Obstacles to the take-up of mental health care provision by adult males in rural and remote areas of Australia:

A Systematic Review Thesis

Peter C Stroud MAPS MASCH

Psychologist

Joanna Briggs Institute

School of Translational Health Science

The University of Adelaide

Master of Clinical Science

Supervisor: Professor Jennifer Abbey

Associate Supervisors: Associate Professor Craig Lockwood, and

Dr Jared Campbell

TABLE OF CONTENTS

TABLE OF CONTENTS ---- **II**

LIST OF TABLES ---- **V**

AUTHOR'S DECLARATION ---- **VI**

ABSTRACT ---- **VIIII**

INTRODUCTION/BACKGROUND: ---- VIII

METHODOLOGY: ---- VIII

RESULTS: ---- VIIII

CONCLUSION: ---- IX

ACKNOWLEDMENTS ---- **X**

INTRODUCTION ---- **1**

CONTEXT ---- 1

REVIEW QUESTION ---- 3

EVIDENCE SYNTHESIS ---- 4

THEORETICAL FRAMEWORK ---- 5

DEFINITION OF TERMS ---- 5

OBSTACLES ---- 6

ADULT RURAL MALE POPULATIONS ---- 7

THE SYSTEMATIC REVIEW PROTOCOL ---- **10**

BACKGROUND ---- 10

REVIEW QUESTION ---- 12

CRITERIA FOR CONSIDERING STUDIES ---- 12

Types of Studies ---- *12*

Types of participants ---- *13*

Types of intervention(s)/phenomena ---- *13*

Types of outcomes ---- *13*

REVIEW METHODS ---- 13

Search Strategy ---- *13*

ASSESSMENT OF METHODOLOGICAL QUALITY ---- 15

DATA EXTRACTION ---- 16

DATA SYNTHESIS ---- 16

ANDERSON'S MODEL ---- 17

EXTRACTION AND EXPLANATION OF OBSTACLES ---- 18

RESULTS ---- **19**

CONTEXT AND BACKGROUND ---- 19

REVIEW QUESTIONS ---- 19

STUDIES FOUND AND REVIEWED ---- 22

FINDINGS FROM QUANTATIVE ARTICLES REVIEWED ---- 24

FINDINGS FROM QUALITATIVE ARTICLES REVIEWED ---- 24

RESULTS OF TAKE-UP FACTORS - QUANTITATIVE RESEARCH ---- 25

RESULTS OF TAKE-UP FACTORS - QUALITATIVE RESEARCH ---- 32

Results of qualitative and quantitative findings - take-up factors ---- 35
Theoretical Modelling ---- 37
Population Characteristics ---- *38*
Environment ---- *38*
Health Behaviour ---- *38*
Health Outcomes ---- *38*
DISCUSSION ---- 46
Context and background ---- 46
Perceptions of Mental illness ---- 47
Rural and Remote Male Health Practices ---- 47
Obstacles ---- 48
Outcomes from Review Question ---- 50
Frequency of Help Seeking Behaviour: Quantitaitve findings ---- 50
Attitudes ---- 51
Coping with Distress ---- 52
Service Utilisation ---- 53
Meaning and experience of help seeking behaviour: Qualitative Assessment ---- 54
Data Synthesis ---- 54
Help Seeking ---- 55
Resilience Factors ---- 55
Stigma, Confidentiality and Cost ---- 56
Helath Service Use ---- 57
Anderson's Model ---- 57
Take up Factors ---- 57
Population factors ---- 58
Environment ---- 61
Health Behaviours ---- 62
Health Outcomes ---- 64
Current Study ---- 66
Supply and Demand Factors ---- 68
Implications for Practice: ---- 70
Implications for Research: ---- 71
Assumptions, Limitations, Delimitations ---- 72
Conclusion ---- 74
Conflict of Interest Statement: ---- 74
REFERENCES ---- 75
APPENDIX 1: APPRAISAL INSTRUMENTS ---- 82
QARI Appraisal instrument ---- 82
MAStARI Appraisal instrument ---- 83
APPENDIX 2: DATA EXTRACTION INSTRUMENTS ---- 86
QARI data extraction instrument ---- 86
MAStARI data extraction instrument ---- 88

APPENDIX 3: DETAILED SEARCH STRATEGY - PUBMED ---------- **90**

APPENDIX 4. INCLUDED STUDIES ---------- **91**

APPENDIX 5: LIST OF FINDINGS WITH ILLUSTRATIONS ---------- **93**

LIST of Tables

TABLE 1: OBSTACLES TO THE TAKE-UP OF, MENTAL HEALTH-CARE PROVISION BY ADULT MALES IN RURAL AND REMOTE AUSTRALIA. ---- 14
TABLE 2: NUMBER OF STUDIES FOUND AND RETRIEVED ---- 22
TABLE 3: NUMBER OF QUALITATIVE STUDIES INCLUDED AND EXCLUDED ---- 22
TABLE 4: FINAL ASSESSMENT OF QUALITATIVE STUDIES ---- 23
TABLE 5: NUMBER OF QUANTITATIVE STUDIES INCLUDED AND EXCLUDED ---- 23
TABLE 6: FINAL ASSESSMENT OF QUANTITATIVE STUDIES ---- 23
TABLE 7: FREQUENCY OF MENTAL HEALTH SERVICES CONTACT BY GENDER ---- 25
TABLE 8: COMPARATIVE FREQUENCY OF SYMPTOM DISABILITY AND ATTITUDE BY GENDER ---- 26
TABLE 9: REGRESSION ANALYSIS OF LIFETIME HELP SEEKING FROM A GP FOR PSYCHOLOGICAL PROBLEMS ---- 26
TABLE 10: SUMMARY OF THE PSYCHOLOGICAL DISTRESS MEASURES BY GENDER AND AGE GROUP ---- 27
TABLE 11: SUMMARY OF THE FREQUENCY OF USE OF COPING MEASURES ---- 28
TABLE 12: SUMMARY OF THE COPING MEASURES BY GENDER ---- 29
TABLE 13: SUMMARY OF THE SIMULTANEOUS REGRESSION ANALYSIS FOR COPING MEASURES PREDICTING PSYCHOLOGICAL DISTRESS ---- 30
TABLE 14: PROFESSIONAL HEALTH SERVICES USED FOR THE MOST SERIOUS CONDITIONS IN THE FOUR WEEKS PRIOR TO THE SURVEY ---- 31
TABLE 15: QARI-VIEW DISPLAYING THE SYNTHESES FOR THE REVIEW. ---- 32
TABLE 16: CURRENT RESEARCH FINDINGS MATRIX ---- 35
TABLE 17. IDENTIFIED BARRIERS TO MENTAL HEALTH TAKE-UP IN RURAL AND REMOTE AUSTRALIA ACCORDING TO CATEGORY AND DESIGN ---- 36
TABLE 18: THEORETICAL MODEL – EXTRACTION AND EXPLANATION OF OBSTACLES ---- 40
TABLE 19:SUPPLY SIDE FACTORS AND QUANTITATIVE AND QUALITATIVE STUDIES ---- 44
TABLE 20: DEMAND SIDE FACTORS AND QUANTITATIVE AND QUALITATIVE STUDIES ---- 44
TABLE 21: DEMAND AND SUPPLY SIDE FACTORS ACCORDING TO ANDERSON'S CATEGORIES ---- 45

AUTHOR'S DECLARATION

This systematic review thesis has been developed from a systematic review of the obstacles involved in the take-up of mental health provision by AARRMs. It has grown into an evidence-based explanation of the nature and significance of these obstacles. The review thesis has developed within the evidence-based requirements of the Joanna Briggs Institute, within the School of Translational Health Science, University of Adelaide.

Collaboration is acknowledged with the University of Adelaide and the Joanna Briggs Institute, and the author subscribes to the University and Institute definition of evidence-based practice, methodology and synthesis. The author declares that collaboration, support and utilisation of evidence from quantitative and qualitative meaningful and experiential research has been utilised in the preparation of this thesis.

The thesis conforms to the policies, practices and requirements of the University of Adelaide and the Joanna Briggs Institute, and no activities outside those scholarly requirements are incorporated within the presentation of this thesis for the degree of Master of Clinical Science.

I certify that this work contains no material which has been accepted for the award of any other degree or diploma in my name, in any university or other tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text. In addition, I certify that no part of this work will, in the future, be used in a submission in my name for any other degree or diploma in any university or other tertiary institution without the prior approval of the University of Adelaide and, where applicable, any partner institution responsible for the joint award of this degree.

I give consent to this copy of my thesis, when deposited in the University Library, to be made available for loan and photocopying, subject to the provisions of the Copyright Act 1968.

The author acknowledges that copyright of published works contained within this thesis resides with the copyright holder(s) of those works.

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

Peter Charles Stroud, MAPS MASCH, Psychologist

ABSTRACT

Introduction/background:

Research and practice have suggested that mental health care, and mental health care practices and practitioners, along with mental health care systems, seem to be confronted with obstacles in the take-up and delivery of mental health-care services to adult males living in rural and remote areas of Australia. The aim of this systematic review thesis is to appraise and synthesise research evidence about these obstacles. These obstacles may influence the interaction between adult rural and remote dwelling males, and mental health care providers and mental health care systems. This thesis reviews and analyses health data from health systems, provider and recipient view points, through a critical analysis of the research literature published from 1995. This field of research has warranted further exploration and understanding in both qualitative and quantitative domains.

Methodology

The qualitative and quantitative components of this systematic review thesis have considered studies which included adult males of all racial and cultural backgrounds residing in rural and remote areas of Australia. The quantitative component has considered studies which evaluated the nature, significance, causes of and remedies to obstacles to mental health care, and the nature and significance of such obstacles from both the provider and recipient points of view. The qualitative component has considered studies which explored the meaning and experience of obstacles from similar viewpoints.

Results:

The outcomes of this systematic review thesis have led to the identification and description of four categories of obstacles which impact on adult males seeking mental health care in rural and remote communities of Australia. These categories are population characteristics, environment, health behaviour and health outcomes.

Conclusion

Quantitative and qualitative data has revealed a constellation of statistical data and themes from men's perceptions and experiences that clarify the everyday nature of obstacles to the take-up of mental health care by rural and remote dwelling Australian adult males. Provider (supply side) and recipient (demand side) obstacles contribute to the factors involved in the demand for and supply of services and the under-use of mental health care services by adult rural and remote males in Australia. This analysis opens a fertile ground for future research in this field.

ACKNOWLEDMENTS

The author highly values the contribution of Professor Jennifer Abbey (Supervisor), School of Translational Health Science, Joanna Briggs Institute, University of Adelaide, and the University of Tasmania, Menzies Institute. The author also acknowledges the valuable contribution of Dr Melanie Attard (Associate Supervisor – January 2012 to October 2012), and Dr Jared Campbell (Associate Supervisor – October 2012 to August 2013). The author values the important contribution of Associate Professor Craig Lockwood in a variety of contexts to both the secondary review process of the systematic review and the preparation of the thesis. Ms Alicia Hopper is highly valued for her assistance with secondary review processes and her contribution with technical assistance and material production. Ms Linda Scipioni is acknowledged for her assistance with manuscript production and proof reading. The author also acknowledges the contribution of Professor Alan Pearson and staff and students of the Joanna Briggs Institute for their contributions to outcomes regarding this thesis.

INTRODUCTION

Access to mental health services is just one of the challenges adult males and Indigenous people face in relation to health and well-being in rural and remote Australian regions.[1] Adult males in these areas of Australia include farmers and members of small urbanised rural communities. Adult Australian rural and remote males (AARRMs), over the time-frame of this study, 1995-2013, represent a population who have lived through economic and environmental conditions that have led to poor mental health outcomes.[2]

Addressing mental health issues about AARRMs requires an approach which deals with combinations of perceptions and reality. AARRMs have been perceived as proud and stoic, battling against conditions, prices and policies, and striving to conceal any sense of personal weakness.[2] Compounding the problems in mental health wellbeing are the providers of services, and the mental health system itself. Their joint and individual efforts to deliver valuable initiatives often fail to find their way to those most in need of them.[3]

While it is important to stress to rural males that they must actively seek help, it is also fundamentally important that these men know what programs exist and that they are comfortable with how they are implemented.[4] Program implementation needs to take into account the nature and experience of AARRMs, so that mental health-seeking activity more closely matches mental health care provision.[3]

Context

The desire for mental health, individually or collectively at family, community, and national levels, has been the focus of individuals, organisations and governments of all persuasions, in terms of policy and practice.[3,5] In 2011, the Federal Labour Government established the first Commonwealth Ministry for Mental Health. Prior to this ministerial role, and during its early implementation, the mental health system had been a product of various state and federal

government policy initiatives, largely designed to promote equal opportunity for all Australians in order to meet the mental health needs of the national community.[6] The widespread emergence of social media and computer-based technology has meant that mental health has received more widespread coverage and a push for enhancement.[6,7,8,9,10] The Federal Government Offices of the Minister for Mental Health and Aging and the Minister for Indigenous Health have regularly published papers about policy initiatives and developments in these fields. Yet the only definitive step by governments to create an active program has been the 'Headspace' initiative, which is only child and adolescent based.[11,12] Research and policy has tended to focus, in the adult rural and remote domain, on the 'maleness' of the issues concerned, which act as obstacles, and this has also appeared to be true of health promotion and prevention in this field, for this population.[3,13,14,15]

It appears that there are some gender differences in the take-up of mental health opportunities within rural and remote communities of Australia, compared with urban counterparts.[3,16,17] Females, regardless of culture, are shown to be consistently more likely to take up available mental health services,[17] yet evidence suggests that AARRMs with mental health experiences manifest higher levels of psychological distress compared with the general population.[18,19,20,21,22,23]

The obstacles to the take-up of mental health care provision among AARRMs are the focus of this thesis. AARRMs appear to have equal opportunity to access mental health services, and equal opportunity to mental health care access is seen as a basic human right in the greater Australian community.[3] The take-up of mental health services by adult males in rural and remote Australia, however, does not necessarily reflect the equal opportunity of access to these services.[24]

Even though mental health care access and take-up is the right of every Australian, and sound physical, emotional and mental health is a social norm in

the Australian community, obstacles have been found to exist in the take-up of mental health care provision in rural and remote areas of Australia.[3,25,26,27,28,29,30]

Compounding the impact of obstacles on services, recipients and providers may be oblivious to the nature, meaning, experience and existence of practices which may act as obstacles.[31] Each sector may also be oblivious to its own share of the responsibility for the extent to which these obstacles exist.[31]

Research in the field of adult and rural male mental health has often been directed towards the nature of being male, and the attributes, attitudes and behaviours of males. However, this can often be misleading in terms of the conclusions reached about obstacles. The structure, function and cultural influences relating to maleness and masculinity are by no means the only set of factors that exist as obstacles.[8,18,25,32,33,34,35,36] Research broadly indicates that obstacles can be general or specific issues which could hinder help-seeking behaviour in the general population.[11] Obstacles that can affect the take-up among children, adolescents and younger adult males are much better documented than research on AARRMs.[37,38,39] There is a need to review the research specifically for AARRMs as a unique population.

Furthermore, to understand the nature and significance of obstacles for adult rural males, and the meaning and experience of these obstacles to this population, it is important to review research about the complex interplay of influences on the development of general factors into specific obstacles. Therefore, the objective of this systematic review thesis is to explore obstacles which may limit AARRMs in the utilisation of mental health services available to them.

Review question

In terms of the AARRM, this research points to general and specific problems which act as obstacles to access. This review looks at the lives of the rural and

remote adult male population who suffer mental health issues due to misperceptions of mental health and lack of equal opportunity access to services for AARRMs. The review also considers evidence on service delivery and system elements which can act as obstacles to the take-up of services provided for this population.

This systematic review asks a much broader question about the obstacles to the use of mental health services by adult males in rural and remote Australia. Specifically it seeks to explore what is known about the obstacles which impact on the use of health services by this population from the supply side of mental health service delivery, and the demand side of service utilisation, and how these two aspects interrelate.

Evidence synthesis

The methodological quality of each study was important, and the search, selection and extraction of data were performed systematically.

To answer the question, primary research was identified, appraised and extracted utilising the quality assessment processes (the Joanna Briggs Institute Qualitative Assessment and Review Instrument [JBI-QARI] and the Joanna Briggs Institute Meta Analysis of Statistics Assessment and Review Instrument [-MAStARI]) to explore and identify obstacles. The extracted obstacles emerged as qualitative data and quantitative data. Synthesis and evaluation were then carried out, again using the JBI software.

Research literature in this field is far from being homogenous in its nature and construction, and studies are often not comparable to one another. Synthesis of qualitative research was achieved through the use of JBI-QARI and evaluation of quantitative research was achieved through JBI-MAStARI. A synthesis of qualitative data was made possible through meta- aggregation and a narrative summary of quantitative research was developed because of the heterogeneity of the included studies. None of the quantitative studies were

sufficiently comparable to one another for meta-analysis to be reliably undertaken.

Theoretical framework

The Andersen behavioural model of health service utilisation[40,41] was used as the theoretical framework to categorise the obstacles which hinder the take-up of mental health services. The model was specifically designed for use with health services, and is a published, peer-reviewed tool to aid the selection, identification and presentation of obstacles involved in mental health service take-up. The Andersen model assisted in the arrangement of findings about obstacles, enabling presentation of the obstacles based on the four subject categories of the model, which were also used to achieve a synthesis of the broad findings about the obstacles themselves.[40,41] Andersen's model uses four categories: population, environment, health behaviour and health outcome, and relates well to the JBI PICO concept (population, intervention, comparator and outcome) for quantitative data, and was used to present the phenomena of interest for qualitative data.[40,41]

Definition of terms

The following definitions are found in the literature used in this research.

