of respondents who disagree ('strongly disagree' or 'disagree') and agree ('agree' or ''strongly agree') with a selection of help-seeking statements

Statement	Disagree (%)	Agree (%)
I am confident that I know where to seek information about mental illness	5.2	87.3
I am confident using the computer or telephone to seek information about mental illness	4.0	89.8
I am confident attending face-to-face appointments to seek information about mental illness (e.g., seeing the GP)	12.1	77.2
I am confident I have access to resources (e.g., GP, internet, friends) that I can use to seek information about mental illness	4.0	89.8

Note: 'Neither agree nor disagree' responses are not shown.

68.3% of respondents agreed ('agree' or 'strongly agree') with all four statements in Table 5.5 and 30.5% agreed with at least one statement. Less than 1% (0.8%, n=16) disagreed ('disagree' or 'strongly disagree') with all four statements, none of whom were from the ACT or NT.

There was a strong correlation between level of education and confidence in finding the information described in the help-seeking statements. Specifically, 72.8% of those with a bachelor's degree or higher level of education were able to find information using all four domains, compared to 63.6% of those with other forms of education ($p<0.001$).

Table 5.6. Percentage of respondents who thought the following statements were unlikely ('very unlikely' or 'unlikely') and likely ('very likely' and 'likely')

Statement	Disagree (%)	Agree (%)
To what extent do you think it is likely that in general, in Australia, men are more likely to experience an anxiety disorder compared to women?	60.7	39.3
To what extent do you think it is likely that in general in Australia, women are more likely to experience a mental illness of any kind compared to men?	40.8	59.2

Respondents who thought it was likely that 'men are more likely to experience an anxiety disorder' were more likely to be male ($p<0.001$) with no bachelor's degree or higher level of education ($p<0.001$), and with a history of a mental health diagnosis ($p<0.01$).

At the same time, respondents who thought it was likely 'that in general in Australia, women are more likely to experience a mental illness of any kind compared to men' were likely to be female ($p<0.001$), aged under 60 years ($p<0.001$), with no history of a mental health diagnosis ($p<0.001$).

5.2.3 Knowledge of self-treatment

In terms of self-treatment, the majority of respondents (95.2%) agreed that it would be helpful for someone to 'improve their quality of sleep if they were having difficulties managing their emotions' (Table 5.7). More than one in three (35.4%) respondents agreed that it would be helpful for someone to 'avoid all activities or situations that made them feel anxious if they were having difficulty managing their emotions'.

Table 5.7. Percentage of respondents who believe the following interventions would be unhelpful ('very unhelpful' and 'helpful') or helpful ('very helpful' or 'helpful')

Statement	Disagree (%)	Agree (%)
To what extent do you think it would be helpful for someone to…		
Improve their quality of sleep if they were having difficulties managing their emotions	4.8	95.2
Avoid all activities or situations that made them feel anxious if they were having difficulties managing their emotions	64.6	35.4

Respondents who were female (OR 1.9, 95%CI (1.2–2.9), $p<0.01$), or had a bachelor's degree or higher level of education (OR 2.1, 95%CI (1.3–3.2), $p<0.01$), were more likely than males, or respondents without a bachelor's degree or higher level of education, to agree that it would be helpful to improve quality of sleep if they were having difficulties managing their emotions.

Respondents who were female (OR 0.8, 95%CI (0.6–0.95), $p<0.05$), aged 60 years or older (OR 1.7, 95%CI (1.4–2.1), $p<0.001$), identified as LGBTIQA+ (OR 0.6, 95%CI (0.4–0.8), $p<0.01$) or had a bachelor's degree or higher level of education (OR 0.5, 95%CI (0.4–0.6), $p<0.001$) were more likely to agree that 'people should avoid all activities or situations that made them feel anxious if they were having difficulties managing their emotions'.

5.2.4 Knowledge of professional help available

Regarding knowledge of professional help, the majority (94.8%) of respondents thought that it was likely that 'cognitive behavioural therapy (CBT) is a therapy based on challenging negative thoughts and increasing helpful behaviours' (Table 5.8). The majority of respondents (98.4%) thought it was likely that 'a mental health professional could break confidentiality if you are at immediate risk of harm to yourself or others'. One in five (22.2%) respondents thought it was likely that 'a mental health professional could break confidentiality if your problem is not life-threatening and they want to assist others to better support you'.

Table 5.8. Percentage of respondents who thought it was unlikely ('very unlikely' or 'unlikely') and likely ('very likely' and 'likely') that the following statements are true

Statement	Disagree (%)	Agree (%)
CBT is a therapy based on challenging negative thoughts and increasing helpful behaviours	5.2	94.8
A mental health professional could break confidentiality … if you are at immediate risk of harm to yourself or others	1.6	98.4
A mental health professional could break confidentiality … if your problem is not life-threatening and they want to assist others to better support you	77.8	22.2

5.2.5 Attitudes that promote recognition or appropriate help-seeking behaviour

5.2.5.1 Stigma

The majority of respondents disagreed with the stigma statements (Table 5.9). Specifically, 97.0% disagreed that 'a mental illness is not a real medical illness', 95.2% disagreed that 'a mental illness is a sign of personal weakness', and 94.9% of respondents disagreed that 'people with a mental illness could snap out of it if they wanted to'. Almost one in five (18.3%) respondents agreed that 'if I had a mental illness, I would not tell anyone', while 29.6% neither agreed nor disagreed with the statement. Almost two-thirds (63.9%) of respondents disagreed that 'people with a mental illness are dangerous', while 3.1% agreed with the statement. One-third (33%) of respondents neither agreed nor disagreed regarding perceived dangerousness of a person with a mental illness.

Table 5.9. Percentage of respondents who disagree ('strongly disagree' or 'disagree') and agree ('agree' or 'strongly agree') with a selection of attitude statements about a person with a mental illness

Statement		Disagree (%)	Neither agree nor disagree (%)	Agree (%)
1.	People with a mental illness could snap out of it if they wanted	94.9	3.7	1.4
2.	A mental illness is a sign of personal weakness	95.2	3.4	1.4
3.	A mental illness is not a real medical illness	97.0	2.2	0.8
4.	People with a mental illness are dangerous	63.9	33.0	3.1
5.	It is best to avoid people with a mental illness so that you don't develop this problem	96.9	2.2	0.9
6.	If I had a mental illness, I would not tell anyone	52.2	29.5	18.3
7.	Seeing a mental health professional means you are not strong enough to manage your own difficulties	88.4	5.7	5.9
8.	If I had a mental illness, I would not seek help from a mental health professional	79.6	13.5	6.9
9.	I believe treatment for a mental illness, provided by a mental health professional, would not be effective	80.8	14.0	5.3

43.2% and 47.7% of those who neither agreed nor disagreed with statements 4 and 6, respectively, had been diagnosed with a mental illness. In addition, 17.5% of those who had been diagnosed with a mental illness would not tell anyone about their condition, 5.5% would not seek help from mental health professionals and 14.0% were not sure about treatment effectiveness.

5.2.5.2 Social distance

Willingness to have various types of social contact with people with a mental illness ranged from 60.2% (move next door to a person with a mental illness) to 83.2% (make friends with a person with a mental illness) (Table 5.10). More than one in ten respondents would be unwilling to 'vote for a politician' if they had a mental illness and 8.1% of respondents would be unwilling to have a person with a mental illness 'marry into the family'.

Table 5.10. Percentage of respondents who would be unwilling ('definitely unwilling' or 'probably unwilling') and willing ('probably willing' and 'definitely willing') to have various types of social contact with a person with a mental illness

Social contact	Responses		
How willing would you be to ...	Unwilling (%)	Neither willing nor unwilling (%)	Willing (%)
Move next door	5.3	34.5	60.2
Spend evening socialising	1.9	15.1	83.0
Make friends	2.0	14.8	83.2
Work closely	3.8	17.2	79.0
Marry into family	8.1	27.1	64.8
Vote for politician	10.9	27.4	61.7
Employ	5.4	24.9	69.7

Association between social distance and gender

The results demonstrated that compared to female respondents, male respondents would be less willing to move next door to a person with a mental illness (48.5% vs 64.1%, $p<0.001$), spend time socialising with a person with a mental illness (75.0% vs 85.6%, $p<0.001$) or make friends with a person with a mental illness (75.4% vs 85.8%, $p<0.001$). 68% of male respondents would be willing to work closely with a person with a mental illness, compared to 82.5% of female respondents ($p<0.001$), and 57.5% of male respondents would be willing to employ someone with a mental illness, compared to 73.5% of female respondents ($p<0.001$). Only 49.0% of male respondents would agree to a person with a mental illness marrying into the family, compared to 69.9% of female respondents ($p<0.001$). Even though 61.7% of respondents would be willing to vote for someone with a mental illness, this was predominantly guided by female respondents (66.4%) with only 46.4% of male respondents willing to vote for a politician with a mental illness.

Association between social distance and age

Older respondents (aged 60 and over) were less likely to be willing to have any type of social contact with people with a mental illness ($p<0.001$).

The results demonstrated that compared to younger respondents, respondents aged 60 and over would be less willing to move next door to a person with a mental illness (49.1% vs 64.1%, $p<0.001$), spend time socialising with a person with a mental illness (74.5% vs 85.9%, $p<0.001$) or make friends with a person with a mental illness (77.4% vs 85.3%, $p<0.001$). 73.2% of older respondents would be willing to work closely with a person with a mental illness, compared to 80.9% of younger respondents ($p<0.001$). 57.9% of those aged 60 and over would be willing to employ someone with a mental illness, compared to 73.7% of younger respondents ($p<0.001$). Only 46.6% of those aged 60 and over would agree to a person with a mental illness marrying into the family, compared to 71.0% of younger respondents ($p<0.001$). Older respondents would also be less likely to vote for a politician with a history of mental illness compared to younger respondents (46.1% vs 67.0%, $p<0.001$).

Association between social distance and place of residence

No differences for the social distance questions were observed based on remoteness or the state in which a person resided, apart from the fact that those living in Queensland would be less likely to vote for someone with mental illness (52.0% vs 60.3% to 73.2% in other states and territories ($p<0.001$)).

No differences were observed based on the Indigenous status of study respondents.

5.3 Help-seeking by self and family/friends

The majority of respondents agreed that they would 'seek help from a mental health professional' if they had major depressive disorder (85.8%), social phobia (66.0%), substance use disorder (74.7%), borderline personality disorder (74.9%) or generalised anxiety disorder (76.3%) (Table 5.11). Respondents were more likely to encourage a friend or family member to seek help for major depressive disorder (95.4%), social phobia (89.3%), substance use disorder (91.4%), borderline personality disorder (91.2%) and generalised anxiety disorder (92.1%) than seek help themselves.

Table 5.11. Percentage of respondents who disagree ('strongly disagree' or 'disagree') and agree ('agree' or 'strongly agree') with a selection of help-seeking statements

If I had...	Disagree (%)	Neither agree nor disagree (%)	Agree (%)
Major depressive disorder I would seek help from a mental health professional	5.4	8.8	85.8
Social phobia I would seek help from a mental health professional	12.8	21.2	66.0
Substance use disorder I would seek help from a mental health professional	8.5	16.7	74.7
Borderline personality disorder I would seek help from a mental health professional	7.8	17.4	74.9
Generalised anxiety disorder I would seek help from a mental health professional	8.2	15.6	76.3

If I had a friend/family member with ...	Disagree (%)	Neither agree nor disagree (%)	Agree (%)
Major depressive disorder I would encourage them to seek help from a mental health professional	1.7	2.9	95.4
Social phobia I would encourage them to seek help from a mental health professional	2.7	8.0	89.3
Substance use disorder I would encourage them to seek help from a mental health professional	2.5	4.4	93.1
Borderline personality disorder I would encourage them to seek help from a mental health professional	1.6	7.1	91.2
Generalised anxiety disorder I would encourage them to seek help from a mental health professional	1.8	6.1	92.1

The results also demonstrated that 98%–99% of respondents who would seek help for themselves would also encourage a friend/family member to do so. At the same time, 58.8%–62.6% of those who would not seek help for themselves would encourage a friend/family member to seek help for the same condition, and 17.6%–25.2% would not do so. Similarly, the vast majority of those who were neutral about seeking help themselves would recommend that a friend/family member with the same condition to seek help (75.7%–83.3%).

5.4 Mental illness diagnosis and help-seeking

52.2% of respondents indicated that they had been diagnosed with a mental disorder. Of respondents with a diagnosis, 97.1% had received help for their mental disorder.

5.5 RFDS health services accessed by respondents

Almost one in ten (8.1%) respondents had received healthcare from the RFDS for either a physical (n=168), mental (n=11) or both a physical and mental illness (n=27) with 59.3% living in outer regional or remote/very remote areas.

Respondents were asked an open-ended question about the types of professionals and/or treatments they had accessed for their mental disorder. Examples of professionals/treatments respondents said they had accessed for their mental disorder included: psychiatrist; psychologist; GP; mental health nurse; nurse practitioner; counsellor; community support service; community groups; Perinatal Anxiety & Depression Australia (PANDA); sexual assault counselling; peer support; peer worker; social worker; naturopath; school welfare worker; school counsellor; Crisis and Assessment Team (CATT); career coach; art therapist; mental health case worker; acupuncturist; chiropractor; massage/reiki therapist; kinesiologist; Christian counsellor; Anglicare; Royal Melbourne Hospital; emergency department; Headspace; Lifeline; public hospital admission; outreach support from Mind Australia; medication; cognitive behavioural therapy; complete bed rest.