Obstacles: Barriers to the utilisation of health care/mental health care.[5,18,42]

Take-up: The accessing of health care/mental health care services.[19,31,35,43]

Healthcare: Services which promote, maintain and preserve health, life, and wellbeing.[21,22,36,44,45]

Mental health care: The assessment, diagnosis and treatment of people who are experiencing psychological and situational stressors which create mental health conditions and disorders such as depression and anxiety.[10,22,23,30,46]

Provision: Professional services for health care/mental health care provided by doctors, nurses, medical specialists, psychologists, social workers, psychotherapists, and other care providers.[46,47,48]

Rural and remote: This term can be conceptualised as a set of characteristics which can impact on the way a health care service can be delivered, and includes: geographical isolation from major population centres of Australia; greater distances; lower socioeconomic status; lower educational levels; higher proportion of Indigenous people; specific occupational health safety and welfare risks; a relatively close relationship with nature; specific cultural attitudes; poor access to services; and, smaller population centres where there is a distinctive occupational profile dominated by primary and resource production.[36,47,49,50]

Obstacles

Variations in expectations of mental health systems by adult rural and remote males may affect negative or positive health beliefs, and this may lead to the creation of obstacles to the take-up of mental health services.[5,35,51] For individuals in rural and remote areas of Australia, the outcome of the mental health service needs to be in line with the model and process of the service delivery, or obstacles may emerge in the utilisation of that service.[3,21,29,52,53] An obstacle may serve to prevent adult rural and remote males taking up mental health services because of perceived beliefs, in spite of known positive outcomes.[18,19,20,21,22,36,54]

An obstacle may also serve to prevent AARRMs from entering into an engagement with a service or continuing to access a service.[11] Mental health literacy, for example, can influence the communication between a mental health professional and an AARRM using a mental health service, and in various ways can act as an obstacle.[31,55]

Some obstacles may exist only in certain circumstances and may only influence or affect certain AARRMs. For example, the cost of a mental health service does not become an obstacle for an adult rural male if that service is "bulk billed" and therefore fundamentally provided at no cost to the user.[8,20,24,56]

Seeking mental health care involves an adult rural male 'surrendering' themselves for assessment by mental health care professionals and receiving treatment options. This is a standard model, but the decision to participate is an intensely personal one.[31,52,57,58] In the case of adult rural male populations, it is a decision made in the context of rural and remote life, and is influenced by culture, living conditions and lifestyles.[4] In rural and remote Australia, individuality and masculinity feature strongly.[2,8] As a result, taking up particular mental health services may be part of an existing personal coping framework based on the psychology or rurality of the men themselves.[31,43,46,52,59]

AARRMs represent a very broad demographic, but one separated from its urban counterpart and the female gender.[9,22] This separation may culturally affect different mental health practices especially across the adult rural divide of Indigenous and non-Indigenous Australians and other cultural or migrant groups living in rural and remote Australia.[1,3,54,60]

This thesis contends that obstacles may prevent adult rural males from being recipients of services, mental health professionals from providing optimum services, and mental health systems from being vehicles for delivery of services to rural and remote Australians. Therefore, obstacles may be seen to exist at different levels. The characteristics of these levels may each generate further obstacles individually, or in relation to other levels of rural and remote mental health care to adult males.

Adult rural male populations

This thesis also contends that the mental health needs of adult male populations in rural and remote Australia have not been the research priority

that their level of risk warrants. While numerous authors have indicated that mental health problems abound amongst this population, the nature, significance and characteristics of obstacles to health care access. and the higher than expected suicidiality within this group appears to be under-researched.[10,18,19,20,21,22,23,26,34,36,44] The rise in mental health problems within this population is not a recent phenomenon.[1,25,34] Mental health problems in rural and remote Australia have increased since the Second World War – from the agricultural post-war boom, which saw rural and remote Australia contribute massively to Australia's trade successes overseas, to the current demise of rural communities and the accompanying growth of the mining industry within the overall Australian economy.[31]

A contributing factor in this increase may be changes in the social structure of rural and remote communities in Australia and in the pattern of social and work force participation by adult rural males, although this appears to have been far from uniform around Australia.[34]

In rural and remote communities, adult rural and remote males have often found themselves the victims of changing national and international world supply and demand factors for rural products, and the consequently less favourable economic conditions have affected some sectors of rural communities. Banks have closed, railways have been reduced to freight lines only, business has amortised itself into unrecognisable structures, and schools and football clubs have amalgamated, impacting upon AARRMs' motivation to trust what is new and causing them to hold fast to tradition.[6,8,23,24]

Current government mental health policy frameworks, while enthusing over mental health, often focus on the young or agencies which are not always 'male-friendly'.[3,38,53,61,62] The Men's Shed movement, while not directly mental health in its focus, is one initiative which has moved into the policy initiative vacuum.[3] Users of services, service providers and systems of mental health care all appear to fail to understand and appreciate the nature and significance

of obstacles.[3] This is all the more remarkable given the purpose and vested interests of these groups.[3] Most research has focused on adult rural male characteristics and their personal interactions with the mental health care system, but this is not the whole story.[30,52,53,55] Male characteristics and interactions are not the only forms of obstacles. There is a need to explore and research the factors involved in the nature, significance, creation and resolution of obstacles.

Several studies have investigated various compositional factors, such as maleness, masculinity and male attitudes.[3,14,22,30,31,44] The thesis of this study is that compositional factors represent only part of the story. Recipients, providers and systems of mental health services to AARRMs are poorly understood and under-represented in health policy, in particular, the care for Indigenous Australians, who experience markedly higher burdens of mental health problems than the general Australian population.[5,10,23] The nature of rurality and its impact on both the demand and supply side of the take-up of mental health care services by adult males in rural Australia are generalised and far from clearly understood. [7,17,32,58,64]

Mental health issues affect people from all walks of life, and those from metropolitan and country areas; however, research literature tends to show a lack of awareness of the unique challenges faced by adult males living in rural and remote areas of Australia.[26,28,36,44,49,54,57,59,65,66] These challenges reflect what these men will do in a crisis, what mental health services are available to deliver valuable outcomes, and how these services are actively delivered to a unique population group. This systematic review thesis could inform future research on the recipient, provider and systems contexts, and suggests that future research go beyond ‘male’ contextual and social network structures of rurality and focus on obstacles themselves.

THE SYSTEMATIC REVIEW PROTOCOL

Background

Men's health in general health care practice is defined as the global management of mental, emotional and physical health conditions and related risk factors that are specific to men in order to promote and generate optimal health.[10,21,22,23,36,44,45,46,64] Mental health represents a unique set of structures in health service provision and is concerned with psychiatric and psychological problems.

Research and practice tend to suggest that health care and mental health care practitioners seem to be confronted with obstacles in delivering care to adult rural and remote males.[35] This body of research indicates that there may be certain factors at work relating to AARRMs and their health-seeking behaviours which may be obstacles to the take-up of health and mental health services.[19,20,21,22,23] These include negative individual and community perceptions, particular rural and remote feelings about individualism and masculinity, actual definitions about what constitutes health and mental health, the existence of services themselves, their relative accessibility, and how acceptable these services are in relation to particular rural and remote community value systems.[19,20,21,23]

This research also suggests that further factors might be involved including: whether, or to what extent, care providers are conscious of these obstacles; how care providers work with these obstacles in practice; and whether or not they may also to some extent share some of the responsibility for the existence of these obstacles, on their own, or in conjunction with other factors which might be said to exist purely in the rural and remote context.[12,16,19,20,21,23,29,30,34,35,67,68]

Additionally, this research also indicates there may be factors at work unique to rural and remote settings which could contribute to the creation of obstacles, such as: community value systems, health beliefs, stigmatisation, lack of

education, insufficient resources, isolation, the high value placed on autonomy, and mentalities where individuals are self-reliant and prefer to resolve their own issues themselves rather than seek help.[12,19,21,26,29,30,34,36,43,44,54,68,69] The reasons for framing this systematic review thesis in terms of the adult rural and remote male context are is as follows:

- Research suggests there is a consensus that Australian rural male mental health is a unique social problem, and there appears to be a perception that the state and national health systems may have failed adult rural and remote males.[28]

- This research also indicates that adult rural and remote males respond differently and uniquely, compared to their international counterparts, and this might be especially true in the case of Australian Indigenous populations.[25]

- There is suggestion in the research that the Australian rural health care environment is unique because of its mix of adult rural and remote males among a population which includes culturally and linguistically diverse populations, local Indigenous people as well as people of Anglo-Saxon descent.[43]

- Some research suggests that there are unique complexities within the adult rural and remote male population mix when access to health care is concerned.[34]

- Research also suggests that unique complexities might exist in the mix of care provision, delivery systems and functioning arrangements in the adult rural and remote male context.[34]

- An interesting area of research in terms of social capital and moral distress suggests that the Australian context might be unique in terms of

its formal and informal care structures and arrangements. Moral distress is believed to represent an issue in the professional delivery of quality health care.[61]

- Other research considers the notion of structural disadvantage in the provision of, and access to, care services for adult rural and remote males. Structural disadvantage refers to the dearth of asset-based community development opportunities that play a role in health care provision.[46]

- Examination of the Cochrane Library, the JBI Database of Systematic Reviews and Implementation Reports, PubMed and CINAHL suggests that no published systematic reviews or current reviews exist in this particular field of research. Therefore, this systematic review will help address this gap.

Review question

The objective of this systematic review thesis was to identify the obstacles to adult rural and remote dwelling males in Australia seeking mental health care services, and to describe and categorise the factors that present as obstacles, and the nature and significance of these obstacles and their categorisation.

Criteria for considering studies

Types of studies

The quantitative component of the systematic review thesis has targeted experimental studies followed by other quantitative study designs including; observational and longitudinal studies, as well as survey and other descriptive designs.

The qualitative component of the review targeted study designs such as phenomenology, grounded theory, ethnography and action research, and has also considered other types of interpretive studies and critical studies which

focused on the meaning and experiences of adult rural and remote males in relation to the take-up of health care provision.

Types of participants

Both the quantitative and qualitative components of this systematic review have considered studies that include adult males of all racial and cultural backgrounds and ethnic minority groups, resident in rural and remote areas of Australia.

Types of intervention(s)/phenomena

The quantitative component of the systematic review thesis has considered studies that have evaluated the nature, significance, causes and remedies to obstacles to the take-up of health care for adult males in rural and remote areas, and the nature, significance and causes of obstacles in mental health care from both the providers' and recipients' point of view. The qualitative component of this systematic review thesis has considered studies that have explored the meaning and experience of these obstacles.

Types of outcomes

It was expected that the outcomes of this systematic review thesis would identify and describe clusters of obstacles which have impacted on the take-up of health care by adult rural remote males. Qualitative data was expected to include specific insights about the meaning and experience of under-use factors concerning adult rural and remote males in relation to health care. This data was expected to reveal a constellation of obstacles measuring perceived supply and demand side obstacles in the take-up of mental health care by adult rural and remote males.

Review methods

Search strategy

The search strategy was aimed at finding both published and unpublished studies.

Studies published or completed since January 1995 were considered for inclusion in this systematic review because this time-frame reflected the changing focus on adult rural remote male health in Australia. The time-frame for the inclusion of articles was research published since 1995 up until the completion of the literature search in 2013.

A three-step search strategy was utilised. An initial limited search of PubMed and CINAHL was undertaken followed by an analysis of text words contained in the title and abstract, and the MeSH terms used to describe the article. A second search using all identified keywords and MeSH terms was then undertaken across all included databases. Studies published in other languages where translation was available were considered for inclusion in this review.

The systematic search strategy for literature was undertaken using three broad approaches: (a) a search was made of research literature using online databases, Embase, Medline, PsycINFO, CINAHL, Ovid, PubMed, Scopus, MedNar, Medline Plus, PskDok and Sarus; (b) a search was made of federal and state Australian government websites, in particular, the Federal Ministry for Mental Health and Aging, Ministry for Health, Ministry for Social Inclusion and Ministry for Indigenous Health; (c) an internet search using Google Scholar to locate additional ‘grey literature’.

The search was carried out utilising a series of Thesaurus and free text terms. These terms were representations of primary concepts related to obstacles to the take-up of mental health care provision by adult males in rural and remote Australia, as illustrated in Table 1.

Table 1: Obstacles to the take-up of mental health-care provision by adult males in rural and remote Australia

A Adult Males	B Remote and Rural Australia	C Mental Health Care	D Obstacles	E Take-Up
Adult male Old male Older male Ageing male Aged male	Rural Remote Rural and remote Rurality Country Countryside Support groups Social groups	Health Health-care Mental health Emotional health Mental health problems Depression Anxiety Support programs	Barriers Facilitators Impediments Hindrances Expectations Indicators	Take-up Help seeking Access Accessibility Help negation Social inclusion Social isolation Health risk behaviours Self-monitoring

A list of terms for the various databases was constructed and a separate search strategy devised for each database based on the terms and concepts in Table 1. Field codes were attached to each of these terms as they applied to each database. This method created a logic grid for each database. With some adjustments it was possible to translate a search from one database to another.

Keywords were generated for each of these concepts by examining the technology used in research papers and combining this outcome with standard MeSH terms from PubMed databases and subject headings from the PsychINFO database. Other databases were then searched utilising this set of concepts and key words and synonyms. The combination of concepts, keywords and MeSH terms created a methodological terminology for seeking review papers in the adult rural male mental health help seeking literature.

Assessment of methodological quality

Quantitative papers selected for retrieval were assessed by two independent reviewers for methodological validity prior to inclusion. Standardised critical appraisal instruments from the Joanna Briggs Institute Meta-Analysis of Statistics Assessment and Review Instrument (JBI-MAStARI) were used (Appendix 2). Any disagreements that arose between the reviewers were to be

resolved through discussion; however, there were no major differences of opinion that required extensive discussion.

Qualitative papers selected for retrieval were also assessed by two independent reviewers for methodological validity prior to inclusion in the review using standardised critical appraisal instruments from JBI-QARI (Appendix 2). No significant disagreements arose between the reviewers that required discussion.

Data extraction

Quantitative data was extracted from papers included in the review using the standardised data extraction tool from JBI-MAStARI (Appendix 3). The data extracted included specific details about the interventions, populations, study methods and outcomes of significance to the review question and specific objectives.

Qualitative data was extracted from papers included in the review using the standardised data extraction tool from JBI-QARI (Appendix 3). The data extracted included specific details about the interventions, populations, study methods and outcomes of significance to the review question and specific objectives.

Data synthesis

Quantitative papers could not be combined in statistical meta-analysis using JBI-MAStARI. The different quantitative study designs included in this review were not suited to meta-analysis. Statistical findings are therefore presented in narrative form, including tables and figures, to enable data presentation.

Qualitative research findings were pooled using JBI-QARI. This involved the aggregation or synthesis of findings to generate a set of statements that represent that aggregation through categorising according to similarity in meaning. These categories were then subjected to a synthesis in order to

produce a comprehensive set of synthesised findings that may be used as a basis for evidence -based practice.

The Andersen model

This systematic review thesis has utilised the Andersen behavioural model of health service utilisation to arrange obstacles according to the four categories: population, environment, health behaviour and health outcomes.[18,41,70,71] From the literature searched, each obstacle was expanded into a thematic explanation of the particular obstacle, utilising understanding gained from the literature included. In this way each obstacle was informed by a statement that explained why it could be seen as an obstacle to the take-up of mental health care by adult rural males. The findings of the research were subsequently grouped by collapsing Andersen's categories into two sets of factors:

Demand Side Factors: patient-related factors, environmentally relevant factors and health behaviours and outcomes.

Supply Side Factors: systems, provider and environmental factors and provider and system relevant health behaviours and outcomes.

In this way the analysis from the Andersen behavioural model of health service utilisation was seen to be very constructive. The division into two complete and mutually exclusive set of factors conceptually clarified the understanding of the obstacles identified through the systematic review process. In this way, we create a new understanding and conceptualisation of adult rural male health behaviour.

The findings from the qualitative and quantitative extraction of data are discussed within this framework. Qualitative and quantitative findings revealed specific factors that impeded the take-up of mental health services by adult rural and remote males, and these findings were transferred to the Andersen

model. The findings were then classified as recipient-, provider- or systems-related factors as obstacles in service use.

Extraction and explanation of obstacles

Extraction of relevant outcomes from the original research and data is presented (Table 1) as a series of statements of interests to the outcomes of the review and research. Data was extracted which was related to participants, phenomena of interest, comparators and outcomes of the research. The aim was to gain an understanding to facilitate synthesis and explanation of obstacles.

Extraction summarised the outcomes of research literature utilising the Andersen model to inform the findings of this research, and to integrate important contextual data from the research. The outcomes recorded were derived from the research in each selected study. The second phase of this process was to review the explanation of obstacles for each of Andersen's categories for appraisal as supply and demand side factors. Each obstacle was classified as a supply or demand side factor.

Demand side factors referred to obstacles which related directly to the AARRM themselves and influenced their intention to take up a mental health care service. Supply side factors were those which represented obstacles to the actual provision of mental health services themselves in rural and remote Australia, at the mental health practitioners/provider level and the mental health care system level beyond that of an individual provider, and operating or functioning as a state, territory of federal government service direct to an AARRM.

RESULTS

Context and background

Appraisal and synthesis of the findings of research evidence concerning the take-up of mental health service provision by AARRMs identified 92 titles and abstracts through searching (Table 2). All studies were then screened and studies were excluded that did not address the obstacles to taking up mental health care provision for adult males who lived in rural and remote areas of Australia. This resulted in 32 relevant studies identified as key papers found through the systematic search, and which could satisfy the inclusion criteria. Seven of the articles were selected and reviewed, as shown in Table 2.

Review questions

Results show what is known about the type of obstacles discovered in the systematic review of the research articles and how these obstacles can be categorised in terms of their impact on AARRMs.

Initial database searches returned 261 published abstracts which were then screened, and studies were excluded that did not address obstacles, take-up factors, mental health, adult rural and remote dwelling males. This resulted in 79 potential studies. Additional studies were then sourced through hand searching of the reference lists of these studies. An additional 13 studies were located.

Studies were included if the investigated obstacles to accessing mental health care in which adult males and rural and remote Australia were identified or were relevant to the Australian rural and remote context, or focused on adult rural and remote males with mental health problems. Studies which examined particular obstacles, such as transport or which were related to particular mental health problems like depression were also considered for inclusion if they met the conditions relating to adult rural males living in rural and remote Australia. Studies from other countries were considered for ‘background’ and ‘discussion’ if the nature of the article met the criteria of adult rural males and

obstacles to the access of mental health care. Studies of other populations, such as adolescents were considered where these studies highlighted other aspects of the index conditions.

Altogether, this approach allowed for a bigger pool of studies for appraisal of factors within the selected field of review, consideration of studies in broader groups and problem areas, and appraisal of similar or different factors to be considered across a range of different yet related studies.

Study selection involved examining each of the 32 relevant studies which met the inclusion criteria:

1. Participants were male and were adults, i.e. over the age of 18 years. Participants in studies were accepted where male and female, Indigenous and non-Indigenous people were specified and specifically described.
2. The study was a primary research study. Study participants were members of a rural and remote community of Australia, and the study focussed on help-seeking behaviours in relation to mental health care problems.
3. The study was not a review.
4. The study contained extractable data on obstacles, and no comparators or phenomena of interest.
5. The study addressed rural and remote mental health conditions.

Seven studies met the inclusion/exclusion criteria (quantitative n=4 and qualitative n=3). The other studies were excluded from further consideration and utilised for the Background and Discussion. A list of included studies is provided in Appendix 4.

Preliminary reading had indicated that this may prove to be a complex search strategy. Therefore, the strategy to be undertaken was to utilise index terms

(e.g. MeSH Terms) with fewer combinations of free text terms for searching the databases specified above.