5.6 Travel distance to nearest care for mental illness

Respondents were asked 'how far would someone in your community have to travel to access professional help (e.g. from a GP, psychologist, psychiatrist, other health professional, RFDS etc.) for a mental illness?' Responses ranged from less than one hour to more than five hours. Specifically:

- 86.4% would need to travel <1 hour;
- 7.9% would need to travel 1 hour to <2 hours;
- 2.7% would need to travel 2 hours to <3 hours;
- 0.9% would need to travel 3 hours to <4 hours;
- 0.6% would need to travel 4 hours to <5 hours; and
- 1.3 would need to travel 5+ hours.

No associations were found between the distance required to travel and willingness to seek help.

5.7 Community connections

Respondents completed four questions regarding how involved they are in their local community Table 5.12 demonstrates that more than three-quarters (76.7%) of respondents 'feel a great sense of belonging to my community', either sometimes, often or always. Similarly, 76.9% of respondents indicated that 'I actively contribute to my community', either sometimes, often or always.

Belonging to the community ($p<0.001$) and actively contributing to the community ($p<0.001$) were associated with higher MHLS scores. However, belonging and contributing did not influence respondent's willingness to have various types of social contact with a person with a mental illness, or their knowledge of where to seek information for a mental illness.

Table 5.12. Perceived belonging and contribution to the community by respondents

Response (%)	I feel a great sense of belonging to my community	I actively contribute to my community
Always true	12.6	15.1
Often true	27.0	29.0
Sometimes true	37.1	32.8
Rarely true	18.5	18.6
Never true	4.7	4.6

Around half (51.0%) of the respondents 'would like to be more involved in my community' while 29.6% would not. 70.4% of respondents indicated that 'there are opportunities for me to be more involved in my community', while 7.3% did not perceive opportunities for more community involvement.

Chapter 6: Discussion

The aims of the MHL survey were to: measure respondents' demographic characteristics; determine their MHLS scores and report on their ability to recognise mental disorders, identify risk factors, causes, treatments and where to seek information, and understand their attitudes towards mental disorders; determine the mental health of respondents and types of treatment accessed; identify factors that predict better MHL; identify interventions to improve MHL; and identify other community factors related to mental disorders and community belonging.

This section of the report discusses the results of the MHL survey.

6.1 Demographic characteristics of respondents

6.1.1 Usual place of residence

Respondents to the MHL survey included residents from all states and territories, but the majority came from Queensland, New South Wales and Victoria. The proportion of responses from all states and territories, except WA, did not align with the proportions of people aged 18 years or older from the 2016 Census. For example, 32.0% of Australian adults live in NSW, yet only 20.6% of respondents to the 2018 MHL survey resided in NSW. The anomalies may reflect the fact that the current survey was a convenience sample, which used snowball sampling methodology.

6.1.2 Remoteness of residence

Recent ABS data indicated that 72.0% of the Australian population live in major cities, 17.8% live in inner regional areas, 8.2% live in outer regional areas, 1.2% live in remote areas and 0.8% live in very remote areas.[78] Data from the MHL survey indicated that respondents were located across all remoteness categories, with 43.9% living in major cities and the remainder living in rural and remote areas. As a proportion of the population, rural and remote areas were over-represented in the current survey. This is unsurprising, especially since the RFDS and ACU sought comprehensive survey data on people living in rural and remote areas where the RFDS delivers services, by geo-targeting advertising material on digital media channels. In addition, many of the organisations that promoted the survey served a similar demographic to the RFDS in rural and remote areas, such as the National Rural Health Alliance, National Farmers' Federation etc.

The strong interest from rural and remote service providers and their subsequent distribution of the survey, could potentially be explained by recent Australian research findings.[79] This research suggests that while mental health prevalence per 100,000 population is similar to major city areas, rural and remote areas have significantly worse outcomes, including acute emergency mental health retrievals and increased suicide completion rates.[79]

6.1.3 Age

Adults of all ages, from 18 to 75 years of age and older participated in the MHL survey. Around half (49.5%) of the respondents were aged 49 or younger.

6.1.4 Gender

Females were over-represented among survey respondents—three-quarters of respondents were female. This contrasts with the actual population where the proportion of males and females is approximately equal. Similar gender response bias has been reported in other surveys conducted by the RFDS, with rates of male responses significantly lower than female response rates.[28]

Some possible explanations for the gender inequality among survey respondents are that: females are more interested in health issues, and are generally more likely to complete online surveys;[80] and that females are more likely to engage in online activity characterised by communication and exchanging of information than men, and that accessing an online survey, completing it and returning it, is a process of online information exchange.[81]

6.1.5 Sexual orientation and gender identity

More than one in ten respondents self-identified as LGBTIQA+. This accords with population estimates that indicate around 11% of Australians identify as LGBTIQA+.[82]

6.1.6 Education

Results demonstrated a range of educational qualifications among respondents, from 'still attending school' to a 'bachelor's degree' or 'higher degree'. Previous MHL surveys of the general public have also demonstrated that respondents hold a range of educational qualifications.[33,75] However, the proportion of respondents holding a bachelor's degree or higher level of education was significantly higher in the current MHL survey than in previous surveys of the general public,[33,75] and is higher than the Australian average, where 22.0% of the population have a bachelor's degree or higher level of education.[83]

In the current MHL survey, females were more likely to hold a bachelor's degree than males, and males were more likely to hold a trade certificate/apprenticeship than females. This concurs with current trends that indicate that over the last decade, women aged 18–64 years have been consistently more likely than men in this age group to have attained a bachelor's degree or above.[84]

6.1.7 Indigenous status

Results demonstrated that 97.2% of respondents were non-Indigenous and 2.8% were Indigenous. Current Australian population data demonstrate that around 3.3% of the population is Indigenous.[85] Although the proportion of Indigenous respondents was lower in the survey relative to their proportion in the Australian population, it was pleasing to have a significant level of engagement from Indigenous Australians.

Lower participation of Indigenous Australians in the survey may be a result of poorer access to computers and the internet, especially in remote areas—in 2011 around 80% of Australians had regular access to the internet, but only 6% of residents in some remote Indigenous communities had a computer.[86]

6.1.8 Previous experience of a mental disorder

More than half of the survey respondents indicated that they had been diagnosed with a mental disorder and the majority had sought professional help for their disorder. This is higher than community prevalence and help-seeking rates. Around one in five Australians experience a mental disorder in any one year[2] and only around half of the people with a mental disorder seek help.[4]

However, results from the 2011 Australian MHL survey indicated that between 8.2% (chronic schizophrenia) and 33.0% (depression) of respondents had a problem similar to the problem described in the unlabelled vignette they received.[33] Between 65.1% (social phobia vignette) and 94.8% (chronic schizophrenia vignette) of respondents indicated that they had received professional help for their problem.[33] Overall, 21.3% of respondents had received treatment for a mental health problem at some stage in their lives and, of these, 44.4% had received treatment in the past 12 months.[33]

National surveys of the Australian general public have demonstrated that the number of people disclosing experiences of mental disorders, such as depression and schizophrenia, and of having received professional help for a mental disorder, increased between 1995 and 2011.[75] However, rates of disclosure in the current survey were higher than in previous surveys of the Australian public, as were rates of help-seeking.

Increasing rates of disclosure for mental disorders are likely to be due to increased willingness to disclose rather than increased prevalence of disorders.[75] The high rates of disclosure in the current MHL survey may also represent the fact that people with a lived experience of a mental disorder, or an interest in mental health, were more likely to complete the survey.

6.2 MHLS

The mean MHLS score of respondents in the MHL survey was 133.65, SD 12.36, range 85–159. This was higher than the mean score for community respondents from research conducted by O'Connor and Casey, who developed the scale in 2015, but lower than the MHL of health professionals who completed the MHLS.[11] The mean MHLS score of their community sample was 127.38, SD 12.63, range 92–155.[11] However, their community sample comprised entirely undergraduate university students—94 male and 278 female first-year university students, with a mean age of 21.10 years, who lived predominantly in major cities (73.6%) and whose highest level of education was a secondary school certificate (76.1%).[11]

The mean MHLS score of the health professional sample in research conducted by O'Connor and Casey (2015) was 145.49, SD 7.19.[11] The health professional sample comprised 37 female and six male mental health professionals, with a mean age of 33.09 years, who predominantly lived in major cities (88.4%) and whose highest level of education was a bachelor's degree or higher level of education (95.4%).[11]

The results from the current MHL survey are also consistent with other MHL surveys that demonstrate higher MHL among health professionals compared to the general public, with the general public's views moving closer to the views of health professionals between 1995 and 2011.[75]

Several factors were identified as contributing to higher MHLS scores and better MHL, and are discussed below, including:

- Younger age (<60 years);
- Being female;
- Identifying as LGBTIQA+;
- Being non-Indigenous;
- Holding a bachelor's degree or higher level of education; and
- Having a previous diagnosis of a mental disorder.

Remoteness of residence did not impact MHLS score or MHL.

Younger respondents (<60 years) had significantly higher MHLS scores than respondents aged 60 years or older. This concurs with findings from previous research which has demonstrated poorer MHL among older adults, including less accuracy in identifying symptoms of mental disorders and endorsing fewer sources of treatment for a mental disorder, such as from a counsellor, telephone service or psychologist, with more considering treatment from a psychiatrist as harmful.[72,87,88]

Female respondents had higher MHLS scores than male respondents. Previous MHL surveys have also demonstrated that females have better MHL than males.[5,89] Specifically, previous research has revealed that men are more likely to suggest self-help treatments for mental disorders,[5,90,91] are less likely to be informed about the causes of mental disorders,[5,91] and are less able to correctly identify symptoms of a mental disorder from an unlabelled case vignette.[5,92] Conversely, females are more likely to endorse psychological explanations for the causes of mental illness and are more likely to endorse evidence-based psychological interventions.[5,91]

LGBTIQA+ respondents had significantly higher MHLS scores than heterosexual respondents. Previous research has demonstrated that members of the LGBTIQA+ community experience higher rates of depression and anxiety than their non-LGBTIQA+ counterparts, due to experiences of sexuality- and gender-based discrimination.[93] However, levels of MHL in LGBTIQA+ populations have not been previously directly assessed.[94] This study, therefore, provides one of the first pieces of research considering the role of sexual orientation and gender identity in MHL.

Non-Indigenous Australians had significantly higher MHLS scores than Indigenous Australians. There are currently no MHL or SEWB literacy scales that have been developed specifically for Indigenous Australians. Since Indigenous Australians often conceptualise mental health differently to non-Indigenous Australians,[29] an appropriate SEWB scale that measures culturally relevant constructs around mental health may well yield different results. A SEWB literacy scale, whose development is Indigenous-led, would be a valuable tool to help researchers and policymakers understand the constructs around mental health that are important to Indigenous Australians. A SEWB scale, that enabled researchers to quantify the MHL of Indigenous Australians, could facilitate the development of targeted, culturally appropriate interventions to enhance MHL for Indigenous Australians. This could also support improved outcomes across several action areas identified in the National Strategic Framework for Aboriginal and Torres Strait Islander Peoples' Mental Health and Social and Emotional Wellbeing,[68] which emphasises the value of good MHL in assisting Indigenous Australians to recognise and provide initial help to a person with a mental health problem, including connecting them to appropriate treatment, and encouraging help seeking behaviour.[68]

Respondents with a bachelor's degree or higher level of education had significantly higher MHL than respondents who did not have a bachelor's degree or higher level of education. Previous studies that have examined the influence of education on MHL have demonstrated better MHL among respondents with higher levels of education.[5]

MHL survey respondents who had previously been diagnosed with a mental disorder had significantly higher MHL than respondents who had not previously been diagnosed with a mental disorder. This is unsurprising, and accords with multiple MHL studies that have found previous experience of a mental disorder predicts better MHL.[5,11,72]

One of our hypotheses was that respondents living outside major cities would have poorer MHL than respondents living in major cities, and that MHL would decrease with increasing remoteness. However, analysis of the data demonstrated that there was no effect of remoteness on MHL and that the MHL of major city respondents was similar to that of rural and remote respondents. This accords with previous Australian research that found MHL was similar across all remoteness categories.[12]

6.2.1 Recognition of mental disorders

The majority of respondents thought it was likely that the vignettes presented in the MHL survey accurately represented the stated mental disorders. This included for disorders that have a lower prevalence than depression and have rarely been included in MHL surveys, such as bipolar disorder, social phobia, personality disorders, dysthymia, agoraphobia and substance use disorder. Where these disorders have been studied, rates of identification have generally been low.[95-97]

For example, a survey of the general public in London demonstrated that only 2.3% of people recognised borderline personality disorder when presented with a vignette of the disorder, compared with 72.5% that recognised depression.[95] A study of the MHL of 223 lay people, regarding 10 personality disorders, demonstrated poor rates of identification of personality disorders.[97] Rates of correct labelling were less than 7% for seven of the 10 personality disorders presented to respondents.[97]

Similarly, a study on the identification of psychiatric problems demonstrated that British participants had low levels of identification of bipolar disorder (18%) and social phobia (2%).[96] The Australian general public were better at identifying social phobia from an unlabelled vignette, with 9.2% of respondents correctly labelling the disorder.[33]

Although rates of recognition of these disorders in the current MHL survey were high, this may, in part, be a result of the methodology employed. Specifically, respondents were presented with a vignette of the disorder, along with the name of the disorder, and asked to nominate the likelihood that the name of the disorder matched the vignette.

It is highly likely that if respondents had been presented with an unlabelled vignette of these disorders, rates of identification would have been much lower, and similar to findings from previous research.

However, good recognition of mental disorders by respondents in the current MHL survey may also reflect the impact of education campaigns, and campaigns and educational initiatives to improve MHL, by organisations such as beyondblue, SANE Australia, Black Dog Institute, Menta Health First Aid (MHFA) etc., as well as easier access to mental health resources, such as eMHPrac, which has both printed and online resources. Similarly, Australian MHL surveys have demonstrated increasing rates of correct identification of mental disorders such as depression from 1997 to 2003–2004 to 2011 and the results from the current survey may reflect increased recognition of disorders by the general public.[76]

Conversely, although the majority of respondents thought the depression vignette was likely to represent the stated disorder, almost one in five respondents thought it was unlikely to represent the stated disorder. Of all of the disorders described in the survey, depression was the one with the highest proportion of respondents who thought it was unlikely that the vignette represented the stated disorder. This is interesting, especially in light of national campaigns to increase awareness of depression. Regardless of this finding, it is clear that more than four in five respondents were able to identify the disorder, representing good recognition of depression.

Specifically, the results from the current MHL survey do not support the stereotypes of poorer MHL among rural and remote Australians.[12] This suggests that interventions to improve MHL do not need to be specifically targeted to populations according to remoteness of usual place of residence. Based on the survey responses, interventions to improve MHL should be targeted towards older Australians (60+ years), males, heterosexual Australians, Indigenous Australians, people without a bachelor's degree or higher level of education, and people who have not previously been diagnosed with a mental disorder.

6.2.1.1 Predictors of recognition of mental disorders

The results indicated that the main predictors of recognition of different mental disorders were related to age, gender, sexuality, education, previous diagnosis of a mental disorder and remoteness of residence.

Respondents aged 60+ years were significantly more likely than respondents aged <60 years to recognise substance abuse disorder but less likely to recognise personality disorder. The impact of age on MHL has been considered in several MHL studies which have found that, in general, older age is associated with poorer MHL.[5,98] Better recognition of substance abuse disorder by respondents aged 60+ years is an interesting finding. It may reflect the fact that today's baby boomers, who represent the 60+ cohort, used alcohol and other drugs at higher rates than previous generations,[99] and are therefore more likely to recognise problematic substance abuse.

Females were significantly more likely than males to recognise five of the disorders presented in the survey. A review of MHL studies conducted in non-Western countries between 2000 and 2014 demonstrated better recognition of mental disorders by females.100 Similar findings have been reported in studies conducted in Western countries, including Australia, with females generally having better MHL than males.[5,90,91,101] Recent research suggested that females have greater awareness of symptoms, whereas males are less aware of health issues, and that these differences may explain better MHL of females.[102]

Respondents with a bachelor's degree or higher level of education were significantly more likely than those without a high level of education to recognise generalised anxiety disorder and substance use disorder. In general, people with higher levels of education have better MHL,[5] and are more likely to accurately identify mental disorders. It is notable that that people with a bachelor's degree or higher level of education were less likely to recognise agoraphobia than people without a bachelor's degree or higher level of education. One potential explanation for this finding may be related to differences in the lived experience of agoraphobia.

Specifically, people with lower levels of education are more likely to experience agoraphobia than people who have higher levels of education, and given this is a very specific diagnosis, this may be a factor in recognition of this disorder.[103] Regardless, this finding is interesting, given that overall, people with high levels of education are generally better at recognising mental disorders, and warrants further investigation.

Respondents with a previous diagnosis of a mental disorder were significantly more likely than respondents who had never been diagnosed with a mental disorder to recognise major depressive disorder and personality disorder. Recent research has consistently demonstrated that previous experience (or a 'lived experience') of a mental disorder results in improved MHL.[5,11,72]

Respondents living in very remote Australia were significantly less likely than respondents in major cities to recognise social phobia and respondents in outer regional areas were significantly less likely than respondents in major cities to recognise bipolar disorder. These findings are interesting and warrant further research to elucidate the reasons for these differences.

6.2.2 Knowledge of where to seek information

The majority of respondents agreed that they were confident in knowing where to seek help for mental disorders, how to use the telephone or computer to access information about mental disorders, and that they had access to resources for mental disorders. This aligns with other surveys of MHL that have seen an increase in the use of the internet to access mental health information, and may also represent better availability of evidence-based online interventions and information, such as the information contained on the eMHPrac website.

There was a strong correlation between level of education and confidence in finding the information described in the help-seeking statements in the current MHL survey. Other MHL surveys have similarly found that respondents with a bachelor's degree or higher level of education are better at finding, and using, information from a number of different sources, including knowing where to look for information generally, as well as through face-to-face and digital media channels.[5,72]

It was notable that 12.1% of respondents disagreed that they were confident 'attending face-to-face appointments with a GP'. The GP is often the first point of contact for a person with a mental disorder, and the person most likely to refer people with mental disorders to specialised mental health services.[56] The National Mental Health Commission acknowledged that "much of the clinical responsibility for providing mental health care sits with primary health care providers", and that general practice "must be acknowledged and resourced as the clinical front line in tackling mental health issues".[104] The Bettering the Evaluation and Care of Health (BEACH) survey of general practice activity, which provides detailed information about GP encounters, reported that an estimated 12.7% of all GP visits were mental health–related encounters.[105]

Given the important role that GPs play in the care of people with a mental disorder, it is concerning that one in eight respondents were not confident attending face-to-face consultations to discuss mental health issues with their GP. Future MHL campaigns should seek to encourage people with symptoms of mental disorders to attend their GP. Additionally, such campaigns should consider interventions to upskill GPs on how to approach having conversations with patients about their mental health, and ways in which they could make their practice mental health friendly.

6.2.3 Knowledge of risk factors and causes

Around 40% of MHL survey respondents thought that 'men are more likely to experience an anxiety disorder compared to women' and 40% thought that it was unlikely that 'women are more likely to experience a mental illness of any kind compared to men'.

This is contrary to the evidence that indicates that women are more likely to experience a mental disorder of any kind compared to men, including anxiety disorders. The 2007 National Survey of Mental Health and Well-being, which contains the most comprehensive data on the metal health of the Australian public, demonstrated that females (22.3%) were more likely than males (17.6%) to experience a mental disorder.[2]

When asked about six types of anxiety disorders, including panic disorder; agoraphobia; social phobia; generalised anxiety disorder; post-traumatic stress disorder; and obsessive-compulsive disorder, the results demonstrated that females (17.9%) experienced much higher rates of anxiety disorders than males (10.9%) in the 12 months prior to survey.[2] Women experienced higher rates of all anxiety disorders compared to men (Table 6.1).

Table 6.1. Prevalence of 12-month anxiety disorders by anxiety disorder type and gender, 2007

Disorder	Males (%)	Females (%)	Persons (%)
Panic disorder	2.3	2.8	2.6
Agoraphobia	2.1	3.5	2.8
Social phobia	3.8	5.7	4.7
Generalised anxiety disorder	2.0	3.5	2.7
Obsessive-compulsive disorder	1.6	2.2	1.9
Post-traumatic stress disorder	4.6	8.3	6.4
Any anxiety disorder	**10.8**	**17.9**	**14.4**

Note: Totals are lower than the sum of disorders as people may have had more than one type of anxiety disorder in the 12 months.
Source: Australian Bureau of Statistics (2008).[2]

Males, without a bachelor's degree or higher level of education, and who had previously been diagnosed with a mental disorder, incorrectly thought it was likely that 'men are more likely to experience an anxiety disorder'. It is possible that males, who have previously been diagnosed with a mental disorder, related this statement to their own experience of having a mental disorder. Specifically, if they have had a diagnosis of a mental disorder, then they may think that males are more likely to experience mental disorders. Previous research has also linked male gender and lower levels of education with poorer MHL.[5,90,91,101]

At the same time, respondents who thought it was likely 'that in general in Australia, women are more likely to experience a mental illness of any kind compared to men' were likely to be female, aged under 60 years and with no history of a mental health diagnosis. These results are most likely explained by better MHL among females and younger respondents, leading them to correctly identify that women have higher rates of mental disorders, compared to men and older respondents.[5,90,91,98,101]

These results suggest that efforts to improve MHL should focus on educating the general public about the prevalence of different mental disorders, as well as the specific mental disorders most likely to impact men and women. Awareness of base rates of mental disorders by the general public will aid in their recognition.

6.2.4 Knowledge of self-treatment

In terms of self-treatment, most respondents thought it would be helpful for someone to 'improve their quality of sleep if they were having difficulties managing their emotion'. Respondents who were female, or had a bachelor's degree or higher level of education, were more likely to endorse improving sleep quality.

Health and psychological functioning are often linked to poor sleep-related outcomes,[106,107] and there is evidence that improving quality of sleep can assist in managing emotions. Sleep and emotions are closely linked, and the relationship between these two domains is complex and bidirectional.[108] Previous research has found that sleep loss is associated with subjective reports of irritability and emotional volatility, along with impairments of attention, alertness and memory.[109] "Without sleep, the ability to adequately regulate and express emotions is compromised at both a brain and behavioural level."[109] Sleep, especially rapid eye movement (REM) sleep, plays an important role in restoration of appropriate next-day emotion reactivity and salience discrimination.[109] In particular, a good sleep routine in known to assist in the management of mental disorders, such as anxiety and other mood disorders.[110]

One-third of respondents agreed that it would be helpful for someone to 'avoid all activities or situations that made them feel anxious if they were having difficulty managing their emotions'. Specifically, respondents who were female, aged 60 years or older, identified as LGBTIQA+ or had a bachelor's degree or higher level of education were more likely to agree that 'people should avoid all activities or situations that made them feel anxious if they were having difficulties managing their emotion'.

Evidence suggests that avoiding activities or situations that make a person feel anxious may reduce anxiety in the short term, but is likely to have some less helpful long-term effects. The reduction in stress and anxiety that occurs as a result of avoidance negatively reinforces these actions and perpetuates the maintenance of anxiety.[111] Avoidance is therefore considered to be a maladaptive behavioural response to excessive fear and anxiety.[112] Exposure therapy, where a person faces a feared situation or event, in the presence of fear or anxiety, is known to be an effective strategy for treating anxiety disorders.[112]

MHL interventions that address issues related to sleep and anxiety, and exposure therapy as a treatment for anxiety, by providing accurate, evidence-based information, would be of benefit to the Australian general public.

6.2.5 Knowledge of professional help available

More than 90% of MHL survey respondents thought that it was likely that 'cognitive behavioural therapy (CBT) is a therapy based on challenging negative thoughts and increasing helpful behaviours'. Indeed, CBT has good evidence of efficacy for mood and affective disorders, such as depression and anxiety.[113] CBT helps people recognise patterns in their thinking and behaviour that make them more likely to become depressed.[113] It helps people learn how to replace negative and unrealistic thoughts with more realistic thoughts that promote good mood and better coping.[113] It is one of the most effective treatments available for depression and its efficacy appears to have been well understood by the Australian general public.

Other research has demonstrated increases in beliefs about the helpfulness of GPs, psychiatrists and counsellors, and beliefs in the likely helpfulness of medications, including antidepressants and antipsychotic medications, among the general public.[75] Although there were no questions about these sources of help in the current survey, they are included for discussion since they point to current trends in MHL research indicating increasing knowledge and beliefs about treatment over time.[75]

The majority of respondents to the MHL survey agreed that a mental health professional could 'break confidentiality … if you are at immediate risk of harm to yourself or others' and almost one-quarter of respondents agreed that a mental health professional could 'break confidentiality … if your problem is not life-threatening and they want to assist others better support you'. There are clear guidelines governing the situations under which mental health professionals can break confidentiality. For example, the *Australian Psychological Society Code of Ethics*[114] sets out guidelines on privacy standards for its members. Psychologists may only disclose confidential information obtained in the course of their provision of psychological services in the following circumstances: "(a) with the consent of the relevant client or a person with legal authority to act on behalf of the client; (b) where there is a legal obligation to do so; (c) if there is an immediate and specified risk of harm to an identifiable person or persons that can be averted only by disclosing information; or (d) when consulting colleagues, or in the course of supervision or professional training".[114]

Mental healthcare professionals are therefore legally bound to protect the confidentiality of their patients in Australia. They are unable to break confidentiality if a problem is not life-threatening and they want to help others support a person, unless the person has provided consent for the healthcare professional to do so.

MHL interventions for the Australian general public should include clear information regarding the situations under which clinicians can break confidentiality. Additionally, clinicians should provide this information to patients at the commencement of treatment for mental disorders.