PubMed MeSH Terms were used: professional practice location; acceptance of health-care; patient satisfaction; physician's practice patterns; physician's practice; public health practice; health facility environment; attitude to health; attitude to health personnel; health literacy; health knowledge, attitudes and practice; patient acceptance of health care; depression; mood disorders; suicide; stress disorders; anxiety; anger; delivery of health care; health care services; patient care planning; health status disparities; health plan implementation; professional-patient relations; human services needs and demands, health service accessibility; public health practices, primary health care methods; public health practices; social stigma; social class; stereotyping; prejudice; educational status; social values; social distance; social identification; social isolation, communication barriers; quality of health care; patient care management; clinical competence; religion and medicine; religion and psychology; health services indigenous; community mental-health centre; community mental health services; consumer satisfaction; consumer participation; health-care costs; remote consultation; mental health; mental-health services; community mental health; community mental health services; allied health personnel, physicians; psychology; general practitioners; nurses; psychiatric nurse; social work; patient care team, perception, ethnology; accessibility; trust; empathy; ethics; confidentiality; adult; male; men's health; rural; rural health; rural population; rural health services; cultural characteristics; vulnerable populations; residence characteristics; transportation; community networks; humans, Australia; Australia epidemiology; rural and remote; medically underserved area; disorders; obstacles; barriers; values; masculinity.

Terms were eliminated until a pattern of search terms was established and a cross database list established.

The complex nature of the search and the seemingly limited nature of subject material indicated that many terms, rather than many combinations, would reveal a greater number of results. An initial search resulted in some of these terms being eliminated completely making further searches more specific when using combinations.

Studies found and reviewed

As the following tables illustrate, a total of seven studies were finally included once critical appraisal had been completed. The list of included studies is found in Appendix 4, while a list of findings specific to the qualitative studies is found in Appendix 5. The articles were divided into two groups of studies (quantitative studies [n=4] and qualitative studies [n=3]). No combined (mixed methods) studies were found for inclusion. Other papers from the grey literature were reviewed and informed the Context and Background to the systematic review findings but did not meet the inclusion criteria. Tables 2 through to 6 summarise the analysis of studies identified and their quality scores based on the standardised critical appraisal instruments per study design.

Table 2: Number of studies found and retrieved

The number of studies selected for systematic review from the number found through searching databases.

Number of studies found	Number selected for retrieval
92	7

Methodological quality

QARI

Table 3: Number of qualitative studies included and excluded

The number of qualitative studies included from the total number found in Table 2

Number of studies included	Number of studies excluded
3	0

Table 4: Final Assessment of qualitative studies

Data assessed from selected studies using appraisal instruments: See Appendix 1

Citation	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
Corby, D, 2011	Y	Y	Y	Y	Y	N	U	Y	Y	Y
Gorman D, Buikstra E, Hegne, D, Pearce S, Rogers-Clark C, Weir J, McCullah B, 2007	Y	Y	Y	Y	Y	Y	N	Y	Y	Y
Pierce D,; Brewer C, 2012	U	Y	Y	Y	Y	N	N	Y	Y	Y
%	66.67	100.00	100.00	100.00	100.00	33.33	0.00	100.00	100.00	100.00

MASTARI

Table 5: Number of quantitative studies included and excluded

The number of quantitative studies included from the total number found in Table 2

Number of studies included	Number of studies excluded
4	0

Table 6: Final assessment of quantitative studies

Data assessed from selected studies using appraisal instruments: See Appendix 1

Citation	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9
Findlay R, Sheen M, 2004	N	Y	N	Y	N/A	N/A	U	Y	Y
Gunn KM, Kettler LJ, Skaczkowski GLA, Turnbull,, D, 2012	U	Y	U	Y	N/A	N/A	U	Y	Y
Judd F, Jackson H, Komiti A, Murray G, Fraser C, Grieve A, Rapson G, 2006	Y	Y	U	Y	N/A	N/A	N/A	Y	Y
Sveticic J, Milner A, Diego De Leo, 2012	U	U	U	Y	N/A	N/A	U	Y	Y
%	25.00	75.00	0.00	100.00	N/A	N/A	0.00	100.00	100.00

The review and studies were all conducted in rural and remote areas of Australia, with some reference to rural and remote versus urban Australian comparison. The reviewed studies focused upon different kinds of mental health care in general, and some studies focused on particular aspects of mental health care, and also on health and mental health related care. Some aspects of papers focused on preventative care and mental health promotion.

A number of obstacles were identified. The identified mental health care obstacles were arranged according to the categories outlined by Andersen.[41,70,71] The focus areas of the included articles were as follows:

Findings from the quantitative articles reviewed

a) Suicidiality among Indigenous and non-Indigenous Australians and help-seeking for mental health concerns in urban and rural and remote contexts.

b) The use of health services by people with symptoms of mental illness identifying obstacles to service utilisation in rural and remote areas.

c) Psychological distress and coping amongst farmers, services available to them, stress, attitudes, rates of suicide, and the role of environment and context.

d) Help-seeking by rural residents for mental health problems and the obstacles to help-seeking.

Findings from the qualitative articles reviewed

a) Mental health help seeking responses in rural Australia which describes the characteristics of services and health professionals and government health promotion initiatives

b) Psychosocial support among men living with cancer in rural areas of Australia and the obstacles to support service use among such men.

c) The experiences of men in rural and remote regions of Australia and the obstacles to them taking up professional support, as derived from their stories about coping with mental health problems and their reflections on seeking out professional support.

Results of take-up factors – quantitative research

As meta-analysis of the quantitative findings was statistically inappropriate due to generality or varied study designs, data synthesis was presented in narrative format. Factors which impeded the take-up of mental health care service use from quantitative data are presented in Tables 7 to 13. The tables illustrate psychosocial factors relating to AARRMs who under distress, do not seek the extra support.

Sveticic et al. compared the prevalence of contacts with mental health services related to help-seeking behaviours between Indigenous and non-Indigenous Australians.[23] Table 7 demonstrates a greater degree of resource utilisation by non-Indigenous persons; however, it also illustrates that men are lower users of services than women among the non-Indigenous community.[23]

Table 7: Frequency of mental health services contact by gender

Within last 3 months	**Non-Indigenous %(N=6,655)**	**Indigenous % (N=471)**	**OR (95%CI)**	**P value**
Male	22.9	10.1	2.63 (1.88-3.69)	<0.01
Female	36.8	8.1	6.57 (3.01-14.35)	<0.01

Judd et al. focused their research on attitudes as obstacles to help-seeking by rural residents.[21] The authors applied the logistic regression analysis to

investigate attitudes towards seeking professional psychological support.[21] The data presented in Tables 8 and 9 suggests that AARRMs are statistically less likely to seek professional help for mental health problems than their female counterparts.[21] Help-seeking behaviour by women indicated a higher level of service contact when compared with men. [21] This difference was thought to reside within the nature of rural and remote male attitudes to help-seeking behaviours. [21]

Table 8: Comparative frequency of symptom disability and attitude by gender

	Men **M (SD)**	**Women** **M (SD)**	**P value**
LSS	59.48 (7.9)	51.11(8.97)	<0.001
NGSE	31.64(4.22)	31.08(4.54)	>0.05
PSS	39.57(4.56)	40.54(5.39)	>0.05
ATSPPH	41.16(6.96)	44.42(7.18)	<0.001

Table 9: Regression analysis of lifetime help-seeking from a GP for psychological problems

	OR (95%CI)	**P value**
LSS	0.94 (0.88-1.00)	>0.05
NGSE	0.92 (0.88-0.99)	<0.05
PSS	0.99 (0.93-1.04)	>0.05
ATSPPH	1.03(0.99-1.08)	>0.05

Gunn et al. investigated psychological distress among adult rural males compared with females during seasonal drought. Utilising descriptive statistics and analysis of variance (ANOVA) they reported levels of psychological distress, finding a statistically significant difference across the age groups for adult rural males compared with the general population.[20] As Table 10 illustrates the mean differences indicate no specific variance between genders in the degree of psychological distress associated with drought conditions, and this effect did not change when the data was stratified by age.[20]

Table 10: Summary of the psychological distress measures by gender and age group

Group (n)	Mdn	MD (95% CI)	% Sample
GENDER			
Male (196)	18	19.28 (18.27 – 20.29)	64.69
Female (107)	19	20.10 (18.80 – 21.39)	35.31
Age (years)			
25-44 (80)	20.5	21.05 (19.57-22.53)	28.17
45-54 (96)	20	21.27 (19.66-22.87)	33.80
55-64 (75)	16	16.93 (15.68-18.18)	26.41
65-74 (33)	18	18.94 (16.31-21.57)	11.62

From this baseline, the authors investigated specific coping strategies to measure rates of use of specific coping strategies. The median, mean and 95% Confidence Interval (CI) for these mechanisms are reported in Table 11.[20]

Table 11: Summary of the frequency of use of coping measures

Coping strategy (n)	Mdn	M (95% CI)
Active coping (300)	11	10.65 (10.25-11.05)
Planning (302)	12	11.62 (11.26-11.97)
Seeking instrumental social support (303)	8	8.26 (7.91-8.61)
Seeking emotional support (301)	8	8.39 (8.04-8.74)
Suppression of competing activities (300)	9	8.79 (8.49-9.10)
Turning to religion (303)	5	7.12 (6.67-7.58)
Positive reinterpretation and growth (301)	10	9.62 (9.30-9.95)
Restraint (300)	9	9.40 (9.05-9.75)
Acceptance (302)	12	11.33 (11.02-11.65)
Venting of Emotions (303)	8	8.10 (7.75-8.45)
Denial (301)	5	5.38 (5.16-5.59)
Mental disengagement (304)	7	7.52 (7.28-7.77)
Behavioural disengagement (301)	5	6.19 (5.90-6.49)
Alcohol/drug use (303)	4	5.19 (4.93-5.46)
Humour (302)	6	6.26(5.96-6.55)

The coping strategies reported in Table 11 were then analysed by gender. Table 12 reports the breakdown of coping strategy utilisation comparing self-reported strategies utilised by men and women.[20]

Table 12: Summary of the coping measures by gender

Coping strategy	**M (95% CI)**	
	Male (n=189)	**Female (n=101)**
Active	10.69(10.14-11.23)	10.60 (10.03-11.18)
Planning	11.67(11.22-12.12)	11.59 (10.98-12.21)
Seeking instrumental social support	8.28 (7.84-8.73)	8.24 (7.64-8.84)
*Seeking emotional social support	8.08 (7.64-8.52)	8.87 (8.29-9.44)
Suppression of competing activities	8.72(8.35-9.10)	8.91 (8.36-9.46)
Turning to religion	7.05 (6.46-7.63)	6.73 (6.02-7.44)
Positive reinterpretation and growth	9.71 (9.30-10.12)	9.49 (8.93-10.04)
Restraint coping	9.52 (9.10-9.94)	9.24 (8.62-9.86)
Acceptance	11.19 (10.80-11.58)	11.69 (11.12-12.26)
**Focus on and venting of emotions	7.38 (6.98-7.78)	9.36 (8.75-9.98)
Denial	5.48 (5.19-5.77)	5.26 (4.94-5.59)
Mental disengagement	7.61 (7.28-7.94)	7.45 (7.06-7.84)
Behavioural disengagement	6.04 (5.70-6.39)	6.60 (6.03-7.18)
Alcohol/drug use	5.33 (4.97-5.69)	5.08 (4.67-5.49)
Humour	6.37 (5.98-6.76)	6.20 (5.72-6.68)

*$p<.05$, ** $p<.001$ – Cohen's D statistic

Coping as a predictor of distress was also reported. In particular, the authors sought to identify all the participants' strategies for stress alleviation and analysed them for impact on the level of stress experienced.[20]

Table 13: Summary of the simultaneous regression analysis for coping measures predicting psychological distress (n=294)

Predictors	**B**	**SE B**	**B**
Active	-0.22	.13	-.11
Planning	-0.01	.18	-.01
Seeking instrumental social support	0.18	.15	.08
Seeking emotional social support	-0.28	.15	-.12
Suppression of competing activities	0.52	.16	.20*
Turning to religion	-0.01	.90	-.00
Positive reinterpretation and growth	-0.23	.15	-.09
Restraint coping	0.08	.13	.03
Acceptance	-0.18	.14	-.07
Focus on and venting of emotions	0.41	.13	.18*
Denial	0.22	.21	.06
Mental disengagement	0.38	.18	.12*
Behavioural disengagement	0.77	.17	.28*
Alcohol/drug use	0.53	.15	.18*
Humour	-0.23	.14	-.09

B: unstandardised regression coefficient. SE B: standard error for the unstandardised regression

coefficient (B) *p<.05

From Table 13 it can be seen that suppression of competing activities, focusing on and venting emotions, mental disengagement and alcohol and drug use (although common strategies used to decrease stress) actually resulted in a measurable, significant increase in stress.[20] Of the named interventions, none were found to be of statistically significant benefit.[20]

Findlay and Sheehan investigated barriers to service utilisation in rural and remote communities through a survey across areas of Queensland. The survey sought to establish usage and perceptions of accessibility of health services by persons with a mental health problem.[19] Table 14 reports the type of service utilised by severity of illness.[19]

Table 14: Professional health services used for the most serious conditions in the four weeks prior to the survey

Type of service	**Serious mental health problem** **n= 68 (%)**	**Physical illness and mental health problem** **n=160 (%)**	**Physical illness alone** **n=303 (%)**
Private GP	16 (24)	48 (30)	77 (25)
Hospital nurse	0 (0)	8 (5)	10 (3)
Hospital doctor	1 (1)	8 (5)	20 (7)
Private specialist	3 (4)	8 (5)	7 (2)
Hospital specialist	0 (0)	4 (3)	4 (1)
Ambulance	0 (0)	2 (1)	3 (1)
Pharmacist	2 (3)	23 (14)	44 (15)
Dentist	0 (0)	0 (0)	2 (1)
Social worker/counsellor	2 (3)	1 (1)	0 (0)
Other	0 (0)	8 (5)	16 (5)
No service	50 (74)	92 (58)	173 (57)

Note: a person may have used more than one service.

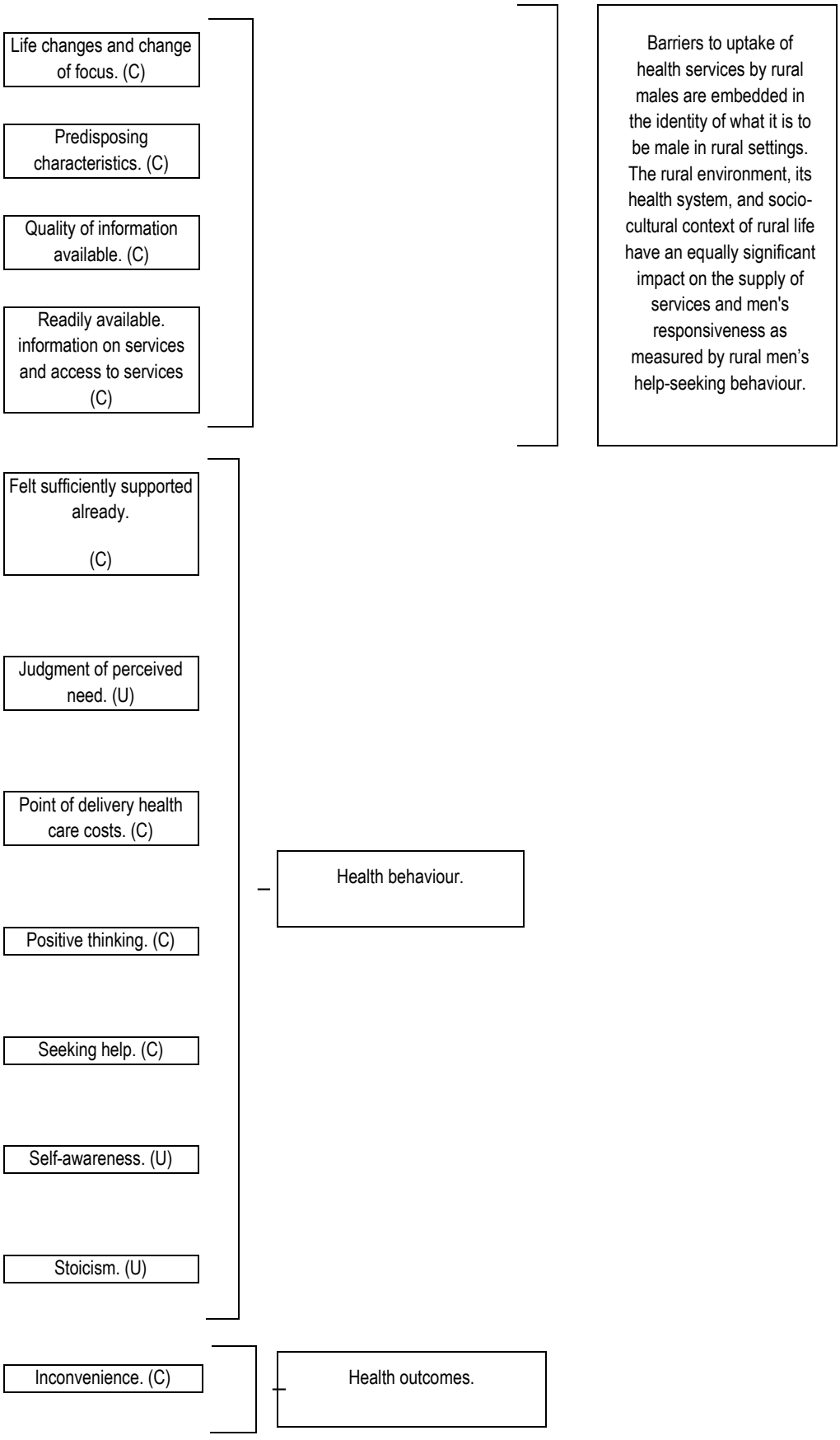
The data illustrates that professional services were less likely to be taken up by people in rural and remote areas.[19] People in rural and remote areas utilised health services more for physical compared with psychological or mental health problems, and access to psychological and psychiatric services was either limited or unavailable.[19]

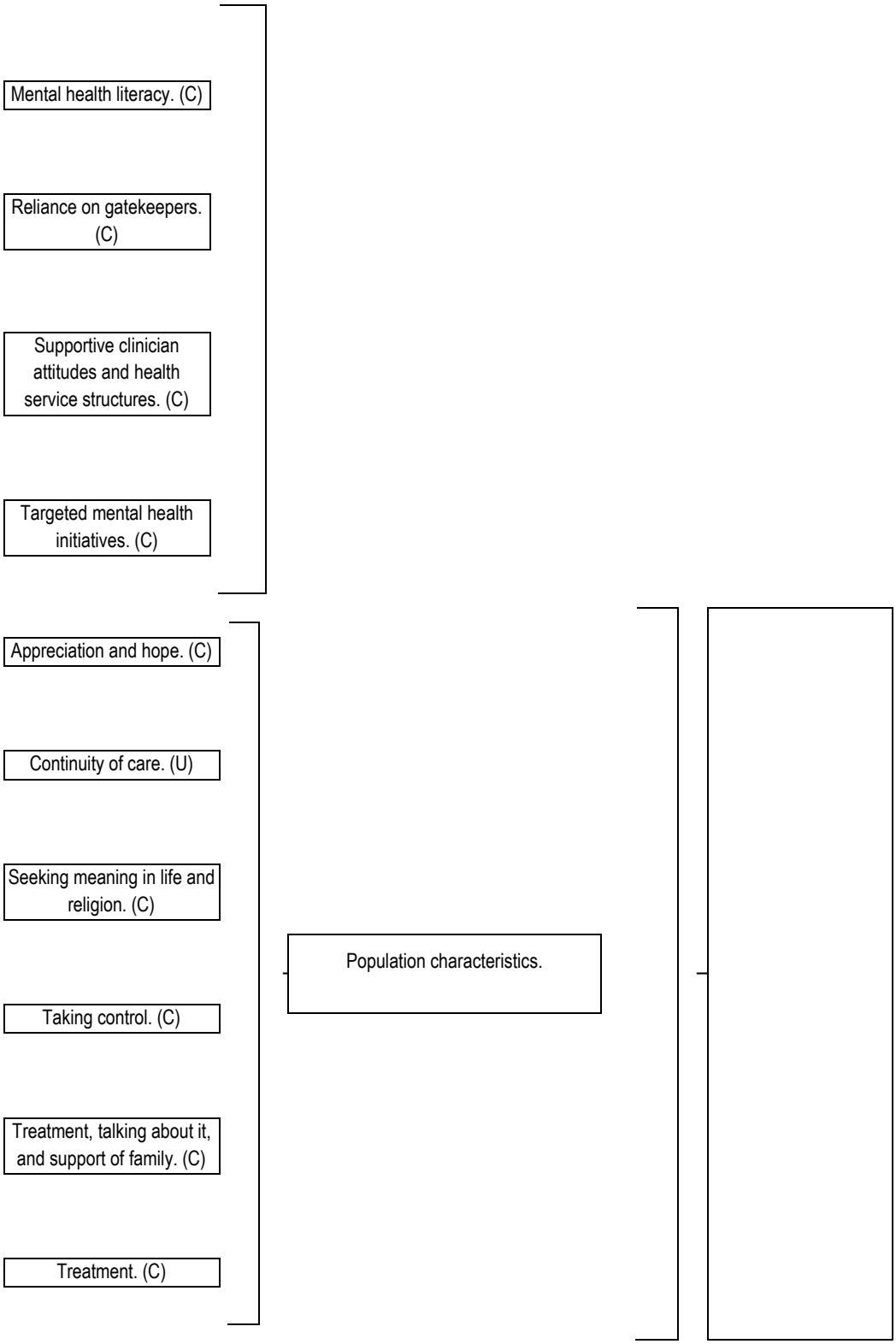
Results of take up factors – qualitative research

Meta-synthesis of studies included in the review generated one synthesised finding. These synthesised findings were derived from 26 study findings that were subsequently aggregated into four categories and then one synthesised finding. The qualitative study findings are listed in Appendix 5. Note that only those syntheses that have had valid categories allocated to them are reported in a QARI-view graph. Findings that do not appear to be driven by participant data are not included as they represent the author's interpretations rather than a clear description of participant experiences. Meta aggregation relies on clear analysis of findings that are grounded in participant experiences rather than the primary study author's unsubstantiated interpretations. This is shown in Table 15

Table 15: QARI view displaying the syntheses for the review

Finding	Category	Synthesised finding
Access to information. (C) Being needed and taking a break. (C) Burden of travel. (C) Enabling resources. (C)	Environment.	If the obstacles to rural men's mental health that are ingrained in being rural and male, and the rural health system and environment are addressed, men's mental health behaviours and outcomes can be understood and improved.


Life changes and change of focus. (C)
Predisposing characteristics. (C)
Quality of information available. (C)
Readily available. information on services and access to services (C)
Barriers to uptake of health services by rural males are embedded in the identity of what it is to be male in rural settings. The rural environment, its health system, and socio-cultural context of rural life have an equally significant impact on the supply of services and men's responsiveness as measured by rural men's help-seeking behaviour.
Felt sufficiently supported already. (C)
Judgment of perceived need. (U)
Point of delivery health care costs. (C)
Positive thinking. (C)
Seeking help. (C)
Self-awareness. (U)
Stoicism. (U)
Health behaviour.
Inconvenience. (C)
Health outcomes.


Mental health literacy. (C)
Reliance on gatekeepers. (C)
Supportive clinician attitudes and health service structures. (C)
Targeted mental health initiatives. (C)
Appreciation and hope. (C)
Continuity of care. (U)
Seeking meaning in life and religion. (C)
Taking control. (C)
Treatment, talking about it, and support of family. (C)
Treatment. (C)
Population characteristics.

Results of qualitative and quantitative findings – take-up factors

The following table (Table 16) lists the findings from the three qualitative studies and four quantitative studies included in the systematic review. Each of the obstacles listed are placed in the corresponding Andersen's category and the type of research indicated.[41,70,71]

The table represents a method for conceptualising identified obstacles to the take-up of mental health service provisions by AARRMs in rural and remote Australia. Existing patterns of research are shown by category, obstacles, or design. This same framework could form the basis of a gap analysis in order to develop future research possibilities.

Table 16: Current research findings matrix

Andersen's categories	Findings related to category of obstacle	Research type qualitative/ quantitative
Population	• Appreciation and hope • Continuity of care • Seeking meaning in life and religion • Taking control • Treatment, talking about it and support of family • Treatment attitudes affect seeking psychological support • Indigenous Australians statistically less likely to seek professional help for mental health problems • Female Indigenous Australians have a higher level of mental health service contact than men	Qualitative Qualitative Qualitative Qualitative Qualitative Qualitative Quantitative Quantitative
Environment	• Access to Information • Being needed and taking a break • Burden of travel • Enabling resources • Life changes and change of focus • Predisposing characteristics • Quality of Information available • Readily available information on services and access to services • Particular rural circumstances such as drought affect traditional responses regardless of experience of success • Access to psychological and psychiatric services was either limited or unavailable	Qualitative Qualitative Qualitative Qualitative Qualitative Qualitative Qualitative Qualitative Quantitative Quantitative

Health Behaviour	• Felt sufficiently supported already • Judgement of perceived need • Point of delivery health costs • Positive thinking • Seeking help • Self-awareness • Stoicism • Adult males resort to a range of self-selected coping mechanisms during periods of distress which rarely include seeking professional help • Male coping strategies do not markedly differ from female strategies	Qualitative Qualitative Qualitative Qualitative Qualitative Qualitative Qualitative Quantitative Quantitative
Health Outcomes	• Inconvenience • Mental health literacy • Reliance on gatekeepers • Supportive clinician attitudes and health service structures • Targeted mental health initiatives • Self-generated coping strategies are rarely completely successful but repeatedly sought out • Professional services are less likely to be taken up by people in rural and remote areas • People in rural and remote areas utilised health services more for physical than mental health problems	Qualitative Qualitative Qualitative Qualitative Qualitative Quantitative Quantitative Quantitative

Table 17: Identified barriers to mental health take-up in rural and remote Australia according to category and design

Andersen's categories	Qualitative designs	Quantitative designs
Population	• Appreciation and hope • Continuity of care • Seeking meaning in life and religion • Taking control • Treatment, talking about it and support of family • Treatment attitudes affect seeking psychological support	• Indigenous Australians statistically less likely to seek professional help for mental health problems • Female Indigenous Australians have a higher level of mental health service contact than men

Environment	• Access to information • Being needed and taking a break • Burden of travel • Enabling resources • Life changes and change of focus • Predisposing characteristics • Quality of information available • Readily available information on services and access to services	• Particular rural circumstances such as drought condition traditional responses regardless of experience of success • Access to psychological and psychiatric services was either limited or unavailable
Health Behaviour	• Felt sufficiently supported already • Judgement of perceived need • Point of delivery health costs • Positive thinking • Seeking help • Self-awareness • Stoicism	• Adult males resort to a range of self-selected coping mechanisms during periods of distress which rarely include seeking professional help • Male coping strategies do not markedly differ from female strategies
Health Outcomes	• Inconvenience • Mental health literacy • Reliance on gatekeepers • Supportive clinician attitudes and health service structures • Targeted mental health initiatives	• Self-generated coping strategies are rarely completely successful but repeatedly sought out • Professional services are less likely to be taken up by people in rural and remote areas • People in rural and remote areas utilised health services for physical more than mental health problems

Table 17 presents an inventory of findings relating to the obstacles to the take-up of mental health care service provisions by adult rural males in Australia. Findings are grouped by Andersen's category and the type of research undertaken. [41,70,71]

Theoretical modelling

This systematic review makes use of the Andersen behavioural model of health service utilisation, as a structured framework to display the obstacles which act as interference in the take-up of mental health services. The Andersen model is a conceptual framework for helping to identify the complex interacting variables involved in the obstacles to mental health care usage:

Population characteristics

Refers to:

a) Predisposing factors – demographics, social structures, health beliefs.
b) Enabling factors – personal resources, family resources, community resources.
c) Need related factors – perceived individual need, professional evaluative need.

Environment

Refers to the physical, social, political and economic envelope external to and around the health care system, its policies, resources and structure, function and organisation.

Health behaviour

Refers to:

a) Use of health services, their type, location, purpose, and time frames around accessibility and delivery.

b) Personal health care practices including self-judgements and related treatments.

Health outcomes

Refers to:

a) The satisfaction of consumers of health care services with particular services, their convenience, availability, provision, and quality.

b) The individual's own health status and perceived health status.

The Andersen model was used to help arrange the obstacles to mental health care services as they are taken-up by AARRMs. The Andersen model structure has been further adapted to see if its four groups can be divided into:

- Demand side factors affecting take-up
- Supply side factors affecting take-up

It was anticipated that obstacles to AARRMs use of psychosocial mental health care services would be related to participating factors like population, health behaviour and factors enabling demand to access services. It was also thought that provision characteristics would be influenced by environment, health outcomes and systematically structured notions of supply. Consequently what might be thought of as obstacles in a psychosocial mental health care service might be perceived as factors which determine the demand and supply of those services. In this way, the challenge of thinking about social, individual, economic and situational obstacles, which vary from person to person, place to place, and time to time, could be considered from the point of view of intentions and expectations in relation to AARRMs behaviour.

In the current study, demand and supply side explanation of obstacles allows for grouping of shared perception of obstacles by AARRMs to the take-up of mental health care services. Demand side factors represent take-up factors and supply side factors represent service provision. Under these categories use of health services is considered to be a function of Andersen's model as they are grouped into demand and supply side factors. Understanding the factors that influence help-seeking among AARRMs in this way is crucial in developing service use and improving outcomes for AARRMs.

Table 18 shows the results from the systematic review outlining the nature and significance of obstacles utilising Andersen's categories as a structural framework. The further categorisation of findings as demand or supply side factors is also provided.

Table18: *Theoretical model – extraction and explanation of obstacles

***(s)** indicates supply side factor categorisation*

***(d)** indicates demand side categorisation*

Category	Obstacle
1. <u>Population</u>	• Adult rural males will utilise a variety of personal resources based on appreciation and appraisal of their situation, and hope about remediation based on past experience, and they do this more than they utilise mental health services.**(d)** • Perceptions of continuity of care and that mental health services will be more than just 'start-up' services will influence the initial take-up of a service.**(s)** • Cultural factors such as rurality can mean that perceptions and attitudes towards mental health services are secondary to health behaviours based on the meaning of rural life and religious beliefs in rural and remote areas of Australia.**(s)** • Traditional beliefs and values about taking control can lead to a lack of awareness of services and can create an obstacle to the take-up of these services.**(d)** • Family support in rural and remote communities is critical to ideas about what constitutes mental health, and family support and talking with family members can contribute to treatment, as family strongly influences decision-making.**(d)** • Attitudes emerging from a traditional rural background can influence preferred and non-preferred treatments, and traditional attitudes in relation to perceptions of symptoms and their severity can act as factors that influence take-up behaviour.**(s)** • Indigenous Australians in general, and indigenous adult rural males in particular, as examples of rural disadvantaged groups, can act as an obstacle, as disadvantage can be reflected in fewer services in rural and remote communities for disadvantaged groups.**(d)** • Female Indigenous Australians demonstrate more health-seeking behaviours as these behaviours emerge from general health practices of Indigenous people and their living conditions. Particular rural and remote backgrounds act as obstacles.**(d)**

2. Environment	• Access to information about mental health and mental health services in rural and remote Australia often leads to greater contact with non-professional advice as adult rural male values and belief systems, and those of family and tribe, influencing decision-making and the take-up of services.**(s)** • Traditional adult rural male beliefs and values of being needed as a provider often means being stoic in the face of mental health issues, and not taking a break to seek treatment. **(d)** • Transport, travel and travelling times represent a burden for those needing to access mental health services due to the location of these services in rural and remote Australia, for those with and without a motor vehicle.**(s)** • Cost of services, income levels, rural economic structures and practices can act as obstacles as they affect the lives of rural and remote adult males and their ability to access mental health care.**(s)** • Life changes and changes in focus on lifestyle both affect health beliefs, and perceptions and attitudes towards mental health services. Being an adult rural male in a rural and remote community generally acts as a predisposing factor in the take-up of mental health care.**(d)** • The quality of information available to adult males in rural and remote areas of Australia affects their understanding of the operation of the mind and body. and can influence health-seeking beliefs and the take-up of services.**(s)** • Availability of service information can affect the adoption to up-to-date methods of mental health care, which can act as an obstacle to the take-up of services by adult rural males.**(s)** • Rurality itself, agricultural practices, and the cycles of drought, flood and other catastrophes and their relationship to climate change create stoic attitudes and beliefs about independence and coping, which readily lead to the non-recognition of both health and mental health issues, which cause both illness and treatment to be both overlooked.**(s)** • Access to services, their location and distribution in relation to agricultural practices and rurality and being an adult rural male often influence local knowledge of, and experience with, mental health services and could lead to family, community and religious practices becoming obstacles hindering perceptions of the beneficial nature of mental health services.**(s)**

3. Health behaviour	• Strong rural and remote traditional family structures and local community influences can often mean adult rural males already feel sufficiently supported alongside the mental health care available to them.**(s)** • Beliefs and practices of adult rural males embedded in family and community structures can influence take-up behaviour in terms of the value of its benefits.**(s)** • Fear of costs of mental health services at the point of delivery affects their take-up by adult rural males who weigh up the practical costs and benefits of mental health care services to them.**(s)** • Positive thinking needs recognition and consideration in health promotion and intervention because stereotyping and discrimination act as obstacles and worsen mental health outcomes particularly amongst Indigenous Australians.**(d)** • Seeking help as a belief is not ingrained in adult rural males and so perceptions of symptoms and their severity can often be overlooked.**(d)** • Lack of development of self-awareness can lead to a lack of recognition of mental health issues in adult rural male thinking about issues, causing them to be overlooked and may lead to suicidiality potentials.**(d)** • Stoic attitudes and perceptions often lead to the take-up of traditional ways of dealing with mental health issues rather than appropriate mental health services.**(d)** • Adult rural males exist in a culture in which a variety of coping strategies and adaptive behaviours are resorted to in times of distress but which rarely include accessing mental health services as a solution to problems being faced.**(d)** • Male and female coping strategies in rural and remote Australia are culture bound and remarkably similar, and are often based around traditional values and beliefs which hinder take-up or services or the encouragement of one gender to another to take up services.**(d)**

4. Health Outcomes	• Limitations to the take-up of mental health care relate to convenience, against a background of necessary agricultural practices and organisational considerations based around referral systems, access to services, making appointments, waiting times, and follow-up appointment. Rural and remote males seem more influenced by these factors, particularly Indigenous people. Often, due to fewer services being available and difficulties at the interface of rural time and service time, appropriate mental health care is not always taken up.**(s)** • Mental health literacy in rural and remote Australia among adult males, and among Indigenous adult males can often lead to sensitivity to mental health processes and understanding, particularly in regards to fear of assessment and possible embarrassment, which acts as an obstacle.**(s)** • Rural and remote providers who act as gate keepers to mental health services can easily transgress rural concepts of time, place and trust, all of which are important in rural and remote male concepts of the pragmatic nature of treatment.**(s)** • Supportive attitudes by mental health care clinicians and mental health services structures in rural and remote areas are critical factors as there is an expectation by rural and remote male users of mental health services that service providers are warm, sympathetic, personable and professional.**(s)** • Targeted mental health care initiatives in rural and remote Australia work best where the adult rural male patient is matched closely to the skills set of the care-giver and the skills of the practitioners are practical and readily evident.**(s)** • Adult rural male self-generated coping strategies are repeatedly utilised, regardless of measured success as individual orientation to values and beliefs about mental health care act as an obstacle. Seeking treatment for a headache means exactly that in adult rural male thinking. Fear of mental health services and providers and systems act as an obstacle, creating a form of apprehension about mental health care take-up.**(d)** • Professional mental health care services will be less likely to be taken up in rural and remote areas where a lack of care and empathy is implicated, especially in cases of high suicidal potential, and also in the case of Indigenous Australians' refusal to take up mental health care services. A lack of local, cultural, rural and remote knowledge and experience can hinder the take-up of professional services.**(s)** • People in rural and remote areas utilise services for mainly for physical health. Mental and emotional health problems are very much tied to the individual's orientation to values and beliefs about mental and emotional health. Rural and remote adult male mental health care patients do not always represent the assertive personality required by the mental health care system as being necessary for survival in the system. In ability to case manage one's own mental health care can act as an obstacle to the on-going take-up of services.**(d)**

The data revealed that there was good theoretical fit between Andersen's categories of Population and Health Behaviour and the demand for and usage of mental health services by AARRMs. The data also revealed a degree of fit between Environment and Health Outcomes categories and the supply of and usage of these services by this population. Andersen's categories do not however fit into a neat categorisation of supply-side and demand-side obstacles to take-up. Nonetheless, results tend to show that take-up does involve both demand and supply side factors. The model has been useful in conceptualising take-up factors in this way.

Table 19 and 20 show the numerical distribution of obstacles from qualitative and quantitative data. The data shows Andersen's categories, demand and supply side factors, the various percentages and obstacles within each category (where reported).

Table19: Supply side factors and quantitative and qualitative studies

Andersen's categories	Supply side factors	Qualitative	Quantitative
Population	3	3 (16.66%)	-
Environment	6	4 (22.22%)	2 (11.11%)
Health behaviours	3	3 (16.66%)	-
Health outcomes	6	5 (27.78%)	1 (5.55%)
TOTALS	**18**	**15 (83.33%)**	**3 (16.67%)**

Table 20: Demand and factors and quantitative and qualitative studies

Andersen's categories	Demand side factors	Qualitative	Quantitative
Population	5	3 (20%)	2 (13.33%)
Environment	2	2 (13.33%)	-
Health behaviours	6	4 (26.67%)	2 (13.33%)
Health outcomes	2	1 (6.67%)	1 (6.67%)
TOTALS	**15**	**10 (66.67%)**	**5 (33.33%)**

There were 33 obstacles determined as influencing the take-up of mental health care provision by AARRMs. Of these, 18 obstacles were identified on the supply side and 15 on the supply side of the take-up equation. Demand-side factors represent patient-related factors which influence the use or take-up of mental health care services and supply-side factors represent systems and provider-related factors which influence the availability of a mental health care service. Table 21 illustrates the fit between the findings aligned to the Andersen model and the dual categories of demand and supply side factors.