6.2.6 Attitudes that promote recognition or appropriate help-seeking behaviour

6.2.6.1 Stigma

Personal stigma was assessed by presenting MHL survey respondents with a series of attitude statements about a person with a mental illness. Mental illness was predominantly seen as a 'real medical illness', and not as a 'sign of personal weakness' or something people could 'snap out of'.

However, one in five respondents agreed that 'if I had a mental illness, I would not tell anyone'. This indicates that a proportion of respondents remain uncomfortable in disclosing a mental disorder in themselves, which can be a barrier to seeking effective help. Recent research has indicated that disclosure related to mental disorders is linked to various positive outcomes, including better mental health.[115]

Stigma and labelling have been identified as disadvantages of disclosure,[116] with perceptions of good social support linked to increasing willingness to disclose a mental disorder.[115,116]

There is evidence that willingness to disclose a mental disorder may also depend on the situation in which a person is disclosing. For example, disclosing a mental illness to an employer versus disclosing a mental illness to a family member, or disclosing a severe mental illness, such as schizophrenia, versus disclosing an experience with depression.[117]

Despite campaigns to reduce stigma around mental disorders, some people are still hesitant to disclose a personal experience of a mental disorder. Future interventions to improve MHL among the Australian general public should include stigma reduction campaigns and should incorporate information about the benefits to disclosing a mental illness, including better access to treatment and better health outcomes.

Almost two-thirds of respondents disagreed that a 'person with a mental illness is dangerous', while 3.1% agreed with the statement. One-third (33%) of respondents neither agreed nor disagreed regarding perceived dangerousness of a person with a mental illness. Previous research has demonstrated that a proportion of the general public perceives people with mental disorders as dangerous and unpredictable, and react with fear and increased desire for social distance.[72]

It is notable that around one-third of respondents to the MHL survey neither agreed nor disagreed with the statement about perceived dangerousness. This could indicate that they don't really have an opinion either way, or that they are genuinely unsure about the dangerousness of a person with a mental illness. If the latter is correct, future MHL interventions for the Australian general public should incorporate accurate information about the dangerousness of a person with a mental disorder.

Previous research has demonstrated that belief in the dangerousness of people is higher for schizophrenia compared with depression.[72] Results from the 2003–2004 and 2011 MHL surveys of the Australian general public showed an increase in the general public's perception about dangerousness of a person with depression and schizophrenia.[75] Perceived dangerousness is a significant dimension of stigma and it is commonly assumed that people with schizophrenia are more dangerous than people without a mental disorder.[118] However, the relationship between violence and mental disorders is complicated.[119] The overall risk of violence may increase during an acute phase of psychosis, when people with the disorder remain untreated, if they are not taking medication for their illness, or if they have a comorbid substance use disorder. However, the level of risk of dangerousness appears to be overestimated by the general public who may benefit from stigma reduction programs aimed at dispelling the myths of dangerousness and unpredictability for all metal disorders.[72]

6.2.6.2 Social distance

Willingness to have various types of social contact with people with a mental illness ranged from 60.2% to 83.2% in the MHL survey, including a willingness to 'move next door', 'spend an evening socialising', 'make friends', 'work closely', 'marry into the family', 'vote for a politician' and 'employ a person' with a mental illness.

This compares favourably with the results from the 2011 survey, which demonstrated:

- 45.1% respondents would not want a person with schizophrenia marrying into their family and 28.2% would not want someone with depression marrying into their family;[33]
- 32.6% and 48.6% of respondents would avoid someone with a mental health difficulty;[33] and
- 37% of respondents would not employ a person with chronic schizophrenia and 23.4% would not employ someone with depression.[33]

Male respondents were significantly less willing than female respondents to have several types of contact with a person with a mental illness. They were less willing to 'move next door', 'spend time with' or 'make friends with' a person with a mental disorder.

The current survey did not collect information on social distance for specific mental disorders, instead, it used the generic term 'mental illness'. The results of the current survey may have been different, and included greater social distance, if responses were sought on individual mental disorders, such as schizophrenia or depression.

The current MHL survey showed the greatest social distance for 'voting for a politician' and 'marrying into the family', with 10.9% and 8.1% of respondents (respectively), unwilling to have close social contact with politicians with a mental disorder and have a person with a mental disorder marry into the family. Previous Australian MHL surveys yielded similar results, with desire for social distance most common for the items relating to working closely with a person with a mental illness or having the person marry into one's family.[75]

The results also demonstrated that male respondents and respondents aged 60+ years were significantly less likely than female respondents and respondents aged <60 years to have most types of social contact with people with a mental illness. Older respondents (60+ years) were also more likely to be to be neutral, and less likely to be 'definitely willing' than younger respondents to have social contact with people with a mental disorder. This was consistent across all questions. Data from the 2003 and 2011 Australian MHL surveys demonstrated that desire for social distance was higher in people aged 65 years and older for some beliefs.[75]

Although the proportion of respondents unwilling to have social contact with people with a mental illness is relatively low in the MHL survey, there is an opportunity to include information about the harmful effects of social distance on people with mental disorders in future national MHL campaigns. Campaigns should specifically include information on the importance of social contact for people with mental illness and should be targeted towards males and older Australians.

Additionally, it would be useful to review, and include data on, the actual levels of social contact from the perspective of people with mental disorders in MHL interventions. This will provide a more comprehensive picture of how society treats people with a mental disorder and could assist in providing useful information on how stigma interventions could be developed and delivered at both an individual and community level.[120]

6.3 Help-seeking by self and family/friends

In general, MHL survey respondents indicated their intent to seek help for a range of mental disorders. Overall, help-seeking intentions were highest for depression. Interestingly, respondents would be more likely to encourage a family member or friend to seek help than seek help themselves.

The relationship between attitudes or intentions expressed in MHL surveys and actual behaviour of respondents has not been studied in detail due to the complexity of this type of research.[121] As a result, it is not known if the public's beliefs and attitudes about mental disorders, such as treatment they would use, help-seeking behaviour, desire for social distance or stigmatising behaviour, is congruent with actual behaviour in the context of a mental disorder.[121,122]

One study of help-seeking for mental disorders, conducted across Belgium, France, Germany, Italy, the Netherlands and Spain, demonstrated that the perceived effectiveness of treatments for mental disorders was associated with receiving mental healthcare.[33,122] People who perceived treatments as effective were more likely to seek, and adhere to, treatment.[122] This suggests there may be a relationship between treatment beliefs and help-seeking and treatment adherence.[33,122]

MHL interventions for the general public should include information about the benefits of help-seeking and of accessing evidence-based treatments to facilitate increased uptake of treatments for mental disorders.[33]

6.4 Mental illness diagnosis and help-seeking

More than half of the respondents to the MHL survey indicated that they had been diagnosed with a mental disorder. This contrasts with finding from the *2011 National Survey of Mental Health Literacy and Stigma* that showed only about one-third of survey respondents revealed that they had experienced a mental disorder.[33] However, the high rate of self-disclosure in the current survey accords with research from South Australia, which demonstrated an increase in the proportion of respondents acknowledging personal experience of a mental disorder (depression) over a 10-year period from 1998 to 2008.[123,124]

Female respondents to the MHL survey were significantly more likely to be diagnosed with a mental disorder than males. One potential explanation for higher rates of diagnosis among females is related to higher rates of help-seeking among females experiencing symptoms consistent with mental disorders.[125-127] Females that seek help for symptoms of mental disorders are more likely to receive a diagnosis of a mental disorder.[125-127] Males may have symptoms of mental disorders, but are less likely to seek help, therefore, less likely to receive a diagnosis of a mental disorder.

The majority of MHL survey respondents who had been diagnosed with a mental disorder had sought professional help for their disorder.

The high level of help-seeking among respondents is surprising, since evidence suggests that more than half (54%) of all people with a mental disorder do not seek help.[4] However, there is evidence that the general public's attitudes towards help-seeking are changing. Specifically, between 1997 and 2011 the general public's perception of health professionals has shifted, with health professionals being seen as more helpful and less harmful for depression in 2011, compared to 1997.[33]

The relatively high level of self-disclosure of a mental disorder and help-seeking may also be related to the voluntary nature of the survey and the fact that members of the general public interested in mental health chose to complete the survey. This may also reflect its dissemination through organisations aligned with improving mental health, such as the RFDS, ACU, Lifeline and Men's Shed.

6.5 RFDS health services accessed by respondents

Results indicated that almost one in ten respondents had accessed the RFDS for either mental, physical, or mental and physical healthcare. This suggests the RFDS continues to play an important role in the provision of healthcare to people in rural and remote Australia. The RFDS has the opportunity to further develop its mental health services, to ensure the right care is delivered to the right people in the areas it serves. It also has the opportunity to work with individuals, communities and other organisations to develop and/or implement MHL interventions that increase the general public's knowledge about mental disorders in the areas where it delivers services.

6.6 Travel distance to nearest care for mental illness

86.4% of MHL survey respondents would need to travel less than one hour to access professional help for a mental disorder. The reminder would need to travel anywhere from one hour to more than five hours to access professional help. Rural and remote Australians are often required to travel long distances to access care, which is an important barrier to receiving appropriate care for a mental disorder.[28] Compared to people living in major cities, rural and remote Australians have poorer access to, and demonstrate lower usage of, health services.[28,128] For example, in 2011–2012, 7.6% of major city residents accessed MBS mental health services, compared to 3.0% in remote areas and just 1.5% in very remote areas.[129] Other research has linked the poorer health status of remote and rural Australians, in part, to inequitable access to primary healthcare services,[130] including longer travel distances to access care.

6.7 Community connections

A large proportion of respondents to the MHL survey indicated that they felt a great sense of belonging to, and actively contribute to, their community. More than half of the respondents wanted to be more involved in their community and more than 70% identified opportunities for greater community involvement.

Connection to one's community may be a protective factor against anxiety and depression, and can provide people with happiness, security, support and a sense of purpose.[131] There is evidence that community connectedness is also positively correlated with mental health among LGBTIQA+ people.[93,127] Having community connections has also been found to be an enabler for men to seek help for mental disorders, while lack of community connections is a barrier.[127] Similarly, young people with serious mental illness value treatments that are focused on social inclusion.[132]

6.8 Strengths and limitations of the research

There are both strengths and limitations to the research methodology employed for this study, which should be acknowledged. These are described below.

6.8.1 Strengths

The survey garnered responses from 2,574 respondents in a 9-week time period, indicating that close to 300 people completed the survey each week. This large number of responses likely reflects the reach of the RFDS and ACU digital media platforms, and that of the organisations that shared the survey link with their members.

The survey was voluntary, meaning that people were free to choose whether to participate. If they changed their mind at any time during the survey, they were able to discontinue the survey.

Developing the survey online, and primarily administering it via the internet, meant that it was cheaper, faster, more environmentally friendly and more convenient compared to other survey methods, such as face-to-face or telephone interviews. People were able to complete the survey from the comfort of their own home, at a time of their choosing, and were not required to participate in face-to-face interviews with a researcher. The provision of a small number of paper-based surveys via RFDS primary healthcare clinics enabled respondents who did not have access to the internet to participate in the survey.

It is possible that respondents were more likely to provide honest responses via the internet survey than they might have done in a face-to-face interview, due to the anonymity of the survey.[133] Responses were also collected and displayed in real time, which meant that researchers were able to view individual responses and consolidate data as they arrived. In addition, researchers were not required to transcribe responses, thereby reducing the potential for errors in the transcribing process. Data were also quick to analyse, as there was no need to enter data into a database. Finally, developing and administering the survey via the internet was a good way to reach populations that may not otherwise have been able to participate. This methodology is especially relevant for remote and rural populations who may not normally be invited to participate in face-to-face research due to the large distances researchers may need to travel to survey them.

6.8.2 Limitations

There are a number of limitations that are important to note.

The snowball sampling technique used in this survey is a non-probability sampling technique and therefore does not recruit a random sample—respondents did not participate in the survey by chance alone.[134] As a consequence, conclusions "reached in a study that used a snowball recruitment strategy may be biased, e.g., the sample may include an over-representation of individuals with numerous social connections who share similar characteristics".[134]

Answers to the demographic questions show that the demographic characteristics of survey respondents do not match the overall population of Australia—rural and remote Australians, females and non-Indigenous Australians were over-represented among respondents. Future research should seek to capture the views of males and Indigenous Australians—this may require a different approach to sampling, such as face-to-face surveys, focus group work and the development of a culturally appropriate Indigenous MHL or SEWB literacy tool designed in partnership with Indigenous communities.

The survey was biased towards people who had access to the internet. Sections of the community that may not have good access to the internet—for example, some very remote areas and some Indigenous communities—were unable to participate in the survey unless they had access to an RFDS primary healthcare clinic, where they could complete a paper version of the survey.

It is also possible that respondents may have completed the survey more than once, as the researchers did not limit surveys to one per internet provider address, recognising that multiple household members may wish to complete the online survey using the same computer.

Factors dissuading people from participating may have included people feeling insecure about whether their answers would be treated anonymously, or having slow internet connectivity.