Table 21: Demand and supply side factors according to Andersen's categories

Andersen's categories	Demand side factors	Supply side factors	Total in category
Population	5 (15.15%)	3 (9.09%)	8 (24.24%)
Environment	2 (6.06%)	6(18.18%)	8 (24.24%)
Health behaviours	6 (18.18%)	3 (9.09%)	9 (27.27%)
Health outcomes	2 (6.06%)	6 (18.18%)	8 (24.24%)
TOTALS	**15 (45.45%)**	**18 (54.55%)**	**33**

DISCUSSION

Context and background

Understanding the obstacles to help-seeking is an essential step towards improving the mental health of rural communities in Australia. A variety of obstacles have been found which may be categorised by the demand for services and the supply of those services. This dichotomy shows the true nature and extent of these obstacles.

Results indicate that some obstacles contributing to the failure to take up mental health care services by AARRMs can exist as service supply factors, particularly non-involvement by rural male populations. Indigenous males were found to be even less involved in participation.[23] Females in rural Australia reportedly sought more help than men.[23] Research shows that there are numerous obstacles that impede help-seeking behaviours by AARRMs and the Andersen Model has assisted with the categorisation of these obstacles.[18] In the unique rural and remote context, data extracted through the systematic review process concerning AARRMs indicates that there are many and varied numbers of supply side obstacles. Supply side obstacles may actively prevent these men from seeking assistance. [9,12,18,19,20,22,23,33,36,44,58,59,69,72,73,75,78]

Obstacles also exist because mental health promotion and prevention do not always take account of the interaction of demand side factors and the nature of adult rural and remote males themselves. This includes factors like self-reliance and independence, and the failure to convince males in rural and remote Australia to seek mental health assistance.

The study of both supply and demand side obstacles opens up a possible focus on the mental health attitudes, beliefs and behaviours of recipients of services, as well as on suppliers and systems delivery networks. Mental health promotion and prevention both need to be more prominently on the psychological agenda in assessing the whole gamut of obstacles to adult rural male mental health and models associated with the general mental health situation.

The Andersen model proposed that categorisation of obstacles is useful in determining a predisposition towards take-up of mental health care services.[41,70,71] Using the Andersen model, the inequalities in the take-up of mental health care services in rural and remote Australia by AARRMs became readily apparent. Self-recognition of mental health care needs for take-up by AARRMs was found to be related to a wide range of factors that emerged as obstacles in this study. These demand and supply side factors were spread equally across Andersen's four categories.

Perceptions of mental illness

Rural and remote Australian male perceptions of the nature, symptoms and severity of mental health conditions have been shown to act as obstacles due to personal beliefs about perceived symptoms and illness.[19,21,36,39,43,44,69,72,73,74] Taking up a mental health care service requires AARRMs to initially consider the problem as being serious enough for them to act and seek treatment. Not seeing the matter as warranting attention is a characteristic of an AARRM's approach which leads to mental health self-care. Compared to urban dwellers, rural and remote males are less concerned about symptoms and are more prone to seek a ready-made, tried and tested treatment solution to what they perceive to be the problem.[19,21,36,39,43,44,69,72,73,74] Rural males are also more likely to seek care for others in their family to whom they see themselves as care givers, rather than seeking help for themselves.[19,21,36,39,43,44,69,72,73,74] These perceptions drive conceptions among AARRMs of the negative effects of people with mental illness and fear of the social consequences of mental illness which affect their engagement with services.

Rural and remote male health practices

The 'wait until it is absolutely necessary to seek treatment' model and traditional rural male practices for dealing with mental health issues may also act as an obstacle.[10,13,18,20,21,22,23,36,44,75] Traditional male health beliefs and practices may influence the take-up and use of a preventative mental health care service.[10,13,18,20,21,22,23,36,44,75] Life conditions in rural and remote communities have been shown to correlate with a high incidence of take-up

refusal.[10,13,18,20,21,22,23,36,44,75] Experiences of rural and remote acculturation pose as impediments to the take-up of mental health services.[10,13,18,20,21,22,23,36,44,75]

Obstacles

Obstacles are problems that can restrict the take-up of mental health services in all individuals.[5,11,18,24,39,56,62] Obstacles may only affect an individual in specific situations, and obstacles will only ever influence some individuals some of the time, or all of the time, depending on particular circumstances.[5,11,18,24,39,56,62] Rural and remote adult males, as a result of their health behaviours, their environment, their family and community background and the mental health resources available to them, find themselves experiencing obstacles to their ability to take up mental health services.[10,18,20,21,22,23,36,44,75,76] Characterised by life conditions in rural and remote Australia, problems of acculturation and lack of familiarity and trust of mental health care services, AARRMs show a higher incidence of not taking up available services.

Obstacles to the take-up of mental health services can create a significant negative impact on the wellbeing of rural and remote males in Australia because of the 'rurality' of the males themselves, and the lack of 'rurality' of the services supplied to them.[7,19,26,33,37,38,42,43,45,46,47,59,63] This difference in perspective has negative consequences for the demand for and eventual availability of mental health care services.[7,19,26,33,37,38,42,43,45,46,47,59,63] In contrast, in urban areas, this difference is relatively inconsequential.[7,19,26,33,37,38,42,43,45,46,47,59,63] In addition, the rural and remote environment can be particularly severe for men who are not acculturated to a system that is there to assist them but which is not structured in a manner perceived to be acceptable to them.[9,18,20,21,23,35,37,44,55,57,69,72] Instead, lack of acculturation results in needed services not providing the necessary benefits to AARRMs.[9,18,20,21,23,35,37,44,55,57,69,72]

Some obstacles will only affect adult rural males as they relate specifically to the attributes of this population. Masculine attitudes about mental health and use are particular to rural and remote Australia in relation to cultural norms,

values, beliefs and ideologies which prevail in these regions. In rural and remote Australia a hegemonic masculinity has developed, which has been shown to be detrimental to mental health seeking.[9,10,28,31,34,37,55,59,77] There seems to exist a provider-patient gap in identification and understanding, a type of clinical reality of rural and remote male perceptions of mental health, and a professional nomenclature of service and evaluation, which is on the one hand subjective, yet on the other hand definitive.[19,22,26,46,53,58,63,73,78] The gap in health beliefs and values between rural and remote males and the provision of mental health services is said to be greater in rural and remote Australia than in other places in Australia which share the same relationship.[9,12,16,28,29,31,35,39,63,73,75]

Obstacles can be understood in relation to the rural and remote environment in which adult males exist find themselves existing. The reviewed studies were of research carried out within this context, but the contexts themselves varied considerably. In some papers, a general concept of rural areas was identified as the context, in others the context was limited to rural regions of a particular state of Australia. Other studies focused on a particular community in rural Australia and others, on particular socio-economic groups such as farmers or cancer patients, or they focused on an issue such as suicidiality or a particular racial divide, such as Indigenous and non-Indigenous people.[8,10,13,17,20,23,42,44,45,47,58,67,74,80] Research also drew comparisons regarding obstacles in terms of gender differences and rural-urban characteristics.[9,10,21,23,38,65,68,75,82] From these outcomes, the importance of context when considering obstacles to the take-up of mental health services became readily apparent. A pivotal factor in these perspectives involves the importance of demand and supply factors. From a research perspective, the nature of demand and supply represented a core aspect of the problem of lack of take-up of services.

Analysing the contextual factors that influence the take-up of mental health care services by AARRMs is an important part of understanding the use and development of appropriate services and service delivery.[12,19,21,23,26,47,52,60,72,75,83,84] Attitudes towards health and health behaviour

influence mental health service use.[12,19,21,23,26,47,52,60,72,75,83,84] Differences are documented in the literature between rural and urban males, and attitudes and behaviours towards seeking professional help.[12,19,21,23,26,47,52,60,72,75,83,84] The findings of this systematic review indicated that AARRMs display negative attitudes and behaviours towards help-seeking and these men are much less committed to seeking help for mental health problems.[12,19,21,23,26,47,52,60,72,75,83,84] These men prefer to rely on themselves and their networks of family and community rather than moving out of this pattern towards seeking professional help.[12,19,21,23,26,47,52,60,72,75,83,84] A person in a rural and remote community seeking mental health care help sets in motion a variety of socio-cultural stereotypes and reactions about mental illness that are applied to the person by others and to the person by themselves.

Outcomes from the review question

The review findings indicate that obstacles represent a broad church of factors influencing AARRMs in mental health service availability take-up. These obstacles are embedded in both what it is to be male and the nature of rural life itself, and the nature, values, beliefs and expectations of its inhabitants. What is known of these obstacles is presented and classified in this thesis and discussed in terms of the sources of these obstacles and the nature and significance of their outcomes. No study has tested or recorded the relative influences of obstacles. The systematic review discussed the importance of obstacles and perceived obstacles versus the availability of services and the demand for those services in rural and remote Australia. Results show that both supply and demand factors are associated with failure to take up mental health care services, but in different ways.

Frequency of help-seeking behaviour: quantitative findings

Sveticic J et al. compared the prevalence of contact with mental health services related to help seeking behaviours by indigenous and non–Indigenous Australians.[23] Sveticic et al. concluded that Indigenous Australians die from suicide at twice the rate of non-Indigenous Australians, yet they are statistically less likely to seek professional help for mental health problems.[23] The help-

seeking behaviour of Indigenous Australians was thought to relate to western-based biomedical models of treatment as an obstacle because this model failed to take account of Indigenous community based experiences of hopelessness, cultural disconnectedness and grief.[23] Sveticic et al. concluded that increased accessibility of culturally relevant services would allow for more timely identification and addressing of Indigenous suicide risks through:[23]

- Promotion of contact with general practitioners.
- Adequate Indigenous mental health worker involvement.
- Culturally safe mental health clinical environments.
- Strengthened mental health services and general practitioners to help with Indigenous culturally based mental distress.
- Intensive after care management of suicide attempts.

Attitudes

Judd et al. examined attitudes as barriers to help seeking.[21] These authors concluded that many AARRMs do not conceive their symptoms as being illness related and therefore these individuals often delay seeking help until symptoms are severe and disabling.[21] This research showed that AARRMs were also reluctant to admit to illness and therefore a need for treatment. In both cases, male agrarian attitudes were found to be dominant.[21] These attitudes are as follows:

(i) Self-efficacy: AARRMs assume greater self-responsibility for mental health compared with urban males.[21] While this appears as a positive finding, self-efficacy actually promotes unhealthy self-reliant attitudes and failure to seek help when it was needed.[21] This research indicated there was not necessarily confidence among AARRMs that they could always take the health promoting action required. [21]

(ii) Stoicism: AARRMs tended to avoid discussion of personal mental health issues.[21] This behaviour created attitudes about not

what is said but how an individual AARRM behaves, seeing virtue in a strong will, which was in accordance with the environment in which these men lived.[21]

(iii) Stigma: Judd et al. found that mental health literacy did not reduce stigma and such literacy enhancement was not a sufficiently adequate strategy to reduce stigma.[21] These authors concluded that stigma was a very relevant factor for rural males in determining help-seeking behaviour.[21] Stigma was seen by AARRMs as a mark of disgrace that set the individual apart from others in an agrarian culture where conformity was important.[21]

Attitudes are important determinants of help-seeking behaviour.[21] Attitudes led to the expression of disfavour towards mental health service availability and were formed from past and present agrarian experience.[21] Attitudes were found to mitigate against help-seeking and also made it difficult for the mental health service providers to isolate problems and to pinpoint rural dwelling males who needed help.[21] Further research is needed to determine ways to quantify these attitudinal factors, variables and interactions; to establish the rural and remote nature of these variables and concepts; and to develop ways in which attitudes do not diminish help-seeking behaviours.[21] Attitudes were seen as influencing AARRMs' emotion and behaviour. [21] Attitudes determined mood and were synonymous with AARRMs' take-up of mental health services. [21]

Coping with distress

Gunn et al. found a statistically significant difference for psychological distress across AARRMs from all age groups.[20] Distress occurred when AARRMs could not adapt to stress and incurred suffering.[20] In normal situations, distress results in establishing a means for help-seeking behaviour. However, these authors did not find that this recognised connection existed consistently among AARRMs. [20]

Distress represented an aversive state in many AARRMs who were unable to produce adequate adaptive functioning, and the resultant stressors often

created maladaptive patterns of adjustment.[20] It was evident that the presence of rurality was an influence on motivation to engage in positive help-seeking behaviours.[20] Dealing with distress in traditional ways led to complicated rural and remote social interaction patterns which created increased distress.[20] Increased mental health literacy was not necessarily a factor found to reduce stress in AARRMs.[27] Other research also suggests that coping strategies may be age related.[19] This research indicates that AARRMs find more traditional and culturally appropriate ways of dealing with distress.[19,20,27]

Service utilisation

Findlay and Sheehan identified obstacles to mental health utilisation in rural and remote communities by AARRMs as being related directly to the scarcity of appropriate services, their distance from potential users, and the stigma associated with using these services.[19] An interesting finding by these authors was that AARRMs considered it inappropriate that medical practitioners used traditional medical skills for mental health problems.[19] These men were astute enough to realise that psychological skills were necessary, but were unsure how to access them.[19] As a result, professional services were variably taken up by AARRMs.[19] These authors also found that AARRMs utilised health services more for physical than psychological problems.[19]

This research highlights a lack of clarity of health service use by AARRMs. Rates of help-seeking can be seen to fall into characteristics of the users of services and characteristics of the suppliers of services. Geographic obstacles of location and distribution were linked on the one hand with personal services need factors and on the other hand with perception of service adequacy.[19]

These authors considered farming communities as a whole, and found that during times of distress, such as drought, males experienced greater mental health distress than females.[19] Their research found that those AARRMs with estimated high service needs had little or no contact with professional mental health services.[19] Higher levels of adversity seemed to influence women more than men in rural and remote Australia in terms of seeking help.[19] Men on the

whole preferred non-professional sources of relief from distress, such as behavioural disengagement, suppression of competing attitudes, venting, alcohol and drug use, and mental disengagement.[19]

Meaning and experience of help-seeking behaviour: qualitative findings

Data and synthesis

Data extraction using the JBI-QARI helped establish the evidence base about the prevalence of mental health issues, disorders, symptoms and service utilisation by AARRMs. Evidence indicates no causative link between the prevalence of mental problems and rurality, but mental health problems differ between rural and remote residents and their urban counterparts, and these problems are identified and explained in this systematic review.[10,18,19,20,21,22,23,36,44]

However, evidence about the nature and prevalence of mental problems in rural and remote regions of Australia is not in abundant supply and is not particularly well categorised. The meaning, significance and experience of mental health problems among AARRMs were found to need a nomenclature, and the Andersen model was utilised as a framework for identifying and categorising the findings of the systematic review.

The research findings of the systematic review indicate that AARRMs are less likely to access mental health services. Doctors are key health providers in rural and remote regions of Australia and remain the first option for AARRMs seeking help for a mental health problem.[19] The systematic review findings indicate services used by AARRMs for mental health problems are less than optimal.[10,18,19,20,21,22,23,36,44] The extent of under-use of mental health services is not clear but the socio-cultural context of rural life means that there is widespread use of non-professional methods and self-management strategies. There is a finding in the research of attitudes of lack of confidence in professional treatment.[21]

Help-seeking

Corby et al. found that specific impediments (obstacles) to taking up mental health services centred around perceived needs and perceived informal support and subjective judgements by AARRMs.[18] Availability as a factor in taking up mental health care services was not commonly raised by AARRMs; however health professionals reported this as a factor themselves.[18] These authors considered that help--seeking behaviour was a critical factor in service utilisation and developing outcomes for AARRMs.[18,40] Negative attitudes towards help-seeking, and stigma, self-reliance and stoicism were concerns AARRMs experienced in making help-seeking decisions. Negative attributes reduced help-seeking, particularly where rurality factors amounting to hegemonic masculinity and emotional control were present.[18] While these attitudes and behaviours were variable across AARRM populations, they were nonetheless found to act as obstacles to the take-up of mental health care services across the AARRM spectrum.[18]

These authors further concluded that costs, expenses, accessibility, availability and social support were factors which could act as obstacles, or could in fact act as a motivator for service take-up.[18] Obstacles were seen in this qualitative research to be variable according to the AARRM's individual perceptions.[18]

Resilience factors

Gorman et al., found a theme around AARRMs' self-evaluation of need in making judgements about seeking mental health care.[36] Collective community culture created a positive realisation of mental health care which in turn promoted recovery.[36] Therefore, if need for care is positively evaluated, take-up is not impeded.[36] These authors also found that resilience acted as an obstacle to taking up this professional care.[36] Emerging from this review were findings that positive thinking, self-awareness, self-control, meaning, appreciation and hope were all coping factors used by AARRMs in difficult times. However the individual experiences did not amount to professional intervention-seeking attitudes and behaviours by AARRMs.[36] These abilities allowed AARRMs to adapt to adversity and to rise above stressors. Having developed these abilities

and utilised them to cope in crises, AARRMs tended to use resilience as an excuse to resist professional mental health services.[36]

Stigma, confidentiality and cost

Pierce et al. utilised focus groups and individual interviews with AARRMs who had personally experienced mental ill health.[22] These researchers reported on common factors such as stigma, confidentiality, expense and negative prior experience of mental health care professionals and systems.

Stigma contributed to major distress and was seen as being as distressing as the mental health condition itself.[22] Stigma has the effect of creating prejudiced perceptions which lead to a reluctance to seek available mental health services.[22]

Confidentiality of conversations between mental health service providers and AARRMs was seen to weigh heavily on the minds of those accessing services.[22] AARRMs were described as private individuals who required the safest route to confidence that practice would allow.[22] This also applied to making enquiries.[22] Perceptions of possible breaches of privacy were detrimental to help seeking by AARRMs in general.

Costs of services were measured not only in financial terms but in the productive capacity that is lost in accessing a service.[22] Costs were variable and related to personal income and asset levels, but were often measured in rural and remote communities in the broadest sense.[22] Expenses also involved costs of transport and mileage in accessing a service. [22]

Negative prior experiences of mental health care, professionals and systems left lasting impressions on AARRMs who had relied on the expertise of a professional with trust and uncertainty but did not receive a valuable outcome.[22] The experience is projected into the future.[22] Developing and evaluating expectations involves considerable risks to AARRMs who, once let down, succumb to irrational reasoning based on their thwarted reality.[22]

Mental health literacy, targeted mental health care schemes, accessible information, affordability and continuity of care, when addressed and made available, do not always promote help-seeking behaviour.[22] Other research also indicates that absence of these factors can contribute to this trajectory, where each factor on its own can become an obstacle to the take up of mental health care by AARRMs.[9,12,18,19,20,33,58]

Mental health care services to adult males in rural and remote Australia need to acknowledge the beliefs and values of life and lifestyle practices in the various regions which make up non-urban Australia.[59] AARRMs use their values and beliefs to guide the health-seeking behaviours and to form attitudes about help-seeking.[59] Any other way of addressing mental health care provision will discourage adult rural males from seeking to learn more about the services which are available and to engage with those services, providers and systems.[18,19,20,21,22,23] AARRMs make assumptions about the mental health professional network and they react based on what they see, hear, experience and think, and they apply this value and belief system to how they perceive the mental health system.[59]

Concerns about signs and symptoms amongst AARRMs do not necessarily translate to this population seeking immediate care for their mental health needs. This review found that obstacles are more directly related to feeling safe and secure in the approach and feeling a sense of predictability about the approach.[18,19,21,22,23,36,44] Rural and remote males generally seek to be treated and accommodated in the ways in which they are comfortable within their daily living community.[18,19,21,22,23,36,44]

Health service use

The Andersen model

Take-up factors

The obstacles to the take-up of mental health provisions by adult rural and remote males identified through this systematic review were classified under the four categories of the Andersen model as described in the Methods section of

this review report.[40,70,71] This is the best way to present the complex nature of the obstacles in a conceptual model.[40,70,71] The Andersen behavioural model of health service utilisation is a theoretical framework used to reveal obstacles and conditions, which affect the utilisation of health services.[40,70,71] The Model was seen as a valuable tool for selection, identification and categorisation of obstacles in the take-up of mental health care services in the following four categories:

- Population – patient characteristics
- Environment – organisational factors
- Health behaviour – personal practices
- Health outcomes – provider characteristics.

Population factors

The findings of this systematic review indicate that in rural and remote environments, the age of male users of services may represent an issue.[25,34,39,56,73] Adult rural males may be influenced by different perceptions of risk factors.[9,18,19,21,36,43,44] Traditional health beliefs and practices are likely to influence the adult rural male's access to and utilisation of mental health care services, and the use of preventative mental health care practices, compared to adolescent male access and female access.[18,19,21,22,23,59]

Being a farmer may also influence the take-up of mental health care services as opposed to other rural and remote inhabitants, where differential usage of mental health care professional usage exists.[20,49,50,54] Differences between indigenous Australians and other Australian rural and remote dwellers also help to explain the take-up of mental health care systems.[10,17,23,50] Beliefs are used to make decisions and keep individuals fixed in particular positions. Beliefs are often made on the basis of assumptions which come from differing world views.[20,49,50,54] Differing assumptions about mental health services have not always been empowering for each of these groups.[20,49,50,54] Lack of empowering beliefs negatively influences decision-making.[20,49,50,54] Living conditions among

all remote dwellers may act as an obstacle as it reflects different access to transport and point-of-access costs of services.[17,19,22,37,46,49,50,54,59]

The habits of adult rural males can act as an obstacle as they influence non-traditional mental health care practices.[9,12,23,29,36,44,76,79] Individual AARRMs have different habits.[9,12,23,29,36,44,76,79] Habits require AARRMs to be coaxed into health -seeking behaviours, to be assisted with the routines and to experience immediate and pragmatic reward.[9,12,23,29,36,44,76,79] Family and community support factors affect the quality and quantity of relationships and resources, and may also influence the take-up of mental health care services in rural and remote Australia.[23,27,28,29,30,35,37]

Rural cultural factors impact on perceptions of mental health and mental health care.[18,19,68] Rural kinship and community may be an obstacle to the take-up of mental health care in rural areas among those who need it.[18,19,20,21,22,36,37,44,63] While kinship and community are positive concepts, this does not mean they always have a positive outcome. These concepts may bind a community but over time and space, they can contribute to the retention of negative habits and influences.[18,19,20,21,22,36,37,44,63] Cultural values, beliefs and perceptions about mental health, its signs, symptoms and treatment may influence the individual who may initially be seeking professional treatment outcomes.[18] Those outside this community can feel vulnerable and may have difficulty accessing existing community support.[18,19,20,21,22,23,36,44,49] The familiarity with rural and remote working and living practices can create a form of group perception about these practices which leads the mental health care seeker to seek more traditional methods and approaches to their mental health care.[10,18,19,20,21,22,23,36,44]

Traditional knowledge systems, belief systems and understandings form habitual ways of solving problems for the patient. This may create a gulf between the patient, and the provider and system of mental health care services.[10,18,19,21,22,23,36,37,44,50] Communities in rural and remote areas use localised methods of self-expression that act at the interface of supply of services and demand for those services.[10,18,19,21,22,23,36,37,44,50] AARRMs may

experience misgivings and confusion when having to communicate outside their traditional ways of operating, and may not seek out mental health care services when they feel disconnected by a community gap or a delivery/response style different from their own.[9,10,18,19,21,22,23,26,30,36,44,69,74]

A certain amount of distress accompanies attendance at a mental health care consultation and this can affect the confidence of the AARRMs involved.[10,18,19,21,22,23,36,44,52] Professional nomenclature, understandings and assumptions can interfere in the communication between the provider/system and the recipient.[10,18,19,21,22,23,36,44,52,73] Understanding the mental health care assessment, examination and treatment profile can be quite a daunting process for patients. [10,18,19,21,22,23,36,44,52,73] This distress may be heightened in rural and remote Australia where cultural differences between the system/provider and the recipient may be more pronounced.[10,18,19,21,22,23,36,44,52,73]

Furthermore, communication factors may promote additional differences in rural and remote areas.[2,10,18,19,21,22,23,36,44,72] The professional/system-recipient relationship may be more top-down in rural and remote communities due to education and communication differentials.[2,10,18,19,21,22,23,36,44,72] Adult rural males in these situations may detach themselves from a process they see as being unfamiliar and alienating.[2,10,18,19,21,22,23,36,44,72]

The process of acceptance of a mental health care practitioner/system or service by a rural and remote community seeking adult male participation has as an obstacle the additional factor of the individual professional involved often being known to the community.[9,12,18,20,21,22,23,26,31,35,37,63] Potential recipients of non-physical health services often feel embarrassment or conflict in utilising the services of this professional.[9,12,18,20,21,22,23,26,31,35,37,63] On the other hand, outsiders providing non-physical mental health services who seem foreign in their approach to local communities may find their services shunned.[9,12,18,20,21,22,23,26,31,35,37,63] In both cases of familiar and unfamiliar practitioners, adult rural males are faced with confidentiality issues in sharing personal information.[9,12,18,20,21,22,23,26,31,35,37,63]

Environment

The environment in rural and remote Australia determines practices which influence the way social and economic life is conducted. The rural and remote environment and its issues of time and distance, and the creation of economic life built around rural industry and business affect income levels and the overall distribution of income and wealth.[13,19,23,26,28,37,38,46,63] Rural life is predicated on waiting for economic returns. As such, AARRMs experience differences in financial flows and income streams.[13,19,23,26,28,37,38,46,63]

Living in rural and remote areas of Australia means putting up with fewer mental health care services.[13,19,23,26,28,37,38,46,63] Distance and remoteness affect the availability of mental health care systems and the availability of mental health care professionals.[13,19,23,26,28,37,38,46,63] In these communities high treatment costs for mental health care services can affect the take-up of services among rural and remote people experiencing the effect of rurality itself.[13,19,23,26,28,37,38,46,63]

Rural and remote Indigenous people often find themselves on lower income levels. Low income level is a factor influencing the demand for mental health care service. Where such areas of need exist an overburdened public mental health care system remains the only option for many of these individuals. Income levels in general are a powerful factor in the access to and make-up of mental health care services.[13,19,23,26,28,37,38,46,63] Mental health care service costs help determine accessibility and availability of services for AARRMs which in turn act as obstacles to demand for these types of services.[13,19,23,26,28,37,38,46,63]

Low availability of public transport and its cost can affect rural and remote males in their access to mental health care services in their local communities.[13,19,23,26,28,37,38,63]

Income variability however means that many AARRMs are prepared to make the journey to a regional centre or capital city to avail themselves of these services, but for other users of mental health care services, this is not

possible.[13,19,23,26,28,37,38,46,58,63] Those who can and are prepared to travel to obtain services achieve more satisfactory mental health outcomes.[13,19,23,26,28,37,38,46,58,63] In rural and remote areas of Australia, adult males are reliant on motor vehicles, or friends with motor vehicles, for access to services.[13,19,23,26,28,37,38,46,58,63] Higher level costs and greater mileage in rural and remote areas of Australia mitigate against seeking adequate mental health care treatment.[13,19,23,26,28,37,38,46,58,63]

Health behaviour

Urban mental health treatment concepts transplanted into rural and remote areas may fail to take account of rural and socio-cultural differences.[12,22,23,33,35,36,37,44,56,76,80] In urban communities family and community are secondary to the needs of the individual. In rural and remote communities the individual is secondary to the needs of the family and community.[12,22,23,33,35,36,37,44,56,76,80] Urban oriented mental health care schemes can also fail to take account of rural and remote values and beliefs about mental health and mental health treatments.[12,22,23,33,35,36,37,44,56,76,80]

Different rural and remote health beliefs reflect the differences within these communities themselves. Concepts of mental illness and its causes and treatment, and the socio-cultural dimension of rural and remote beliefs and taboos prevent individual AARRMs from taking up mental health care services.[12,22,23,33,35,36,37,44,56,76,80]

Perceptions and attitudes of adult rural and remote males about themselves lead to dubious feelings about services which they do not trust.[16,21,22,23,54,55,57] Such beliefs are rooted in the need for the benefits of mental health care services to be obvious.[16,21,22,23,54,55,57] The rural adult male's perceptions and attitudes about the likely benefits of a service are critical.[16,21,22,23,54,55,57] If no benefit is obvious to them, they will be unlikely to use or access a mental health care service.[16,21,22,23,54,55,57]

The findings of the systematic review show that AARRMs are individuals with particular attitudes and beliefs. These attitudes and beliefs explain health behaviours within this population.[16,21,22,23,54,55,57] AARRMs do not necessarily take a health-related action to avoid a negative mental health condition and they do not necessarily have the expectation that by taking a particular course of action a negative mental health condition will be alleviated.[16,21,22,23,54,55,57]

Furthermore, the systematic review indicates that many AARRMs do not feel confident in successfully undertaking a particular course of action recommended by the mental health team.[16,21,22,23,54,55,57]

Demand side factors in mental health care services are influenced by the preferences of patients.[10,20,21,28,36,44,76] Rural adult males see mental health services and service providers as a detached group of individuals, separate from their own socio-cultural group, and they think carefully before developing a personal health relationship with such a group.[10,20,21,28,36,44,76] As a result the take-up of mental health services may be affected by this form of thinking by adult rural males.[10,20,21,28,36,44,76]

Different understanding and knowledge about the operation of the mind and body, mental health medicine and its recognition as a relevant rural health practice is a critical factor in the take-up of mental health care services by adult rural males.[2,6,19,25,34,73] This group displays attitudes and belief systems which suggest that mental health care is really only required in cases of serious mental illness or incapacity.[2,6,19,25,34,73] This is particularly true when such attitudes and beliefs lead to the reality of mental health problems in individuals being suppressed and overlooked in preference to traditional and non-professional practices.[2,6,19,25,34,73]

The systematic review shows that AARRMs display a consistency in the attitudes they hold and the behaviours they display. AARRMs reflect attitudes based on direct experience which are strongly held and influence behaviour.[2,6,10,16,19,20,21,25,26,36,44,55,57,73] However, this does not always result in

rational behaviour. AARRMs have been shown in the systematic review to behave in quite illogical and maladaptive ways. [2,6,10,16,19,20,21,25,26,36,44,55,57,73]

As can be seen from the review discussion in this section, attitudes do not necessarily guide or coincide with behaviour. In terms of AARRMs however the strength with which particular attitudes of rurality are held can often impact on behaviour.[2,6,10,16,19,20,21,25,26,36,44,55,57,73] The importance and personal relevance of attitudes, in particular social identification, affects behaviour, where AARRMs are reflecting attitudes of a social group of which they are a member.[2,6,10,16,19,20,21,25,26,36,44,55,57,73]

Health outcomes

Systemic issues are rarely understood by the recipients of mental health care.[19,22,26,27,38,49,52,59,82] System issues about the conditions of use and availability of services simply lead to scepticism amongst the adult rural male population who will not trust or use the service.[26] Rural and remote male, particularly Indigenous people, may be suspicious of links between mental health service provision and other services like the justice system, the police, or other government agencies.[19,22,26,27,38,49,52,59,82] These males may in fact fear any involvement with services where links are not clear.[19,22,26,27,38,49,52,59,82]

Financial resources are required to maintain ongoing mental and emotional health.[13,20,28,29,46,47,50,65,68,82] Rural and remote males are affected differently by changes in economic circumstances because of their close links to an agrarian related commercial economy.[7,19,20,26,28,29,46,47,50,65,68,82] Changes in import and export prices and conditions, the value of the Australian dollar and natural disasters severely influence rural incomes and therefore the ability of adult rural men to pay for access to mental health care.[7,19,20,26,28,29,46,47,50,65,68,82] Many economic problems are unique to the rural areas and drought, flood, farm produce prices and other particular rural-based disasters create unique vulnerabilities experienced by adult rural male populations.[7,19,20,26,28,29,46,47,50,65,68,82]

The ability to find initial and ongoing access to mental health care is crucial to the take-up of care services.[7,10,18,19,22,26,27,38,46,48,82] Lack of familiarity with Medicare provisions as a means of accessing treatment can create its own unique set of obstacles.[7,10,18,19,22,26,27,38,46,48,82] Inability to afford gap payments between professional fees and Medicare rebates and inability to find ongoing private health insurance directly affect access to care and ongoing connection to care services.[7,10,18,19,22,26,27,38,46,48,82] Vulnerability to mental health care service costs is a very different obstacle to the take-up of services.[7,10,18,19,22,26,27,38,46,48,82] Among Indigenous people, levels of personal mental health care coverage and personal eligibility may not be clearly understood and may not be easy to access.[7,10,18,19,22,26,27,38,46,48,82]

The availability of mental health care services is often found to be restricted in rural and remote regions of Australia.[22,23,26,37,45,46,47,50,63,65,68,82] This forms a direct obstacle to the take-up of services by adult males living in these areas because direct access, particularly at busy times in the rural calendar, can be critical.[22,23,26,37,45,46,47,50,63,65,68,82] Rural and remote adult males, and especially adult Indigenous males, are often strongly influenced by their respective communities, family and friends about the issues surrounding the appropriateness of accessing mental health care services.[22,23,26,37,45,46,47,50,63,65,68,82] These patterns of social influences can result in adult rural men adjusting their attitudes and perceptions away from services which may be influenced by misinformation and poor mental health literacy and understanding.[22,23,26,37,45,46,47,50,63,65,68,82]

Health services need to be understood in order to be accessed and mental health care services are no exception.[18,19,22,36,38,44,59,74] Knowledge of these services and relevant information are not always available in male friendly domains.[18,19,22,36,38,44,59,74] Lack of knowledge of a service will disable its utility. Adult rural males and their Indigenous counterparts have very different understandings of mental health concepts compared with urban males.[18,19,22,36,38,44,59,74]

Time is a vital concept in rural and remote communities in terms of the sequence of farming practices during the agrarian year.[19,20,26,53,54,58,59] Rural and remote agricultural work commitments dominate rural communities and the adult males who drive agricultural practices in these communities.[19,20,22,23,26,53,54,58,59,75] Local unwritten codes and practices about work, work ethics, providing for family and community, all contribute to men taking risks with their mental health because of the need to meet agrarian work expectations and this creates stress, more so in difficult economic and climatic times. Adult rural males will handle the health risks associated with these stresses in their own time honoured way, which does not include the take-up of available mental health care services.[19,20,22,23,26,53,54,58,59,75]

When the home grown systems of dealing with mental health crises do not work, they are simply applied with more rigour.[4,19,20,29,52,57,59,79] Seeking help is often a last option or not considered at all.[4,19,20,29,52,57,59,79] Self-denial and rumination increase the risk of suicidiality.[4,19,20,29,52,57,59,79] Not being able to stoically find a way out, and being unable to save face in the light of ongoing hardship and failure, adult rural males can take matters into their own hands.[4,19,20,29,52,57,59,79]

Current study

The four categories of the Andersen model were thought initially to represent demand and supply side factors in terms of the findings of the systematic review. The relationship between demand and supply side factors were thought to underlie the allocation of AARRMs' preferences for allocation of their resources to treatment of mental health problems. Supply factors were thought to represent what the mental health care system can offer. Demand factors refer to services described by mental health care consumers. Environment and health outcomes were Andersen's categories related to supply and population and health behaviours were categories thought to relate to demand.

The Andersen model however did not readily lend itself to sublimation from its four categories into two sets of factors, Demand and Supply.[41,70,71] When

reviewing the categories, Demand and Supply factors readily found their way equally across all of the four categories. While the four categories proved very useful in arranging obstacles, they could not be collapsed into the Demand side and Supply side obstacle framework that was hypothesised.

This does not mean that Andersen's model or the Demand side/Supply side analysis is invalid or unreliable. What it does mean is that we have two sets of findings for the data about obstacles. This outcome clearly needs evaluation in future research.

The Andersen model however was found to have some limitations in terms of its use in this study.[41,70,71] The adult rural male decision-making process is shown in its outcomes but not in the actual dynamics that lead to an actual take-up decision being made. Perceptions by adult rural males about mental health care services available to them are also not delineated in the Andersen model. The Demand side processing factors are therefore not well explained by the model because we do not get an understanding of why the adult rural male behaves as he does; however, the provider and system processes are much better expounded because the model allows researchers to observe these sectors more closely. On the whole, the model presented a set of findings in useful categories for the synthesis of mental health service use and avoidance by adult rural males, and this was in line with the aim of this systematic review thesis.

The synthesis of results led to findings which could be incorporated satisfactorily under demand side and supply side obstacles to the take-up of mental health care provision by adult rural and remote males. In this way the adult male was the obvious subject of research investigation but not the only factor to be represented when thinking of take-up obstacles. Health care system factors and provider resources also constitute a component set of factors as obstacles. The capacity of mental health care systems to deliver effectively to adult rural males, and the capability of mental health professionals and facilities at their disposal are vital components of any consideration of obstacles.[18]

The mental health care system is clearly a consumerist system. It is not a source of direct comfort to adult rural males seeking mental health care, and so it falls to the provider of mental health care services to be the compassionate 'face' of the supply side sector.[18,19,21,22,23,36,44] This may not always be the case and so the attitudes of the providers of mental health care services are critical to take-up by adult rural male.[18,19,21,22,23,36,44] Here, provider and system interact, and a consumerist approach, where fees for service must be paid, can build obstacles to the take-up of service provision. As has been indicated, some obstacles affect adult rural males directly as recipients of services or as users of services, and other obstacles affect providers and systems, but both supply and demand side obstacles relate to the socio-cultural attributes and decision-making models of both sectors of the take-up equation.[2,18,22,26,45,52,59]

Between the two sectors there are clinical realities of subjectivity and perception about the adult rural male, services required, and this population's subjective perception of system and provider. The realities of the provider and system are about professional assessment and service provision, and those of the recipient or user are about expectation and intention. Values and beliefs, needs and wants differ completely, and so a clinical difference in realties emerges between supply side and demand side within the whole understanding of obstacles, their meaning, how they are experienced, and how significant they are on both sides.