Chapter 7: Conclusion

7.1 Summary of findings

The MHL survey, conducted between May and July 2018 by the RFDS in partnership with ACU, provided comprehensive data on the MHL and mental health of 2,576 adult members of the Australian general public. Respondents were located across all states and territories and all remoteness categories. The sample included adults ranging in age from 18 to 85+ years, of diverse sexual orientation, gender identity and Indigenous status. Respondents possessed a range of educational qualifications from 'still attending school' to a 'bachelor's degree' or 'higher degree'. More than half of the respondents had been diagnosed with a mental disorder, and the majority of these respondents had received treatment for their disorder.

Responses to the MHLS were scored and analysed. Although remoteness of residence did not impact MHL, several factors were identified as contributing to higher MHLS scores and better MHL, including:

- Younger age (<60 years);
- Being female;
- Identifying as LGBTIQA+;
- Holding a bachelor's degree or higher level of education; and
- Having previous experience of a mental disorder.

As levels of MHL did not differ across remoteness categories, interventions to improve MHL are unlikely to require an approach that differs across remoteness areas. This is supported by previous research that found "no evidence to support the rollout of campaigns which are premised on the assumption that rural residents are less likely to recognise mental health problems, although the importance of recognition should not be ignored. Rather, such campaigns, at least in Australia, may be more appropriately and effectively focused on a message that emphasises which interventions are effective and the helpfulness of particular professionals such as psychologists and psychiatrists in the delivery of these".[12] Where there is poor access to services, MHL interventions should emphasise alternative methods of accessing services, such as through telehealth and the internet for the delivery of evidence-based treatments.[12]

Although MHL did not differ according to remoteness, the results of the MHL survey suggest that interventions to improve MHL are still needed, and that such interventions should specifically target:

- Males;
- Older Australians aged 60 years or older;
- Indigenous Australians;
- People without a bachelor's degree or higher level of education;
- Non-LGBTIQA+ Australians; and
- People who have not previously been diagnosed with a mental disorder.

While interventions to improve MHL may not require an approach that differs across remoteness areas, it is prudent for MHL interventions to be appropriately targeted to the intended audience, and to consider the different social determinants of health influencing the communities where these are delivered. For example, the content of campaigns to improve MHL among farming communities, may be different to the content of MHL interventions for health professionals.

7.2 MHL interventions

Jorm (2015) argued that the concept of MHL is an important component of health literacy, and its promulgation has resulted in policy impacts and led to the development of interventions to improve MHL that may not have otherwise occurred.[74] Additionally, the concept of MHL has facilitated the development of assessments regarding interventions to improve MHL.[74] It is important that MHL interventions delivered to the general public, or other groups, are measured and evaluated to determine their impact and efficacy.[5]

Indeed, there is compelling international and national evidence that training courses, as well as community education campaigns, can improve MHL. Examples include the MHFA training program and beyondblue.

MHFA was developed in 2000 to provide community members with first aid skills to support people with mental health problems.[135] A systematic review of randomised controlled trials or controlled trials of the MHFA program in adults between 2000 and 2017 was recently completed.[136] The program was evaluated in multiple settings, including workplaces, with university or healthcare students, members of the public, teachers, parents and the military.[136] MHFA is delivered in all Australian states and territories and has been adopted in 25 countries.[137] There are specialised MHFA courses, including a version for Aboriginal and Torres Strait Islander Australians and older Australians.[136] "The standard adult course is 12 hours long and includes information on depression, anxiety problems, psychosis, substance use problems, and crisis situations (e.g. suicide and self-harm, panic attacks, drug/alcohol overdose)."[136] Course content is evidence-based and contemporary.[136]

The systematic review supported the effectiveness of MHFA training in improving MHL and appropriate support for those with mental health problems up to six months after training.[136] MHFA participants demonstrated: improved mental health first aid knowledge; improved recognition of mental disorders; improved beliefs about effective treatments; small reductions in stigma; enhanced confidence in helping a person with a mental health problem; increased intentions to provide first aid; and improvements in the amount of help provided to a person with a mental health problem at follow-up.[136] In the longer term, improved MHL may result in greater rates of help-seeking for mental disorders.[5]

Similarly, a study of the impact of beyondblue on the Australian public's recognition of depression, and beliefs about depression treatment, demonstrated how public education campaigns can improve MHL and help-seeking.[138] This study employed data from the Australian 1995 and 2003–2004 national MHL surveys. The survey conducted in 2003–2004 included a question about respondents' knowledge/awareness of beyondblue. Australian states that provided funding to beyondblue, and hence were likely to have been more exposed to its promotional campaign, were classified as 'high-exposure states' (although this term is now no longer used, it was an important distinction in the study reported, so is used to describe the findings).[138] The remaining states were classified as low-exposure states. Respondents from high-exposure states were twice as likely as those from low-exposure states to recall and recognise beyondblue.[138]

More significantly, there were greater changes over time in beliefs about treatments for depression among respondents from the high-exposure states, especially with respect to the benefits of counselling, medication and general help-seeking.[138] A greater decrease in the belief that it is helpful to deal with depression alone was also recorded in the high-exposure states.[138] In terms of antidepressant use, counselling and the value of help-seeking in general, the authors concluded that beyondblue may have brought the public's views closer to professionals' views about the benefits of these treatments.[138]

7.3 Principles for MHL interventions

There is consistent evidence that MHL interventions need to be contextually developed and applied, and should contain a number of core components around improving knowledge, attitudes or stigma, and help-seeking efficacies.[13]

There are several principles that should be considered when developing interventions to increase MHL. Interventions should be:

- Context-specific (e.g. developed and applied in everyday life situations);[13]
- Developmentally appropriate (e.g. tailored in its application across the lifespan);[13]
- Effectively integrated into existing social and organisational structures (e.g. schools, community organisations);[13]
- Implemented using valid and reliable psychometric tests;[13]
- Culturally appropriate, including for Indigenous Australians and LGBTIQA+ communities;
- Locally led;
- Developed in consultation with consumers and carers; and
- Integrated into community health literacy initiatives.[13]

7.4 Recommendations for improving MHL in populations served by the RFDS

The MHFA program has demonstrated good outcomes since its inception in 2000 and incorporates the best practice principles for MHL interventions outlined in section 7.3. There is strong evidence for its efficacy and acceptability by the Australian general public. Around 1% of the Australian population has been trained in MHFA.[137] In addition to training members of the general public, MHFA offers a 5-day intensive training course to enable suitable people to become accredited instructors. Instructors can then deliver the standard course to members of their community. This model would work extremely well in rural and remote communities, where access to training courses and MHL interventions may be limited.

The results from the current MHL survey also indicate that MHL interventions should be specific to the communities in which they will be implemented. Based on the survey results, any interventions to improve MHL in Australia should be wide-ranging, and delivered to people living in all remoteness areas. The groups most likely to benefit from targeted MHL interventions include males, people aged over 60 years, people who have not had a lived experience of a mental disorder, non-LGBTIQA+ Australians, Indigenous Australians and people without a bachelor's degree or higher level of education.

In order to improve the MHL of the target groups in rural and remote areas of Australia, the RFDS could partner with organisations to deliver MHFA or other appropriate interventions. This could include partnering with organisations that deliver services to groups identified as having poorer MHL, such as men and older Australians. Organisations such as Ozhelp (provides mental health services to men in very remote areas), Men's Shed (accessible to men with branches across Australia), Mission Australia (delivers services to people in need, including men and older Australians), Aboriginal Community Controlled Health Services (ACCHS), etc.

7.5 Mental health services

In addition to interventions to improve MHL, it is vital that appropriate services are available to all Australians with a mental disorder. Around half of the respondents to the MHL survey had been diagnosed with a mental disorder and the majority had sought help. This suggests that help-seeking behaviour among respondents is high and that services are accessed, when available.

However, appropriate services may not be readily available in some areas of Australia, especially in rural and remote areas, leading to delays in treatment.[29] Rural and remote areas have fewer psychologists and psychiatrists per head of population than major cities.[139] In 2017–2018, the proportion of people receiving mental health services through the MBS decreased as remoteness increased.[140] Around 3.7% of the population in remote Australia, and 2.7% of the population living in very remote Australia, accessed mental health services through the MBS, compared to more than 10% of people living in major cities.[140]

A review of mental health programs and services undertaken by the National Mental Health Commission[141] identified several groups of people with mental ill-health who face compounding disadvantage—including people living in rural and remote areas and Aboriginal and Torres Strait Islander Australians.[141] Specifically, the review found that: mental health services in rural and remote areas are transient, face significant workforce shortages and in many cases are decreasing despite high demand; programs are given inadequate funding for the additional demands and costs of service delivery in regional, rural and remote areas; and that access to services could be improved by wider use of technology and increasing community capacity.[29,141]

The RFDS has previously conducted a thorough assessment of the mental health needs of rural and remote Australians, and developed a set of recommendations to improve mental health and reduce the impacts of mental disorders and suicide in remote and rural Australia.[29] The RFDS recommends that mental health and SEWB services in rural and remote Australia should incorporate a number of components. Programs should be:[29]

- Provided in identified areas of need and address;
- Focused on prevention and early intervention;
- Evidence-based and evaluated;
- Locally relevant, addressing community risk factors and including input from the community, consumers, carers and members of targeted groups (e.g. Indigenous Australians, LGBTIQA+ Australians, etc.) in decisions about new services;
- Underpinned by a social determinants of health approach and be holistic;
- Implemented in collaboration with other organisations delivering mental health and SEWB services;
- Implemented in collaboration with consumers, families and carers;
- Culturally appropriate and safe;
- Supported by a comprehensive primary health approach; and
- Accessible to all members of the local community.

The current research has also highlighted gaps in knowledge about mental health and poorer MHL of some population groups. To ensure all people who would benefit from mental health services feel comfortable accessing them, a comprehensive strategy around improving MHL for groups with lower MHL should be implemented in conjunction with mental health services.

References

1. Australian Institute of Health and Welfare. The health and welfare of Australia's Aboriginal and Torres Strait Islander peoples 2015. Cat. no. IHW 147. Canberra: Australian Institute of Health and Welfare;2015.
2. Australian Bureau of Statistics. National Survey of Mental Health and Wellbeing 2007: Summary of results. ABS cat no. 4326.0. Australian Bureau of Statistics. https://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/4326.0Main+Features32007?OpenDocument. Published 2008. Accessed 20/5/2019.
3. Australian Bureau of Statistics. Causes of death, Australia, 2018. ABS cat. no. 3303.0. https://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/3303.02018?OpenDocument. Published 2019. Accessed 20/11/2019.
4. Australian Institute of Health and Welfare. Australia's health 2014. Australian Institute of Health and Welfare. Australia's health series no. 14. Cat. no. AUS 178 Web site. https://www.aihw.gov.au/reports/australias-health/australias-health-2014/contents/table-of-contents. Published 2014. Accessed 20/5/2019.
5. Furnham A, Swami V. Mental health literacy: A review of what it is and why it matters. International Perspectives in Psychology: Research, Practice, Consultation. 2018;7(4):240–257.
6. Henderson C, Evans-Lacko S, Thornicroft G. Mental illness stigma, help seeking, and public health programs. American Journal of Public Health. 2013;103(5):777–780.
7. Coppens E, Van Audenhove C, Scheerder G, et al. Public attitudes toward depression and help-seeking in four European countries baseline survey prior to the OSPI-Europe intervention. Journal of Affective Disorders. 2013;150(2):320–329.
8. Gulliver A, Griffiths KM, Christensen H, Brewer JL. A systematic review of help-seeking interventions for depression, anxiety and general psychological distress. BMC psychiatry. 2012;12:81.
9. Gorczynski P, Sims-schouten W, Hill D, Wilson JC. Examining mental health literacy, help seeking behaviours, and mental health outcomes in UK university students. The Journal of Mental Health Training, Education and Practice. 2017;12(2):111–120.
10. Clarke M, Whitty P, Browne S, et al. Untreated illness and outcome of psychosis. British Journal of Psychiatry 2006;189(3):235–240.
11. O'Connor M, Casey L. The Mental Health Literacy Scale (MHLS): A new scale-based measure of mental health literacy. Psychiatry Research. 2015;229(1-2):511–516.
12. Griffiths KM, Christensen H, Jorm AF. Mental health literacy as a function of remoteness of residence: An Australian national study. BMC Public Health. 2009;9(1):92.
13. Kutcher S, Wei Y, Coniglio C. Mental health literacy: Past, present, and future. Canadian Journal of Psychiatry. 2016;61(3):154–158.
14. Oliffe JL, Hannan-Leith MN, Ogrodniczuk JS, et al. Men's depression and suicide literacy: a nationally representative Canadian survey. Journal of Mental Health. 2016;25(6):520–526.
15. Kutcher S, Bagnell A, Wei Y. Mental health literacy in secondary schools: A Canadian approach. Child and Adolescent Psychiatric Clinics of North America. 2015;24:233–244.
16. Jorm AF, Korten AE, Jacomb PA, Christensen H, Rodgers B, Pollitt P. "Mental health literacy": A survey of the public's ability to recognise mental disorders and their beliefs about the effectiveness of treatment. The Medical journal of Australia. 1997;166(4):182–186.
17. Jorm AF. Mental health literacy: Empowering the community to take action for better mental health. American Psychologist. 2012;67(3):231–243.
18. Goffman E. Stigma: Notes on the management of a spoled identity. New Jersey: Prentice-Hall; 1963.
19. Link BG, Phelan JC. Conceptualising stigma. Annual Review of Sociology. 2001;27:363-385.

20. Nutbeam D, Wise M, Bauman A, Harris E, Leeder S. Goals and targets for Australia's health in the year 2000 and beyond. Canberra: Australian Government Publishing Service;1993.
21. Kickbusch IS. Health literacy: addressing the health and education divide. Health Promotion International. 2001;16(3):289-297.
22. Jackson H, Judd F, Komiti A, Fraser C, Murray G, Robins G. Mental health problems in rural contexts: What are the barriers to seeking help from professional providers? Australian Psychologist. 2007;42(2):147–160.
23. Brijnath B, Protheroe J, Mahtani KR, Antoniades J. Do web-based mental health literacy interventions improve the mental health literacy of adult consumers? Results from a systematic review. Journal of Medical Internet Research. 2016;18(6):e165-e165.
24. Griffiths KM, Mendoza J, Carron-Arthur B. Whereto mental health reform in Australia: is anyone listening to our independent auditors? The Medical journal of Australia. 2015;202(4):172-144.
25. Kohn R, Saxena S, Levav I, Saraceno B. The treatment gap in mental health care. Bulletin of the World Health Organization. 2004;82(11):858-866.
26. Substance Abuse and Mental Health Services Administration. Results from the 2011 National Survey on Drug Use and Health: Mental Health Findings, NSDUH Series H-45, HHS Publication No. (SMA) 12-4725. Rockville, MD: Substance Abuse and Mental Health Services Administration;2012.
27. Paulus DJ, Wadsworth LP, Hayes-Skelton SA. Mental health literacy for anxiety disorders: How perceptions of symptom severity might relate to recognition of psychological distress. Journal of public mental health. 2015;14(2):94-106.
28. Bishop L, Ransom A, Laverty M. Health care access, mental health, and preventive health: Health priority survey findings for people in the bush. Canberra: Royal Flying Doctor Service of Australia; 2017.
29. Bishop L, Ransom A, Laverty M, Gale L. Mental health in remote and rural communities. Canberra: Royal Flying Doctor Service of Australia; 2017.
30. Harrison JE, Henley G. Suicide and hospitalised self-harm in Australia: Trends and analysis. Injury research and statistics series no. 93. Cat. no. INJCAT 169. Canberra: Australian Institute of Health and Welfare;2014.
31. National Rural Health Alliance Inc. Mental health in rural and remote Australia. Canberra: National Rural Health Alliance Inc.;2016.
32. Medicine Io. Reducing risks for mental disorders: Frontiers for preventive intervention research. Washington, DC: The National Academies Press; 1994.
33. Reavley NJ, Jorm AF. National survey of mental health literacy and stigma. Department of Health and Ageing. https://nswmentalhealthcommission.com.au/sites/default/files/Report%20-%20National%20Surveys%20of%20Mental%20Health%20Literacy%2C%20Stigma%20and%20Discrimination%20-%20NSW%20findings.pdf. Published 2011. Accessed 3/7/2020.
34. Bartlett H, Travers C, Cartwright C, Smith N. Mental health literacy in rural Queensland: results of a community survey. Aust N Z J Psych. 2006;40(9):783-789.
35. Handley TE, Lewin TJ, Perkins D, Kelly B. Self-recognition of mental health problems in a rural Australian sample. Australian Journal of Rural Health. 2018;26(3):173-180.
36. Reavley NJ, Milner AJ, Martin A, et al. Depression literacy and help-seeking in Australian police. Australian and New Zealand Journal of Psychiatry. 2018;52(11):1063-1074.
37. Reavley NJ, Jorm AF. Young people's recognition of mental disorders and beliefs about treatment and outcome: findings from an Australian national survey. Australian and New Zealand Journal of Psychiatry. 2011;45(10):890-898.
38. Caldwell TM, Jorm AF. Mental health nurses' beliefs about interventions for schizophrenia and depression: a comparison with psychiatrists and the public. Aust N Z J Psych. 2000;34(4):602-611.

39. Jorm AF, Korten AE, Jacomb PA, et al. Helpfulness of interventions for mental disorders: beliefs of health professionals compared with the general public. Br J Psychiatry. 1997;171(3):233-237.
40. Morgan AJ, Reavley NJ, Jorm AF. Beliefs about mental disorder treatment and prognosis: comparison of health professionals with the Australian public. Australian and New Zealand Journal of Psychiatry. 2014;48(5):442-451.
41. Nakane Y, Jorm AF, Yoshioka K, Christensen H, Nakane H, Griffiths K. Public beliefs about causes and risk factors for mental disorders: a comparison of Japan and Australia. BMC psychiatry. 2005;5.
42. Royal Flying Doctor Service of Australia. Responding to need in country Australia: Over 90 years of service. Annual national report 2017/2018. Published 2018. Accessed 12/05/2019.
43. World Health Organization. Mental health: A state of well-being. World Health Organization. http://www.who.int/features/factfiles/mental_health/en/. Published 2014. Accessed 7/11/2016.
44. mindhealthconnect. Mental health and wellbeing. http://www.mindhealthconnect.org.au/mental-health-and-wellbeing. Published 2014. Accessed 22/2/2017.
45. Government of Western Australia. What is mental health? Published 2010. Accessed 15/11/2016.
46. beyondblue. What is mental health? Published 2016. Accessed 15/11/2016.
47. Ryff CD. Happiness is everything, or is it? Explorations on the meaning of psychological well-being. Journal of Personality and Social Psychology. 1989;57(6):1069-1081.
48. Ryan R, Deci E. On Happiness and Human Potentials: A Review of Research on Hedonic and Eudaimonic Well-Being. Annual review of psychology. 2001;52:141-166.
49. Slade T, Johnston A, Teesson M, et al. The mental health of Australians 2. Report on the 2007 National Survey of Mental Health and Wellbeing. Canberra: Department of Health and Ageing;2009.
50. Think Mental Health. Factors that can affect your mental health. https://www.thinkmentalhealthwa.com.au/supporting-my-mental-health/factors-that-can-affect-your-mental-health/. Published 2017. Accessed 26/3/2019.
51. Patel V, Chisholm D, Parikh R, et al. Addressing the burden of mental, neurological, and substance use disorders: Key messages from Disease Control Priorities, 3rd edition. The Lancet. 2016;387(10028):1672–1685.
52. Australian Institute of Health and Welfare. Mental health services—in brief 2016. Cat. no. HSE 180. Canberra: Australian Institute of Health and Welfare;2016.
53. beyondblue. Anxiety and depression: An information booklet. Melbourne: beyondblue;2015.
54. Australian Health Ministers. Fourth national mental health plan: An agenda for collaborative government action in mental health 2009–2014. Canberra: Commonwealth of Australia;2009.
55. Dudgeon P, Calma T, Holland C. Future directions In Aboriginal and Torres Strait Islander social and emotional wellbeing, mental health and related areas policy. Published 2015. Accessed 06/12/2016.
56. Australian Institute of Health and Welfare. Mental health services in Australia. Published 2020. Accessed 18/01/2020.
57. Morgan VA, Waterreus A, Jablensky A, et al. People living with psychotic illness 2010: Report on the second Australian national survey. Canberra: Deaprtment of Health and Ageing;2011.
58. Australian Institute of Health and Welfare. Mental health services—in brief 2018. Cat. no. HSE 211. Canberra: AIHW;2018.
59. Australian Institute of Health and Welfare. Emergency department care 2017–18: Australian hospital statistics. Health services series no. 89. Cat. no. HSE 216. Canberra: Australian Institute of Health and Welfare;2018.

60. Australian Institute of Health and Welfare. Admitted patient care 2017–18: Australian hospital statistics. Health services series no. 90. Cat. no. HSE 225. Canberra: Australian Institute of Health and Welfare;2019.
61. Australian Bureau of Statistics. Australian Statistical Geography Standard (ASGS): Volume 5 - Remoteness Structure, July 2011. ABS cat. no. 1270.0.55.005. Australian Bureau of Statistics. https://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/1270.0.55.005Main+Features1July%202011?OpenDocument. Published 2013. Accessed 1/7/2019.
62. Arnautovska U, McPhedran S, De Leo D. Differences in characteristics between suicide cases of farm managers compared to those of farm labourers in Queensland, Australia. Rural and remote health. 2015;15(3):3250.
63. Garvan Research Foundation. Medical research and rural health: Garvan report 2015. Darlinghurst: Garvan Research Foundation;2015.
64. Australian Unity, Deakin University. What makes us happy? Third edition. Melbourne: Australian Unity;2015.
65. Inder KJ, Berry H, Kelly BJ. Using cohort studies to investigate rural and remote mental health. Australian Journal of Rural Health. 2011;19(4):171–-178.
66. Rural Doctors Association of Australia. Mental health care in rural Australia: A RDAA background paper. Canberra: Rural Doctors Association of Australia;2016.
67. National Mental Health Commission. The national review of mental health programmes and services. Volume 4, Paper 2. National Mental Health Commission. http://www.mentalhealthcommission.gov.au/media/119956/Vol%204%20Paper%202%20-%20Review%20of%20Mental%20Health%20Programmes%20and%20Services.pdf. Published 2014. Accessed 18/11/2016.
68. Commonwealth of Australia. National strategic framework for Aboriginal and Torres Strait Islander peoples' mental health and social and emotional wellbeing. Department of the Prime Minister and Cabinet. Published 2017. Accessed 1/8/2020.
69. King M, Smith A, Gracey M. Indigenous health part 2: The underlying causes of the health gap. The Lancet. 2009;374(9683):76–85.
70. Osborne K, Baum F, Brown L. What works? A review of actions addressing the social and economic determinants of Indigenous health. Issues paper no. 7. Produced for the Closing the Gap Clearinghouse. Canberra and Melbourne: Australian Institute of Health and Welfare and Australian Institute of Family Studies;2013.
71. Riebschleger J, Costello S, Cavanaugh DL, Grové C. Mental health literacy of youth that have a family member with a mental illness: Outcomes from a new program and scale. Frontiers in Psychiatry. 2019;10(2).
72. Bishop LM. A comparison of the mental health literacy of Australian newspaper journalists with a sample of the Australian public and the public's recall of stories about depression from the media [PhD thesis]. Canberra: Psychology, Australian National University; 2011.
73. O'Connor M, Casey L, Clough B. Measuring mental health literacy: A review of scale-based measures. Journal of Mental Health. 2014;23(4):197–204.
74. Jorm AF. Why we need the concept of "mental health literacy". Health Communication. 2015;30(12):1166-1168.
75. Reavley NJ, Too T, Zhao M. National surveys of mental health literacy and stigma and national survey of discrimination and positive treatment. A report for the Mental Health Commission of NSW. Mental Health Commission of NSW. https://nswmentalhealthcommission.com.au/sites/default/files/Report%20-%20National%20Surveys%20of%20Mental%20Health%20Literacy%2C%20Stigma%20and%20Discrimination%20-%20NSW%20findings.pdf. Published 2015. Accessed 3/7/2020.

76. Reavley N, Too T, Zhao M. National surveys of mental health literacy and stigma and national survey of discrimination and positive treatment: A report for the Mental Health Commission of NSW Sydney: Mental Health Commission of NSW;2016.

77. e-Mental Health in Practice. eMHPrac. http://www.emhprac.org.au/. Published 2019. Accessed 2/5/2019.

78. Australian Bureau of Statistics. Regional population growth, Australia, 2017-18. ABS cat. no. 3218.0. https://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/3218.02017-18?OpenDocument. Published 2019. Accessed 2/6/2020.

79. Gardiner FW, Coleman M, Teoh N, et al. Aeromedical retrievals of people for mental health care and the low level of clinical support in rural and remote Australia. The Medical journal of Australia. 2019.

80. Anderson JG, Aydin C. Evaluating the Organizational Impact of Health Care Information Systems. 2nd Edition. New York: Springer; 2005.

81. Jackson LA, Ervin KS, Gardner PD, Schmitt N. Gender and the internet: Women communicating and men searching. Sex Roles. 2001;44(5):363–379.

82. Australian Institute of Health and Welfare. Australia's health 2018. Australia's health series no. 16. AUS 221. Australian Institute of Health and Welfare. https://www.aihw.gov.au/reports/australias-health/australias-health-2018/contents/table-of-contents. Published 2018. Accessed 20/5/2019.

83. Australian Bureau of Statistics. 2016 Census QuickStats. https://quickstats.censusdata.abs.gov.au/census_services/getproduct/census/2016/quickstat/036. Published 2019. Accessed 10/02/2020.

84. Australian Bureau of Statistics. Gender indicators, Australia, Sep 2018. ABS cat no. 4125.0. https://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/4125.0~Sep%202018~Main%20Features~Education~5. Published 2018. Accessed 3/06/2019.

85. Australian Bureau of Statistics. Estimates of Aboriginal and Torres Strait Islander Australians, June 2016. ABS cat no. 3238.0.55.00. https://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/3238.0.55.001Main+Features1June%202016?OpenDocument. Published 2018. Accessed 31/05/2019.