Supply and demand factors

Supply side and Demand side factors were seen as being equal in the way they each presented as obstacles. There were few between group differences. There were however variations across Andersen's categories. Environment and health outcomes were strong Supply side influences, while population and health behaviour were stronger Demand side influences. Overall each of the four categories contributed variably to the distribution of obstacles over the four categories themselves. In terms of qualitative and quantitative outcomes there was considerable variation in the numbers and percentages of obstacles in each category.

These findings represent a future productive source of research to determine the exact distribution of factors. There may be some arbitrary aspects to the nature of placing obstacles within certain categories on the Demand or Supply side, which could also warrant more precise determination. Nonetheless, the categorisation is important and influential for practice and policy making.

Qualitative and quantitative studies were equally represented in the categorisation of obstacles and between supply and demand side factors, suggesting that both forms of primary research are relevant to the pursuit of evidence-based knowledge and outcomes in the field of obstacles to the take-up of mental health services by AARRMs.

A crisis seems to exist in the health field involving adult rural males. Many of these men are vulnerable to a number of mental health care issues at all ages of the adult lifespan, and the way these men engage in mental health behaviour may compound the issue that they are less help-seeking, and this situation can be said to exist despite supportive social networks. The health behaviours of AARRMs have been shown to be shaped by hegemonic masculinity in the way that a value system shapes help-seeking behaviour. Adult rural and remote males may shy away from taking an interest in their mental health and they may fail to utilise mental health services and display positive mental health behaviours.

These challenges need to be recognised and appreciated in order for more effective mental health outcomes for adult rural and remote males. The research evidence shows that the mental health system responds to direct, not potential, crises which may exist in the hearts and minds of adult rural and remote males. Research also shows that obstacles lie not just in the nature of adult males in rural Australia, but also in the providers and the systems and structure of health services.

Mental health needs in rural and remote areas need to be recognised, but the community also needs to be cognizant of the provider and systems view of

mental health as well as the adult rural male functional view of mental health, each of which has their own prevailing orthodoxy. Even when problems emerge, adult rural and remote males feel that they can take care of business themselves without the need of mental health professionals. This systematic review thesis proposes that both demand side and supply side factors are crucial.

Implications for practice

If the obstacles to rural and remote adult male mental health are addressed then the mental health take-up behaviours of adult males may be better understood and improved. Obstacles to the take-up of mental health services by rural and remote males are part of the identity of what it is to be an adult male in rural and remote settings. The rural environment and its related mental health system and socio-political-cultural context impact upon the supply of services as well as male demands for those services in terms of mental health availability as indicated by adult male take-up behaviours.

The results of this study indicate that obstacles to the take-up of mental health care by AARRMs are broad in nature. Obstacles are significant to rural men themselves and significant to perceptions of mental health care professionals and services. There are definite supply and demand side factors. Supply side factors represent implications for professional practice in terms of: where policy and practice needs to clearly manifest as valued service delivery; where services need to be clearly available and not supplied with unreliable or limited resources or accessibility; and, where services are defined for, target, and service rural male populations. Demand side factors represent implications for practice because services need to recognise, and be recognised by, male gendered rural beliefs, values and practices.

It is evident from this study that health professionals and health systems have a role to play. This needs to translate into an understanding and appreciation of appropriate service provision.

Implications for research

The current study also has found that significant research is carried out in relation to rural female issues and child and adolescent issues; however, adult rural males' interests are not as well represented in the research literature. Little research has investigated the broad formal obstructions to help seeking in mental health among AARRMs.

Suicidiality is a major entry point into research involving adult rural males. However, adult men's issues in rural and remote communities goes beyond issues relating to self-harm. Research studies use death by suicide as a particular line of injury into the nature and significance of meaning and experience of AARRMs contacts with mental health-care services.

The research is quite inconclusive concerning the role of mental health in suicidal ideation and behaviour. It was a finding however that most people who suicide rarely seek help from mental health care service. Unique, general rural male characteristics in the take-up of mental health care services may provide opportunities for more evidence based inquiry in this field. Traditional mental health care models and their relationships to models of the understanding of the broad nature of obstacles, may better focus on community and contextual experiences of AARRMs.

Indigenous peoples are another entry point into research involving adult rural males. Rural communities are heterogeneous in nature. The development of culturally relevant and accessible mental health care services are critical factors in the appropriate treatment of "at risk" rural and remote indigenous populations. The nature of contacts by all AARRMs, regardless of race or ethnicity is influenced by the broad obstacles to the take-up of available services. Research identifying the role of demand and supply side factors in the take-up of services can provides insights into treatment of mental health problems among all AARRM populations.

Research which focuses on adult rural and remote males of all cultural

backgrounds in terms of mental health behaviours needs to be a more significant feature of primary research. Research to establish help-seeking by all rural males, regardless of race or ethnicity, can better focus on broad obstacles and on understanding these obstacles by addressing demand and supply side factors.

The search process of the systematic review indicated that research in other countries tended to reflect a greater focus on adult rural male health behaviours compared to Australia. Awareness of the scope and direction of research in these countries is relevant to the whole question of take-up factors.

There is an emphasis on mental health care promotion and prevention in the literature over the past decade which indicates an increase in research on promotion of health-seeking behaviour among males of all ages. Emphasis on the promotion of health-seeking among males and developing more trusting relationships with mental health care professionals and systems will assist in reducing the burden of mental illness among males.

The results obtained from this research confirm previous research findings and extend previous research. This research has identified broad obstacles to the take-up of mental health care in rural Australia and indicates where expertise in managed care needs to focus.

Assumptions, limitations, delimitations

There are limitations to this study. The papers included in the systematic review did not differentiate categories of adult rural males by age, race or occupation. Therefore, Indigenous, non-Indigenous and other racial groups were not considered separately, and there is a need for future research to consider this separation. Also, adult rural males were not differentiated by age group, such as 20 to 30 year old males, 30 to 40 year old males, and so on. There is a need to consider adult rural males by age. Another limitation was that adult rural males were not differentiated by the work they do, such as farming, working in commerce in a country town, and so on. Occupational differences may

contribute as a key factor when examining obstacles, and this may also be a good subject for future research. Research has found that the mental health behaviour of farmers differ from that of other rural dwellers.[20,36,44]

The author of this study is an adult male who works part-time in a rural medicinal centre, while residing in a capital city. His not belonging to a rural and remote community may have affected the interpretation of findings. This systematic review thesis has not focused on the particular issues of suicidiality but this issue may well emerge in relation to obstacles and problems when examining events and consequences linked to these obstacles.[7,32,35,58,74,85] Suicidiality may result in failure to take up available mental health care provision.[7,32,35,58,74,85] It can be an outcome related to particular sets of mental health behaviours.[7,32,35,58,74,85] This paper had, as its focus, the presentation of evidence of the everyday obstacles behind the failure to take up an available service. Risk factors for suicide include being male. Men commit suicide more than four times as often as women.[7,32,35,58,74,85] And most suicides now occur among older males.[7,32,35,58,74,85] A drop in social status and mental health issues are also pertinent risk factors.[7,32,35,58,74,85] Illness and mental illness stressors are often found to be risk factors for suicidality in older males.[7,32,35,58,74,85]

This systematic review thesis illustrates the nature of obstacles relating to adult rural males, so that generalisations outside this population cannot be assumed to be applicable.

The writer works in a part-time capacity in a rural mental health setting, but lives in a very highly urbanised environment, and this seems to also apply to most of the researchers themselves. Having an urban background leads to thinking about and conceptualising from an urban perspective.[5,9,22,35,67] Rural-based writers and researchers may express different viewpoints. From an urban perspective it is possible to frame particular concepts of mental health provision and care, and the system of gate keeping and referral can be seen as an asset, whereas in a rural and remote setting it may be present as an obstacle. Such

differences between rural and urban cultures may influence the interpretation of findings.

Conclusion

This research has identified and categorised previous findings concerning obstacles and a way of conceptualising and processing these obstacles to support better outcomes in help-seeking behaviour in AARRMs. The identified obstacles are classified as population, environment, health behaviour and health outcomes, as well as factors that influence the availability and provision of mental health care services. The obstacles identified are further classified as demand and supply side factors to help conceptualize the nature and impact of help seeking behaviour by AARRMs.

Conflict of Interest Statement:

The author and secondary reviewer of this systematic review were not in any situation which represented a conflict of interest.

REFERENCES

1. Duran B, Oetzel J, Lucerto J, Jiang V, Novins DK, Manson S, Beals J. Obstacles for rural American Indians seeking alcohol, drug, or mental health treatment. Journal of Consulting and Clinical Psychology. 2005; 73(5): 819-829.

2. Smith, J. Rural mental health counselling: one example of practicing what the research preaches. Journal of Rural Community Psychology. 2003; E6 (2): 1-9.

3. Jorm AF, Bourchier SJ, Cvetkovski S, Stewart G. Mental health of Indigenous Australians: a review of findings from community surveys. The Medical Journal of Australia. 2012; 196(2): 118-121.

4. Nagel T, Jayaraj R, Ahkit A, Thompson V, Spencer N. Submission in response to the Australia's National Drug Strategy: Beyond 2009 Consultation Paper. Casuarina, N.T 0810: Menzies School of Health Research; February 2010. 10p

5. Bruwer B, Sorsdahl K, Harrison J, Stein DJ, Williams D, Seedat S. Barriers to mental health care and predictors of treatment dropout in the South African stress and health study. Psychiatric Services. 2011; July; 62(7): 774-781.

6. Gough B. Real men don't diet: An analysis of contemporary newspaper representations of men, food and Health. Social Science and Medicine. 2007; 64: 326-337.

7. McGlaughlin R. Position Statement: responding to suicide in rural Australia. Leichardt, NSW: Suicide Prevention Australia; September 2008 (Reviewed April 2010) [:1-14]

8. Miller E, Buys L, Buys R, Buys K. The importance of a confidant for the well-being of older rural married Australian and American men. Presented at the 38th Annual Conference of the Australian Association of Gerontology; 2005; Gold Coast, Australia. P88-99.

9. Ricciardelli LA, Williams RJ. The role of masculinity and femininity in the development and maintenance of health risk behaviours. In C. Blazina and DS Shen-Miller (eds), An international psychology of men: Theoretical advances, case studies, and clinical innovation; New York, 2011; 57-98.

10. Sveticic J, Milner A, De Leo D. Contacts with mental health services before suicide: a comparison of Indigenous with non-Indigenous Australians. General Hospital Psychiatry. 2012; 34(2): 185-91.

11. Scheppers, E., Van Dongen, E., Dekker, Jos., Geertzen, J., Dekker, Joost.. Potential barriers to the use of health services among ethnic minorities: a review.

OJFP. 2006; 23 (3): 325-348.

12. Mahalik JR, Burns SM, Syzdek M. Masculinity and perceived normative health behaviours as predictors of men's health behaviours. Social Science and Medicine. 2007; 64: 2201-2209.

13. Corcoran K, McNob J, Girgis S, Colagiuri R. Is transport a barrier to healthcare for older people with chronic disease? Asia Pacific Journal of health Management. 2012; 7(1): 49-56.

14. Deogaonkar, M. Socio-economic inequality and its effect on healthcare delivery in India: inequality and healthcare. Electronic Journal of Statistics. 2004; 18(1):1-6

15. Quine S, Bernard D, Booth M, Kang M, Usherwood T, Alperstein G, Bennett D. Health and access issues among Australian adolescents: a rural-urban comparison. International Electronic Journal of Rural and Remote Health Research. 2003; 3(245): 3-11

16. Chevalier C, Steinberg S, Lindeke L. Perceptions of barriers to psychiatric-mental health CNS practice. Issues in Mental Health Nursing. 2006; August-September; 27(7): 753-763.

17. Hanssens L. The search to identify contagion operating within suicide clusters in indigenous communities, Northern Territory. Australia. Aboriginal and Islander Health Worker Journal. 2007; 31: 27-33.

18. Corby D. Barriers to accessing psychosocial support services among men with cancer living in rural Australia; perceptions of men and health professionals. International Journal of Men's Health; 1(11); 2011:1-14.

19. Findlay RA, Sheehan MC. Utilisation of Mental Health Services in Rural and Remote Communities. Journal of Rural Community Psychology. 2004; E7 (1): 1-10.

20. Gunn KM, Kettler LJ, Skaczkowski GLA, Turnbull DA. Farmers' stress and coping in a time of drought. Journal of Rural and Remote Health; 12: 2071 (online) 2012; 1-8.

21. Judd F, Jackson H, Komiti A, Murray G, Fraser C, Grieve A, Gomez R. Help-seeking by rural residents for mental health problem: the importance of agrarian values. Australian and New Zealand Journal of Psychiatry. 2006; 40: 769-776.

22. Pierce D, Brewer C. Factors promoting use of mental health services in a rural area of Australia. Journal of Community Medicine and Health Education; 2 (11); 2012:1-6.

23. Sveticic J, Milner A, De Leo D. Contacts with mental health services before suicide: a comparison of Indigenous with non-Indigenous Australians. Australian Institute for Suicide Research and Prevention. 2007:1-6

24. Ohtsuki,T, Inagaki M, Oikawa Y, Saitoh A, Kurosawa M, Muramatsu K, Yamada M. Multiple barriers against successful care provision for depressed patients in general internal medicine in a Japanese rural hospital: a cross-sectional study. BMC Psychiatry. 2010; 26(10): 30-36.

25. Boyd CP, Aishett DL, Francis K, Kelly M, Newnham K. Issues in rural adolescent mental health in Australia; Rural and Remote Health. 2006; 6 (501): 1-9.

26. Calloway M, Fried B, Johnsen M, Morrissey J. Characterisation of rural mental health systems. Journal of Rural Health. 1999; 15(3): 296-307.

27. Goldney RD, Fisher LJ, Wilson DH, Cheok F. Mental health literacy of those with major depression and suicidal ideation: an impediment to help seeking. Suicide and Life-Threatening Behaviour. 2002; 32(4): 394-403.

28. Karoski S. Has the health system failed men? The perceptions of the men's movement on men's health in Australia. International Journal of Mental Health. 2011; Spring. 5-10.

29. O'Keefe P. Help seeking behaviours of farmers. Agriculture: articles, essays and opinion from off the corporate coast. 2012; October, 25: 1-5.

30. Trevaskis N. Addressing depression and anxiety in rural and remote areas. Journal of the Consumer's Health Forum of Australia. October, 2009; Issue 5: 1-2.

31. Smith JA, Braunack-Mayer A, Wittert G, Warin M. "It's sort of like being a detective": Understanding how Australian men self-monitor their health prior to seeking help. BMC Health Services Research. 2008; 8: 56p.

32. Berk M, Dodd S, Henry M. The effect of macroeconomic variables on suicide. Psychological Medicine, 2006; 36(2): 181-189.

33. Berry HL, Kelly BJ, Hanigan IC, Coates JH, McMichael AJ, Welsh JA. Rural mental health impacts of climate change. 2009 Garnaut Climate Change Review. March 11.

34. Boyd CP, Hayes L, Sewell J, Caldwell K, Kemp E, Marvie L, Aisbett DL, Nurses. Mental health problems in rural contexts: a broader perspective. Rural Adolescent Mental Health Care Group, Centre for Health Research and Practice, University of Ballarat, Ballarat , Victoria Australia. 2007; 5p.

35. Cartwright C, Hughson S. Lifeline calls: help-seeking behaviours in rural men. Melbourne, Victoria, Lifeline; September, 2007: 6p.

36. Gorman D, Buikstra E, Hegney D, Pearce S, Rogers-Clark C, Weir J, McCullah B. Rural men and mental health; their experiences and how they are managed. International Journal of Mental Health Nursing. 2007; 16(5): 298-306.

37. Boyd C Parr H. Social geography and rural mental health research. Journal of Rural and Remote Health. 2008; 8(804) (online): 1-4

38. Groot CJ. Capturing benefits of new technologies for rural and remote wellbeing. Paper presented at 11th National Rural Health Conference; 2010; Melbourne, Australia: 4p.

39. Gulliver A, Griffiths KM, Christiensen H. Perceived barriers and facilitators to mental health help-seeking in young people: a systematic review BMC Psychiatry. 2010; 10 (113): 1-11.

40. Adina J. Smith. Rural Mental health Counselling: One Example of Practicing What the Research Preaches. Journal of Rural Community Psychology. 2003;E6(2):1-9.

41. Andersen R, Newman IF. Societal and individual determinants of medical care utilisation in the US. Milbank Memorial Fund, 1973, 51:95-124

42. Thorpe JM, Thorpe CT, Kennedy KA, Pandhi N. Patterns of perceived barriers to medical care in older adults: a latent class analysis. BMC Health Services Research. 2011; August; 3 (11) 161-201

43. Perkins D, Fuller J, Kelly BJ, Lewin TJ, Fitzgerald M, Coleman C, Inder KJ, Allan J, Ayra D, Roberts R, Buss R. Factors associated with reported service use for mental health problems by residents of rural and remote communities: cross sectional findings from a baseline survey. BMC Health Services Research. 2013; April; 13(157): 1-14

44. Gorman D, Buikstra E, Hegney D, Pearce S, Rogers-Clark C, Weir J, McCullagh B. Rural men and mental health: Their experiences and how they managed; Department of Nursing, University of Southern Queensland, Toowoomba, Queensland, Australia; 1(1); 2005: 1-12

45. Western Australian Government. WA Mental health consumer, carer and community consultation review: review to inform the development of WA Mental Health Strategy Plan 2010-2020. Price Waterhouse Cooper; March 2010. 35p.

46. National Rural health Alliance. Mental health in rural Australia: good health and wellbeing in rural and remote Australia. Deakin West, Canberra ACT. Mental health council of Australia; August 2009: 2p.

47. Hunter Institute of Mental Health. Rural Communities. Health in Australia: Issues in Rural and Remote Communities. Rural Australians. 2012: 1-2.

48. Australian Institute of Health and Welfare. Australia's Health, 2010; Canberra. 120p.

49. Vines R. Equity in health and wellbeing: Why does regional, rural and remote Australia matter? Melbourne; Faculty of Medicine, Nursing and Health Sciences, Monash University; 2011. 7p

50. Issues in rural and remote communities. 2012; (Rural Australians)

51. Hauenstein EJ, Petterson S, Merwin E, Rovnyak V, Heise B, Wagner D. Rurality, gender and mental health treatment. Family and Community Health. 2006: July-September; 29(3): 169-185.

52. Chipp CL, Johnson ME, Brems C, Warner TD, Roberts LW. Adaptations to health care carriers as reported by rural and urban providers. Journal of Health Care. 2008; 19(2): 532-549.

53. Griffith University. Health Check: promoting health, enabling communities. (The rural and remote health issue). Griffith University Quarterly. Issue 37: 19p.