86. PHIDU. Private dwellings with Aboriginal households with children, and with no Internet connection, 2011. http://www.phidu.torrens.edu.au/notes-on-the-data/atsi-notes/child-internet-no-connection. Published 2016. Accessed 25/5/2017.

87. Piper SE, Bailey PE, Lam LT, Kneebone, II. Predictors of mental health literacy in older people. Archives of gerontology and geriatrics. 2018;79:52–56.

88. Fisher LJ, Goldney RD. Differences in community mental health literacy in older and younger Australians. International Journal of Geriatric Psychiatry. 2003;18(1):33–40.

89. Hadjimina E, Furnham A. Influence of age and gender on mental health literacy of anxiety disorders. Psychiatry Research. 2017;251:8–13.

90. Jorm AF, Nakane Y, Christensen H, Yoshioka K, Griffiths KM, Wata Y. Public beliefs about treatment and outcome of mental disorders: A comparison of Australia and Japan. BMC Medicine. 2005;3.

91. Wang J, Adair C, Fick G, et al. Depression literacy in Alberta: Findings from a general population sample. Canadian Journal of Psychiatry. 2007;52(7):442–449.

92. Wong DFK, Cheng CW, Zhuang XY, et al. Comparing the mental health literacy of Chinese people in Australia, China, Hong Kong and Taiwan: Implications for mental health promotion. Psychiatry Research. 2017;256:258–266.

93. McNair RP, Bush R. Mental health help seeking patterns and associations among Australian same sex attracted women, trans and gender diverse people: A survey-based study. BMC psychiatry. 2016;16(1):209.

94. Leonard W, Metcalf A. Going upstream: A framework for promoting the mental health of lesbian, gay, bisexual, transgender and intersex (LGBTI) people. National LGBTI Health Alliance. https://www.beyondblue.org.au/docs/default-source/default-document-library/bw0257-going-upstream-online-o-lgbti-mental-health-promotion-framework.pdf. Published 2014. Accessed 10/12/2019.
95. Furnham A, Lee V, Kolzeev V. Mental health literacy and borderline personality disorder (BPD): what do the public "make" of those with BPD? Social Psychiatry and Psychiatric Epidemiology. 2015;50(2):317-324.
96. Loo PW, Wong S, Furnham A. Mental health literacy: A cross-cultural study from Britain, Hong Kong and Malaysia. Asia Pacific Psychiatry. 2012;4(2):113-125.
97. Furnham A, Abajian N, McClelland A. Psychiatric literacy and personality disorders. Psychiatry Research. 2011;189:110–114.
98. Farrer L, Leach L, Griffiths KM, Christensen H, Jorm AF. Age differences in mental health literacy. BMC Public Health. 2008;8(1):125.
99. Nicholas R, Roche AM. Why the growing use of alcohol and other drugs among older Australians needs attention. Published 2014. Accessed 25/11/2019.
100. Furnham A, Hamid A. Mental health literacy in non-western countries: A review of the recent literature. Mental Health Review Journal. 2014;19(2):84-98.
101. Cotton SM, Wright A, Harris MG, Jorm AF, McGorry PD. Influence of gender on mental health literacy in young Australians. Australian and New Zealand Journal of Psychiatry. 2006;40(9):790–796.
102. Picco L, Seow E, Chua BY, et al. Recognition of mental disorders: Findings from a cross-sectional study among medical students in Singapore. BMJ Open. 2017;7(12):e019038-e019038.
103. Blanco C, Rubio J, Wall M, Wang S, Jiu CJ, Kendler KS. Risk factors for anxiety disorders: Common and specific effects in a national sample. Depress Anxiety. 2014;31(9):756-764.
104. National Mental Health Commission. Fact sheet 9—What this means for general practice and primary health care. In. Canberra: National Mental Health Commission; 2015.
105. Britt H, Miller GC, Henderson J, et al. General practice activity in Australia 2014–15. General practice series no.38. Sydney: Sydney University Press;2015.
106. Smith MT, Huang MI, Manber R. Cognitive behavior therapy for chronic insomnia occurring within the context of medical and psychiatric disorders. Clinical Psychology Review. 2005;25(5):559–592.
107. Hoag JR, Tennen H, Stevens RG, Coman E, Wu H. Affect, emotion dysregulation and sleep quality among low-income women. Sleep Health. 2016;2(4):283-288.
108. Kahn M, Sheppes G, Sadeh A. Sleep and emotions: bidirectional links and underlying mechanisms. International Journal of Psychophysiology 2013;89(2):218-228.
109. Goldstein AN, Walker MP. The role of sleep in emotional brain function. Annual Review of Clinical Psychology. 2014;10:679-708.
110. Department of Health and Human Services. Mood and sleep. https://www.betterhealth.vic.gov.au/health/healthyliving/Mood-and-sleep. Published 2018. Accessed 5/06/2019.
111. McGuire JF, Lewin AB, Storch EA. Enhancing exposure therapy for anxiety disorders, obsessive-compulsive disorder and post-traumatic stress disorder. Expert review of neurotherapeutics. 2014;14(8):893-910.
112. Hofmann SG, Hay AC. Rethinking avoidance: Toward a balanced approach to avoidance in treating anxiety disorders. J Anxiety Disord. 2018;55:14-21.
113. Jorm AF, Allen NB, Morgan AJ, Ryan S, Purcell R. A guide to what works for depression: 2nd Edition. Melbourne: beyondblue;2013.
114. Australian Psychological Society Limited. Australian Psychological Society Code of Ethics. Melbourne: Australian Psychological Society Limited;2018.

115. Pahwa R, Fulginiti A, Brekke JS, Rice E. Mental illness disclosure decision making. American Journal of Orthopsychiatry. 2017;87(5):575-584.

116. Mulfinger N, Rusch N, Bayha P, et al. Secrecy versus disclosure of mental illness among adolescents: II. The perspective of relevant stakeholders. Journal of Mental Health. 2019;28(3):304-311.

117. Corrigan PW, Rao D. On the self-stigma of mental illness: stages, disclosure, and strategies for change. Canadian Journal 0f Psychiatry. 2012;57(8):464-469.

118. Grausgruber A, Meise U, Katschnig H, Schöny W, Fleischhacker WW. Patterns of social distance towards people suffering from schizophrenia in Austria: a comparison between the general public, relatives and mental health staff. Acta Psychiatrica Scandinavica. 2007;115(4):310-319.

119. Hachtel H, Harries C, Luebbers S, Ogloff JR. Violent offending in schizophrenia spectrum disorders preceding and following diagnosis. Australian and New Zealand Journal of Psychiatry. 2018;52(8):782-792.

120. Wei Y, McGrath PJ, Hayden J, Kutcher S. Mental health literacy measures evaluating knowledge, attitudes and help-seeking: A scoping review. BMC psychiatry. 2015;15:291.

121. Angermeyer MC, Dietrich S. Public beliefs about and attitudes towards people with mental illness: a review of population studies. Acta Psychiatrica Scandinavica. 2006;113(3):163-179.

122. ten Have M, de Graaf R, Ormel J, Vilagut G, Kovess V, Alonso J. Are attitudes towards mental health help-seeking associated with service use? Results from the European Study of Epidemiology of Mental Disorders. Social Psychiatry and Psychiatric Epidemiology. 2010;45(2):153-163.

123. Goldney RD, Fisher LJ, Dal Grande E, Taylor AW. Changes in mental health literacy about depression: South Australia, 1998 to 2004. Med J Aust. 2005;183.

124. Goldney RD, Dunn KI, Dal Grande E, Crabb S, Taylor A. Tracking depression-related mental health literacy across South Australia: a decade of change. Australian and New Zealand Journal of Psychiatry. 2009;43(5):476-483.

125. Oliver MI, Pearson N, Coe N, Gunnell D. Help-seeking behaviour in men and women with common mental health problems: cross-sectional study. British Journal of Psychiatry. 2005;186:297-301.

126. Judd F, Komiti A, Jackson H. How does being female assist help-seeking for mental health problems? Australian and New Zealand Journal of Psychiatry. 2008;42(1):24-29.

127. Hall and Partners. Men's help seeking behaviour: Report of research findings. Melbourne: Hall & Partners OpenMind;2012.

128. Australian Institute of Health and Welfare. Australia's health 2016. Australia's health series no. 15. Cat. no. AUS 199. Canberra: Australian Institute of Health and Welfare;2016.

129. Centre for International Economics. The Royal Flying Doctor Service: Flexible and responsive primary healthcare for rural and remote Australia. Canberra: Centre for International Economics;2015.

130. Thomas SL, Wakerman J, Humphreys JS. What core primary health care services should be available to Australians living in rural and remote communities? BMC Family Practice. 2014;15:143.

131. beyondblue. Connections matter. https://www.beyondblue.org.au/who-does-it-affect/older-people/connections-matter. Published 2019. Accessed 4/06/2019.

132. Gardner A, Filia K, Killackey E, Cotton S. The social inclusion of young people with serious mental illness: A narrative review of the literature and suggested future directions. Australian and New Zealand Journal of Psychiatry. 2019;53(1):15-26.

133. Newman JC, Des Jarlais DC, Turner CF, Gribble J, Cooley P, Paone D. The Differential Effects of Face-to-Face and Computer Interview Modes. American Journal of Public Health. 2002;92(2):294-297.

134. Sadler GR, Lee HC, Lim RS, Fullerton J. Recruiting hard-to-reach population subgroups via adaptations of the snowball sampling strategy. Nursing and Health Science. 2010;12(3):369–374.

135. Kitchener BA, Jorm AF. Mental health first aid training for the public: evaluation of effects on knowledge, attitudes and helping behavior. BMC Psychiatry. 2002;2:10.

136. Morgan AJ, Ross A, Reavley NJ. Systematic review and meta-analysis of Mental Health First Aid training: Effects on knowledge, stigma, and helping behaviour. PloS one. 2018;13(5):e0197102.

137. Mental Health First Aid. Our impact. https://mhfa.com.au/our-impact/our-global-impact. Published 2019. Accessed 6/06/2019.

138. Jorm AF, Christensen H, Griffiths KM. The impact of beyondblue: The national depression initiative on the Australian public's recognition of depression and beliefs about treatments. Australian and New Zealand Journal of Psychiatry. 2005;39(4):248-254.

139. Gardiner FW, Coleman M, Teoh N, et al. Aeromedical retrievals of people for mental health care and the low level of clinical support in rural and remote Australia. Medical Journal of Australia. 2019;Epub ahead of print.

140. Australian Institute of Health and Welfare. Mental health services—in brief 2019. Cat. no. HSE 228. Canberra: Australian Institute of Health and Welfare;2019.

141. National Mental Health Commission. The national review of mental health programmes and services. Sydney: National Mental Health Commission;2014.

Appendix 1.

Mental Health Literacy Survey

Royal Flying Doctor Service Mental Health Literacy Survey

Participant Information

Introduction

The Royal Flying Doctor Service (RFDS) has been caring for people for ninety years. This includes helping them manage mental health conditions.

Mental health conditions are common. One in five people will have a mental health condition in their lifetime. Even though they are common, and there are effective treatments, not everyone accesses services that could help them. One reason people do not seek help is that they are not sure how to identify mental health symptoms and how to access treatment.

The mental health literacy survey

With our research partners at the Australian Catholic University (ACU), we want to find out what you know about mental health conditions—this is known as your mental health literacy. We want to know whether you have access to mental health services, how likely you are to use them, and how connected you are to your community. We also want to know a few general things about you, including: where you live; what education you have completed; your age, gender, sexual preference and Indigenous status; and whether you have previously had a mental health condition.

The survey will take about 20 minutes. When you have finished the survey, you can enter a draw to win one of five $100 Coles/Myer vouchers, if desired.

Who can participate in the survey?

If you are 18 years of age or older you can take part in this survey. The survey is open to people from all areas of Australia, including major cities, and rural and remote areas.

Participant Information Letter

Before you start the survey, you need to read the Participant Information Letter. When you click here, a copy of the Participant Information Letter will open in a new window. Please read it before continuing with this survey. You can print it and keep a copy. You will be asked to confirm that you have read and understood this information.

If you need support

Some people may feel upset after answering survey questions about mental health conditions. If

Royal Flying Doctor Service Mental Health Literacy Survey

Declaration by Participant

Before you start the survey, we want to be sure you understand this study and are happy to take part.

Please answer the following questions.

* 1. I have read the Participant Information Letter or someone has read it to me in a language that I understand

- ◯ Yes
- ◯ No

* 2. I understand the purposes, procedures and risks of this study

- ◯ Yes
- ◯ No

* 3. I freely agree to participate in this study as described and understand that I am free to withdraw at any time during the study without it affecting any future health care from the RFDS

- ◯ Yes
- ◯ No

Royal Flying Doctor Service Mental Health Literacy Survey

Demographic Questions

Thank you for agreeing to take part in our survey. This survey is voluntary. If you come to a

question and do not wish to answer it, please leave it blank.

The following information will assist in the planning and provision of appropriate and improved health care and services.

4. Which age group (years) do you belong to?

- ◯ 18–19
- ◯ 20–24
- ◯ 25–29
- ◯ 30–34
- ◯ 35–39
- ◯ 40–44
- ◯ 45–49
- ◯ 50–54
- ◯ 55–59
- ◯ 60–64
- ◯ 65–69
- ◯ 70–74
- ◯ 75+

5. What is your gender?

◯ Male ◯ Female ◯ Other

6. Which of these most closely describes your sexual orientation?

- ◯ Straight (heterosexual)
- ◯ Gay
- ◯ Lesbian
- ◯ Bisexual
- ◯ Other

7. Are you of Aboriginal or Torres Strait Islander origin?

- ◯ No
- ◯ Yes, Aboriginal only
- ◯ Yes, Torres Strait Islander only
- ◯ Yes, Aboriginal and Torres Strait Islander

8. What is the name of the suburb or town where you live?

10. What state or territory is this in?

- ◯ Australian Capital Territory
- ◯ New South Wales
- ◯ Northern Territory
- ◯ Queensland
- ◯ South Australia
- ◯ Tasmania
- ◯ Victoria
- ◯ Western Australia

11. What is the highest level of education you have completed?

- ◯ Still attending school
- ◯ Left school before completing year 12
- ◯ Secondary school certificate
- ◯ Trade certificate/apprenticeship
- ◯ Other certificate
- ◯ Associate or undergraduate diploma
- ◯ Bachelor's degree
- ◯ Higher degree (Masters, PhD)
- ◯ Other

12. Have you ever been diagnosed with a mental illness?

◯ Yes ◯ No ◯ Don't know

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Demographic Questions

13. Have you received any professional help or treatment for your mental illness?

◯ Yes ◯ No ◯ Don't know

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Demographic Questions

14. What kind of professional help have you received for your mental illness (e.g. from a GP, psychologist, psychiatrist, other health professional, RFDS etc.)? (list all you have seen)

15. Have you ever received health care from the RFDS for either a physical or mental illness (such as through an RFDS primary health care clinic, RFDS telehealth service, aeromedical retrieval, non-emergency ground transport etc.)?

- ◯ No
- ◯ Yes, a physical illness only
- ◯ Yes, a mental illness only
- ◯ Yes, both a physical and mental illness
- ◯ Don't know

16. How far would someone in your community have to travel to access professional help (e.g. from a GP, psychologist, psychiatrist, other health professional, RFDS etc.) for a mental illness?

- ◯ <1 hour
- ◯ 1 hour to <2 hours
- ◯ 2 hours to <3 hours
- ◯ 3 hours to <4 hours
- ◯ 4 hours to <5 hours
- ◯ 5 hours or more

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Community Connections

The following questions are about how involved you are in your local community. They will help us understand your social connections and your experience of belonging in your community.

Please read the following statements and tell us how true these statements are for you.

17. I feel a great sense of belonging to my community

Always true	Often true	Sometimes true	Rarely true	Never true
◯	◯	◯	◯	◯

18. I actively contribute to my community

Always true	Often true	Sometimes true	Rarely true	Never true
◯	◯	◯	◯	◯

19. I would like to be more involved in my community

◯ Yes ◯ No ◯ Don't know

20. There are opportunities for me to be more involved in my community

◯ Yes ◯ No ◯ Don't know

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Mental Health Literacy

The purpose of these questions is to gain an understanding of your knowledge of various aspects to do with mental health. When responding, we are interested in your degree of knowledge. Therefore when choosing your response, consider that:

Very unlikely = I am certain that it is NOT likely
Unlikely = I think it is unlikely but am not certain
Likely = I think it is likely but am not certain
Very Likely = I am certain that it IS very likely

21. If someone became extremely nervous or anxious in one or more situations with other people (e.g., a party) or performance situations (e.g., presenting at a meeting) in which they were afraid of being evaluated by others and that they would act in a way that was humiliating or feel embarrassed, then to what extent do you think it is likely they have Social Phobia

Very unlikely	Unlikely	Likely	Very likely
◯	◯	◯	◯

22. If someone experienced excessive worry about a number of events or activities where this level of concern was not warranted, had difficulty controlling this worry and had physical symptoms such as having tense muscles and feeling fatigued then to what extent do you think it is likely they have Generalised Anxiety Disorder

Very unlikely	Unlikely	Likely	Very likely
○	○	○	○

23. To what extent do you think it is likely that in general, in Australia, men are MORE likely to experience an anxiety disorder compared to women

Very unlikely	Unlikely	Likely	Very likely
○	○	○	○

24. If someone experienced a low mood for two or more weeks, had a loss of pleasure or interest in their normal activities and experienced changes in their appetite and sleep then to what extent do you think it is likely they have Major Depressive Disorder

Very unlikely	Unlikely	Likely	Very likely
○	○	○	○

25. To what extent do you think it is likely that Personality Disorders are a category of mental illness

Very unlikely	Unlikely	Likely	Very likely
○	○	○	○

26. To what extent do you think it is likely that Persistent Depressive Disorder (Dysthymia) is a disorder

Very unlikely	Unlikely	Likely	Very likely
○	○	○	○

27. To what extent do you think it is likely that the diagnosis of Agoraphobia includes anxiety about situations where escape may be difficult or embarrassing

Very unlikely	Unlikely	Likely	Very likely
○	○	○	○

28. To what extent do you think it is likely that the diagnosis of Bipolar Disorder includes experiencing periods of elevated (i.e., high) and periods of depressed (i.e., low) mood

Very unlikely	Unlikely	Likely	Very likely
○	○	○	○

29. To what extent do you think it is likely that the diagnosis of Substance Abuse Disorder can include physical and psychological tolerance of a drug (i.e., require more of a drug to get the same effect)

Very unlikely	Unlikely	Likely	Very likely
○	○	○	○

30. To what extent do you think it is likely that in general in Australia, women are MORE likely to experience a mental illness of any kind compared to men

Very unlikely	Unlikely	Likely	Very likely
○	○	○	○

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Royal Flying Doctor Service Mental Health Literacy Survey

Mental Health Literacy

When choosing your response, consider that:

Very Unhelpful = I am certain that it is NOT helpful
Unhelpful = I think it is unhelpful but am not certain
Helpful = I think it is helpful but am not certain
Very Helpful = I am certain that it IS very helpful

31. To what extent do you think it would be helpful for someone to improve their quality of sleep if they were having difficulties managing their emotions (e.g., becoming very anxious or depressed)

Very unhelpful	Unhelpful	Helpful	Very helpful
○	○	○	○

32. To what extent do you think it would be helpful for someone to avoid all activities or situations that made them feel anxious if they were having difficulties managing their emotions

Very unhelpful	Unhelpful	Helpful	Very helpful
○	○	○	○

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Royal Flying Doctor Service Mental Health Literacy Survey

Mental Health Literacy

When choosing your response, consider that:

Very unlikely = I am certain that it is NOT likely
Unlikely = I think it is unlikely but am not certain
Likely = I think it is likely but am not certain
Very Likely = I am certain that it IS very likely

33. To what extent do you think it is likely that Cognitive Behaviour Therapy (CBT) is a therapy based on challenging negative thoughts and increasing helpful behaviours

Very unlikely	Unlikely	Likely	Very likely
○	○	○	○

34. Mental health professionals are bound by confidentiality; however there are certain conditions under which this does not apply.

To what extent do you think it is likely that the following is a condition that would allow a mental health professional to break confidentiality:
If you are at immediate risk of harm to yourself or others

Very unlikely	Unlikely	Likely	Very likely
○	○	○	○

35. Mental health professionals are bound by confidentiality; however there are certain conditions under which this does not apply.

To what extent do you think it is likely that the following is a condition that would allow a mental health professional to break confidentiality:
If your problem is not life-threatening and they want to assist others to better support you

Very unlikely	Unlikely	Likely	Very likely
○	○	○	○

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Royal Flying Doctor Service Mental Health Literacy Survey

Mental Health Literacy

Please indicate to what extent you agree with the following statements.

36. I am confident that I know where to seek information about mental illness

Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
○	○	○	○	○

37. I am confident using the computer or telephone to seek information about mental illness

Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
○	○	○	○	○

38. I am confident attending face to face appointments to seek information about mental illness (e.g., seeing the GP)

Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
○	○	○	○	○

39. I am confident I have access to resources (e.g., GP, internet, friends) that I can use to seek information about mental illness

Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
○	○	○	○	○

40. People with a mental illness could snap out if it if they wanted

Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
○	○	○	○	○

41. A mental illness is a sign of personal weakness

Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
○	○	○	○	○

42. A mental illness is not a real medical illness

Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
○	○	○	○	○

43. People with a mental illness are dangerous

Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
○	○	○	○	○

44. It is best to avoid people with a mental illness so that you don't develop this problem

Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
○	○	○	○	○

45. If I had a mental illness I would not tell anyone

Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
○	○	○	○	○

46. Seeing a mental health professional means you are not strong enough to manage your own difficulties

Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
○	○	○	○	○

47. If I had a mental illness, I would not seek help from a mental health professional

Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
○	○	○	○	○

48. I believe treatment for a mental illness, provided by a mental health professional, would not be effective

Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
○	○	○	○	○

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Royal Flying Doctor Service Mental Health Literacy Survey

Mental Health Literacy

Please indicate to what extent you would be willing to do the following.

49. How willing would you be to move next door to someone with a mental illness?

Definitely unwilling	Unwilling	Neither unwilling nor willing	Willing	Definitely willing
○	○	○	○	○

50. How willing would you be to spend an evening socialising with someone with a mental illness?

Definitely unwilling	Unwilling	Neither unwilling nor willing	Willing	Definitely willing
○	○	○	○	○

51. How willing would you be to make friends with someone with a mental illness?

Definitely unwilling	Unwilling	Neither unwilling nor willing	Willing	Definitely willing
○	○	○	○	○

52. How willing would you be to have someone with a mental illness start working closely with you on a job?

Definitely unwilling	Unwilling	Neither unwilling nor willing	Willing	Definitely willing
○	○	○	○	○

53. How willing would you be to have someone with a mental illness marry into your family?

Definitely unwilling	Unwilling	Neither unwilling nor willing	Willing	Definitely willing
○	○	○	○	○

54. How willing would you be to vote for a politician if you knew they had suffered a mental illness?

Definitely unwilling	Unwilling	Neither unwilling nor willing	Willing	Definitely willing
○	○	○	○	○

55. How willing would you be to employ someone if you knew they had a mental illness?

Definitely unwilling	Unwilling	Neither unwilling nor willing	Willing	Definitely willing
○	○	○	○	○

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Royal Flying Doctor Service Mental Health Literacy Survey

Causal attributions

The items below concern your understanding or opinions regarding five mental illnesses. For each

of the mental illnesses, choose one number from the scale.

56. For each of the following, is the cause something:

	Manageable by you 9	8	7	6	5	4	3	2	Not manageable by you 1
Major Depressive Disorder	○	○	○	○	○	○	○	○	○
Social Phobia	○	○	○	○	○	○	○	○	○
Substance Use Disorder	○	○	○	○	○	○	○	○	○
Borderline Personality Disorder	○	○	○	○	○	○	○	○	○
Generalised Anxiety Disorder	○	○	○	○	○	○	○	○	○

57. For each of the following, is the cause something:

	Permanent 9	8	7	6	5	4	3	2	Temporary 1
Major Depressive Disorder	○	○	○	○	○	○	○	○	○
Social Phobia	○	○	○	○	○	○	○	○	○
Substance Use Disorder	○	○	○	○	○	○	○	○	○
Borderline Personality Disorder	○	○	○	○	○	○	○	○	○
Generalised Anxiety Disorder	○	○	○	○	○	○	○	○	○

58. For each of the following, is the cause something:

	You can regulate 9	8	7	6	5	4	3	2	You cannot regulate 1
Major Depressive Disorder	○	○	○	○	○	○	○	○	○
Social Phobia	○	○	○	○	○	○	○	○	○
Substance Use Disorder	○	○	○	○	○	○	○	○	○
Borderline Personality Disorder	○	○	○	○	○	○	○	○	○
Generalised Anxiety Disorder	○	○	○	○	○	○	○	○	○

Royal Flying Doctor Service Mental Health Literacy Survey

Help seeking

Please indicate to what extent you agree with the following statements.

62. If I had Major Depressive Disorder I would seek help from a mental health professional

Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
○	○	○	○	○

63. If I had Social Phobia I would seek help from a mental health professional

Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
○	○	○	○	○

64. If I had Substance Use Disorder I would seek help from a mental health professional

Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
○	○	○	○	○

65. If I had Borderline Personality Disorder I would seek help from a mental health professional

Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
○	○	○	○	○

66. If I had Generalised Anxiety Disorder I would seek help from a mental health professional

Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
○	○	○	○	○

67. If I had a friend/family member with Major Depressive Disorder I would encourage them to seek help from a mental health professional

Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
○	○	○	○	○

68. If I had a friend/family member with Social Phobia I would encourage them to seek help from a mental health professional

Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
○	○	○	○	○

69. If I had a friend/family member with Substance Use Disorder I would encourage them to seek help from a mental health professional

Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
○	○	○	○	○

70. If I had a friend/family member with Borderline Personality Disorder I would encourage them to seek help from a mental health professional

Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
○	○	○	○	○

71. If I had a friend/family member with Generalised Anxiety Disorder I would encourage them to seek help from a mental health professional

Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
○	○	○	○	○

Royal Flying Doctor Service