54. Jackson H, Judd F, Komiti A, Fraser C, Murray G, Robins G, Pattison P Wearing A. Mental health problems in rural contexts: what are the barriers to seeking help from professional providers. Australian Psychologist. 2007; 42(2): 147-160.

55. Emslie C, Ridge D, Ziebland S, Hunt K. Men's account of depression: Reconstructing or resisting hegemonic masculinity? Social Science & Medicine. 2006; 62(9): 246-257.

56. Gulliver A, Griffiths KM, Christensen H. Barriers and facilitators to mental health help-seeking for young athletes: a qualitative study. Biomedcentral Psychiatry (Online Research Journal). 2012; 12(157): 1-18.

57. Brownhill S, Wilhelm K, Barclay L, Schmied V. Big Build: hidden depression in men. Australian and New Zealand Journal of Psychiatry. 2005; 39(10): 921-931.

58. Kelly B. Suicide in rural and remote areas. Tasmania: National Rural Health Association: 2009: 3p.

59. Gregory G. Impact of rurality on health practices and services: summary paper to the inaugural rural remote health scientific symposium. Australian Journal of Rural Health. 2009; 17: 49-52.

60. Schaub M, Williams C. Examining the relations between masculine gender role conflict ad men's expectations about counselling. Psychology of Men and Masculinity, 2007; 8(1), 40-52.

61. Pauly BM, Varcoe C, Storch J. Farming the issues: Moral Distress in Health Care. Healthcare Ethics Committee Forum. 2012; 25 (March): Epub ahead of print.

62. Szirom T, king D, Desmond K. Barriers to service provision for young people with presenting substance misuse and mental health problems. Canberra: National Youth

Affairs Research Scheme; October 2004. 79p.

63. Boyd CP, Hayes L, Wilson RL, Bearsley- Smith C. Harnessing the social capital of rural communities for young mental health: An asset based community development framework. Australian Journal of Rural Health. 2008; 16: 189-193.

64. Behgi M, Rosenbaum JF. Risk factor for fatal and non-fatal repetition of suicide attempt: a critical appraisal. Current Opinion in Psychiatry, 2010; 23(4): 349-355.

65. Meadows E. The Greens' improving mental health services in country Australia: discussion paper. Mental Health Council. Sandy Bay, Tasmania, Australia; November, 2012.

66. The Royal Australian College of General Practitioners. Men's Health. The RACGP Curriculum for Australian Genral Practice. 2007; 1-11

67. Horalambous B, Xiaoping Lin, Dow B, Jones C, Tinney J, Bryant C. Depression in older age: a scoping study. Final Report September 2009: National Aging Research Institute (funded by Beyond Blue: the national depression initiative):102p.

68. Wells R. Under serviced Communities – Australia. Paper presented at the 5th International Medical Workforce Conference; 2000; Sydney Australia: 289-328.

69. Komiti A, Judd F, Jackson H. The influence of stigma and attitudes on seeking help from a GP for mental health problems: a rural context. Social Psychiatry and Psychiatric Epidemiology. 2006; 41(9): 738-745

70. Aday LA, Andersen R. Development of Indices of Access to Medical Care. Ann Arbor (MI): Health Administration Press: 1975.

71. Andersen RM. Revisiting the behavioural model and access to medical care: does it matter? Health Soc Behaviour; 1995; 36: 1-10.

72. Ashfield JA. Doing psychotherapy with men – practising ethical psychotherapy and counselling with men. 2010; Norwood: Peacock Publications.

73. Jeffries M, Grogan S. 'Oh, I'm just, you know, a little bit weak because I'm going to the doctor's'. Young men's talk of self-referral to primary health care services. Psychology and Health. 2012; 27: 898-915.

74. Wilson CJ, Deane FP. Help-negation and suicidal ideation: The role of depression, anxiety and hopelessness. Journal of Youth and Adolescence, 2010; 39(3), 291-305.

75. Price P, Dagleish J. Help seeking among indigenous Australian adolescents: exploring attitudes, behaviours and barriers. Youth Studies Australia. 2013; 32(1): 10-18.

76. Courtney W. Constructions of masculinity and their influence on men's wellbeing: A theory of gender and health. Social science and medicine. 2000; 5: 1385-1401

77. Woolcock K. improving the health of Australian men. Health Promotion: Pharmaceutical Society of Australia; April 2012. 294-296.

78. Winterton R, Warburton J. Models of care for socially isolated older rural carers: barriers and implications. Journal of Rural and Remote Health. 2011; September; 11 (1678) (online): 1-13.

79. Witte TK, Gordon KH, Smith PN, Van Orden KA. Stoicism and sensation seeking: male vulnerabilities for the acquired capability for suicide. Journal of Research in Personality, 2012; 46, 384-392.

80. Howerton A, Byng R, Campbell J, Owens C, Aitken P. Understanding help-seeking behaviour among male offenders: a qualitative interview study. British Medical Journal. 2007; (33)4, 300-303.

81. Wilson RL. Outback and out-of-whack: issues related to the experience of early psychosis in the New England Region, New South Wales, Australia. Rural and Remote Health; 2007; 7-75.

82. Rickards L. Rural Health: Problems prevention and positive outcomes. Health by Future Leaders. Melbourne; 2009.

83. Brownhill S, WilhelmK, Eliovson G, Waterhouse M. 'For men only': a prompt list pre-test in primary care. Australian Family Physician. 2003; 32(6): 443-450.

84. Mercier A, Kerchuel N, Stainkiewitz B, Aubinier S, Boulnois C, Becret F, Czernichow P. Obstacles to effective treatment of depression: a general practitioners' postal survey in the north-west region of France. L'Encephale. 2010;36 (2): 73-82.

85. Harwood DMJ, Hawton K, Hope T, Jacoby R. Suicide in older people: Mode of death, demographic factors, medical contact before death. International Journal of Geriatric Psychiatry. 2000; 45(8): 736-743.

Appendix 1: Appraisal instruments

QARI appraisal instrument

JBI QARI Critical Appraisal Checklist for Interpretive & Critical Research

Reviewer _____ Date _____

Author _____ Year _____ Record Number _____

	Yes	No	Unclear	Not Applicable
1. Is there congruity between the stated philosophical perspective and the research methodology?	☐	☐	☐	☐
2. Is there congruity between the research methodology and the research question or objectives?	☐	☐	☐	☐
3. Is there congruity between the research methodology and the methods used to collect data?	☐	☐	☐	☐
4. Is there congruity between the research methodology and the representation and analysis of data?	☐	☐	☐	☐
5. Is there congruity between the research methodology and the interpretation of results?	☐	☐	☐	☐
6. Is there a statement locating the researcher culturally or theoretically?	☐	☐	☐	☐
7. Is the influence of the researcher on the research, and vice- versa, addressed?	☐	☐	☐	☐
8. Are participants, and their voices, adequately represented?	☐	☐	☐	☐
9. Is the research ethical according to current criteria or, for recent studies, and is there evidence of ethical approval by an appropriate body?	☐	☐	☐	☐
10. Do the conclusions drawn in the research report flow from the analysis, or interpretation, of the data?	☐	☐	☐	☐

Overall appraisal: ☐ Include ☐ Exclude ☐ Seek further info. ☐

Comments (Including reason for exclusion)

_____

_____

_____

MAStARI appraisal instrument

JBI Critical Appraisal Checklist for Randomised Control / Pseudo-randomised Trial

Reviewer _____ Date _____

Author _____ Year _____ Record Number _____

	Yes	No	Unclear	Not Applicable
1. Was the assignment to treatment groups truly random?	☐	☐	☐	☐
2. Were participants blinded to treatment allocation?	☐	☐	☐	☐
3. Was allocation to treatment groups concealed from the allocator?	☐	☐	☐	☐
4. Were the outcomes of people who withdrew described and included in the analysis?	☐	☐	☐	☐
5. Were those assessing outcomes blind to the treatment allocation?	☐	☐	☐	☐
6. Were the control and treatment groups comparable at entry?	☐	☐	☐	☐
7. Were groups treated identically other than for the named interventions	☐	☐	☐	☐
8. Were outcomes measured in the same way for all groups?	☐	☐	☐	☐
9. Were outcomes measured in a reliable way?	☐	☐	☐	☐
10. Was appropriate statistical analysis used?	☐	☐	☐	☐
	☐	☐	☐	☐

Overall appraisal: Include ☐ Exclude ☐ Seek further info. ☐

Comments (Including reason for exclusion)

JBI Critical Appraisal Checklist for Descriptive / Case Series

Reviewer _____ Date _____

Author _____ Year _____ Record Number _____

	Yes	No	Unclear	Not Applicable
1. Was study based on a random or pseudo-random sample?	☐	☐	☐	☐
2. Were the criteria for inclusion in the sample clearly defined?	☐	☐	☐	☐
3. Were confounding factors identified and strategies to deal with them stated?	☐	☐	☐	☐
4. Were outcomes assessed using objective criteria?	☐	☐	☐	☐
5. If comparisons are being made, was there sufficient descriptions of the groups?	☐	☐	☐	☐
6. Was follow up carried out over a sufficient time period?	☐	☐	☐	☐
7. Were the outcomes of people who withdrew described and included in the analysis?	☐	☐	☐	☐
8. Were outcomes measured in a reliable way?	☐	☐	☐	☐
9. Was appropriate statistical analysis used?	☐	☐	☐	☐

Overall appraisal: Include ☐ Exclude ☐ Seek further info ☐

Comments (Including reason for exclusion)

JBI Critical Appraisal Checklist for Comparable Cohort/ Case Control

Reviewer _____ Date _____

Author _____ Year _____ Record Number _____

	Yes	No	Unclear	Not Applicable
1. Is sample representative of patients in the population as a whole?	☐	☐	☐	☐
2. Are the patients at a similar point in the course of their condition/illness?	☐	☐	☐	☐
3. Has bias been minimised in relation to selection of cases and of controls?	☐	☐	☐	☐
4. Are confounding factors identified and strategies to deal with them stated?	☐	☐	☐	☐
5. Are outcomes assessed using objective criteria?	☐	☐	☐	☐
6. Was follow up carried out over a sufficient time period?	☐	☐	☐	☐
7. Were the outcomes of people who withdrew described and included in the analysis?	☐	☐	☐	☐
8. Were outcomes measured in a reliable way?	☐	☐	☐	☐
9. Was appropriate statistical analysis used?	☐	☐	☐	☐

Overall appraisal: Include ☐ Exclude ☐ Seek further info. ☐

Comments (Including reason for exclusion)

Appendix 2: Data extraction instruments

QARI data extraction instrument

JBI QARI Data Extraction Form for Interpretive & Critical Research

Reviewer _____ Date _____

Author _____ Year _____

Journal _____ Record Number _____

Study Description

Methodology

Method

Phenomena of interest

Setting

Geographical

Cultural

Participants

Data analysis

Authors Conclusions

Comments

Complete Yes ☐ No ☐

Findings	Illustration from Publication (page number)	Evidence		
		Unequivocal	Credible	Unsupported

Extraction of findings complete Yes ☐ No ☐

MAStARI data extraction instrument

JBI Data Extraction Form for Experimental / Observational Studies

Reviewer _____ Date _____

Author _____ Year _____

Journal _____ Record Number _____

Study Method

RCT	☐	Quasi-RCT	☐	Longitudinal	☐
Retrospective	☐	Observational	☐	Other	☐

Participants

Setting

Population

Sample size

Group A _____ Group B _____

Interventions

Intervention A

Intervention B

Authors Conclusions:

Reviewers Conclusions:

Study results

Dichotomous data

Outcome	Intervention ( ) number / total number	Intervention ( ) number / total number

Continuous data

Outcome	Intervention ( ) number / total number	Intervention ( ) number / total number

Appendix 3: Detailed Search Strategy - PubMed

PubMed

Search appearance example:

(old male [tiab] **OR** older male*[tiab] **OR** aging male [tiab] **OR** aged male*[tiab])

AND

(rural [mh] **OR** remote [mh] **OR** rural and remote*[tiab] **OR** rurality [mh] **OR** country [mh] **OR** countryside*[tiab] **OR** support groups [mh] **OR** social groups [mh])

AND

(emotional health [mh] **OR** mental health [tiab] **OR** health*[tiab] **OR** health-care [tiab] **OR** mental health problems [tiab] **OR** depression [mh] **OR** anxiety [mh] **OR** support programmes [mh] **OR** models of care [mh])

AND

(barriers [tw] **OR** facilitators [tw] **OR** impediments [tw] **OR** hindrances [tw] **OR** expectations [tw] **OR** indicators [tw] **OR** obstacles [tw])

AND

(take-up [tw] **OR** help seeking [tiab] **OR** access [mh] **OR** accessibility [tiab] **OR** help-negation [tw] **OR** social-inclusion [mh] **OR** social isolation [mh] **OR** health-risk behaviours [tw] **OR** self-monitoring [mh])

Appendix 4: Included studies

QARI

Study	Methods	Participants	Intervention	Outcomes	Notes
[0], Corby D, 2011	Semi structured interviews	Adult males across the adult age spectrum with an average age of 69 and standard deviation for age of 9.31	Men in rural Australia accessing psychosocial support services	There are specific factors which impede participation in psychosocial support services	Identifies factors which impede or facilitate service use among adult rural men
[2], Gorman D, Buikstra E, Hegney D, Pearce S, Rogers-Clark C, Weir J, McCullah B, 2007	Face to face interviews	Men from Queensland 18 years and over	Experiences of adult rural males seeking out professional help for mental health issues	Utilising mental health services was both a conscious decision and a process about the perception of the helpfulness of a mental health intervention which utilised the concept of resilience	Focus on barriers to the access and take-up of professional support for mental health issues by rural men
[0], Pierce D, Brewer C, 2012	Focus group and individual interviews	Seventeen voluntary participants over the age of 18 80% of which were male who all resided in rural and remote Australia	Help-seeking responses by adult rural males in Australia	Barriers and enablers in relation to help-seeking behaviours for mental health issues were identified	Focuses upon the factors relating to the take-up of mental health services by adult rural males which can exist as barriers.

MAStARI

Study	Methods	Participants	Intervention A	Intervention B	Notes

[0], Findlay R, Sheen M, 2004	Survey	531 people, 63% male, interviewed in their home, 50% under 50 years of age	Utilisation of mental health services by people in rural and remote Australian communities surveyed on mental health use		Commonly identified barriers established
[0], Gunn KM, Kettler LJ, Skaczkowski GLA, Turnbull D, 2012	Survey	Farmers	Questionnaires which included measures of distress and coping		Specific rural factors affect the take-up of mental health services in farming communities in rural and remote Australia
[0], Judd F, Jackson H, Komiti, A; Murray, G; Fraser, C; Grieve, A; Rapson, G, 2006	Survey	Adults selected from electoral role by random selection living on farms or in small towns in Victoria and New South Wales, Australia	Measurement of attitudes		Attitudes act as barriers
[0], Sveticic J, Milner A, Diego De Leo, 2012	Data search of suicides	Indigenous and non-Indigenous Australian suicide cases obtained from the Queensland Suicide Register since 1990	Comparisons of prevalence of contacts with mental health services		Unique barriers outlined

Appendix 5: List of findings related to qualitative components with illustrations

Finding1	Felt sufficiently supported already.
Illustration	I can cope on my own.Pg9
Finding2	Quality of information available.
Illustration	I had to do something, so I researched it and found a most useful source, the internet, it was more useful than the Urologist, who was always pushed for time, he was a scarce resource.Pg6
Finding3	Predisposing characteristics.
Illustration	Other men noted that access to information and services was easier if you knew someone in the health system. Luckily, my daughter works in the hospital and she was able to access a lot of information for me.
Finding4	Enabling resources.
Illustration	Lots of our families travel long distances, and we can get travel reimbursements for them but it's not an adequate recompense for the travel that's involved in the care.Pg7
Finding5	Judgment of perceived need.
Illustration	No, I don't have to use support services, and I am not going to use them until I have to.Pg9
Finding6	Reliance on gatekeepers.
Illustration	There is a stigma attached but seeking help for medical problems was accepted, but not referral for psychological reasons, that sense of what is wrong with me, I have to speak to a social worker?Pg6
Finding7	Burden of travel.
Illustration	Access in rural areas is a problem and there is a lack of access to support services in the area.Pg8
Finding8	Inconvenience.
Illustration	Well I haven't sourced any emotional support services from people in my town of residence, it's always been on the telephone, oh you can handle going to major cities for services, it wasn't a major problem.Pg9
Finding9	Stoicism.
Illustration	Look lots of guys, once they get to know you, are the same as women, they do like to talk, but they've got to feel safe, they've got to feel you're not judging them, that they're weak because they get emotional.Pg7
Finding1	Positive thinking.
Illustration	Whenever I was in trouble I retreated to my photography.Pg4
Finding2	Appreciation and hope.
Illustration	Being thankful for the things around you.Pg6
Finding3	Self-awareness.
Illustration	I was in a deep depression and didn't realize it.Pg6
Finding4	Taking control.
Illustration	It is so strange, but when you can take control of your own life, you're actually helping other people as well, rather than the other way around.Pg6

Finding5	Seeking meaning in life and religion.
Illustration	The church has helped me out, yeah the church, just people that are Christians have helped me.Pg7
Finding6	Access to information.
Illustration	A turning point was when I read in a magazine the symptoms of men who've got really bad depression and I fitted the bill perfectly.Pg7
Finding7	Seeking help.
Illustration	The most difficult part was to overcome the initial uneasiness with making contact.Pg7
Finding8	Treatment.
Illustration	I started feeling better straight away because I talked to my wife a bit more.Pg8
Finding9	Treatment, talking about it, and support of family.
Illustration	I felt I started getting better straight away because I talked to my wife a bit more...there was always the support of my wife.Pg8
Finding10	Being needed and taking a break.
Illustration	I knew my parents needed me to keep going... I feel you can't live in the same environment all the time because the walls close in and you just need to get away and have a different outlook for a while.Pg9
Finding11	Life changes and change of focus.
Illustration	I started to move into a different church group, I got different friends, I got more support... that helps you because you get out and then you're talking to others and you come home and you just feel different.Pg10
Finding1	Supportive clinician attitudes and health service structures.
Illustration	It was as if they were working out of a textbook, and that practitioner just talked about her own problems, I might as well have been there talking to them. Pg4
Finding2	Mental health literacy.
Illustration	The push to education and de-stigmatize, particular for the men on the land. Ppg2
Finding3	Targeted mental health initiatives.
Illustration	By being available and staying in contact and using the strength of engagement and having the flexibility to do so I was able to gently engage with that man. Pg3
Finding4	Readily available information on services and access to services.
Illustration	I didn't realise at the time that the hotlines were out there, but I think that I would have definitely given that a try had I known. Pg3
Finding5	Continuity of care.
Illustration	A person in great distress finds it very difficult to continue to answer lots of questions.Pg4
Finding6	Point of delivery health care costs.
Illustration	Clinics that do not charge the patient directly were seen to greatly support help-seeking responses.