



THE UNIVERSITY OF QUEENSLAND
AUSTRALIA

**The Mental Health of
Aboriginal and Torres Strait Islander people in
custody**

Edward B Heffernan
BSc (Hons) MBBS MPH

*A thesis submitted for the degree of Doctor of Philosophy at
The University of Queensland in 2016
School of Public Health*

Abstract

Introduction and Aims: Aboriginal and Torres Strait Islander people (Indigenous Australian's) experience a health burden that is greater than that of non-Indigenous Australians and mental disorder is a significant contributor to this burden. There is a strong link between health inequality and social inequality for Indigenous Australians, including incarceration. Indigenous people are thirteen times more likely to be incarcerated than non-Indigenous Australians and those in custody suffer high rates of health problems including poor mental health. However, very little was known about the type and extent of mental disorder among Indigenous people in custody. This study aimed to estimate for the first time, the prevalence of mental disorder in a representative sample of Indigenous people in Queensland prisons and also identify any relevant mental health correlates.

Design and Methods: A survey of the mental health of adults who self-identified as Indigenous (Aboriginal, Torres Strait Islander or both Aboriginal and Torres Strait Islander) in six of the nine major correctional centres across the state of Queensland was undertaken between May and July 2008. The centres housed 75% of all Indigenous males and 90% of all Indigenous females in Queensland custody at the time. The cross-sectional assessment of mental health was done using a questionnaire and a standardised diagnostic interview for mental disorder, the composite international diagnostic instrument (CIDI). This thesis is based on clinical components of the questionnaire and diagnostic information obtained from the CIDI and clinical interviews.

The CIDI was used to determine the prevalence of anxiety, depressive and substance use disorders. Psychotic disorders were determined by screening, followed by psychiatrist's clinical interviews of those who screened positive, supplemented by a diagnostic panel with a cultural advisor. Components of the questionnaire included in this thesis were the demographic, health service use prior to custody, suicide thoughts and acts and self-assessed intoxication at the time of arrest. The method was culturally informed and appropriate for research involving Indigenous Australians. The sample included 25% of all Indigenous males (n=347,

aged 18 – 62 years) and 62% of all Indigenous females (n=72, aged 18 – 57 years) in Queensland custody at the time.

Results: The 12 month prevalence of mental disorder was 72.8% among men and 86.1% among women. This comprised anxiety disorders (males 20.2%, females 51.7%); depressive disorders (males 11.4%, females 29.2%); psychotic disorders (males 8.1%, females 25.0%) and substance use disorders (males 65.5%, females 69.2%).

Alcohol dependence was the most common type of substance use disorder (males 47%, females 55%), followed by cannabis dependence (males 20%, females 26%). Mental illness and lifetime suicide thoughts and attempts were significantly more likely among those with a substance use disorder. The majority of the sample reported intoxication with alcohol (70%) and/or other drugs (51%) at the time of their arrest. Most individuals (87%) had not accessed alcohol and drug services in the 12 months prior to custody.

Trauma experience was common and Post-Traumatic Stress Disorder (PTSD) was the most commonly diagnosed mental illness (males 12.1%, females 32.3%). Those with PTSD were more likely to experience other mental disorders, and have experienced suicide thoughts and attempts than those without PTSD. For those with PTSD the most prevalent trauma experience for both men and women was sexual assault either in childhood or early adolescence. Most individuals with PTSD had not accessed any mental health care (58.9%) prior to incarceration.

Conclusions: This study was the largest systematic survey of mental disorder among Indigenous Australians in custody. The prevalence of mental disorder in the study sample was very high compared to community estimates. It is likely these findings are generalisable to other Indigenous prisoner populations in Australia given the remarkable similarities in health profiles identified from national prisoner health surveys. There are significant mental health needs for Indigenous people in custody. The mental health needs of Indigenous people are intimately associated with their over representation in custody and poor outcomes in transition back to the community. Mental health care provided to Indigenous people must be culturally

informed, trauma informed, integrate drug and alcohol treatment, address social disadvantage and ensure continuity of care into the community. These findings identify opportunities to address the unmet mental health needs of Indigenous Australians in custody.

Declaration by author

This thesis is composed of my original work, and contains no material previously published or written by another person except where due reference has been made in the text. I have clearly stated the contribution by others to jointly-authored works that I have included in my thesis.

I have clearly stated the contribution of others to my thesis as a whole, including statistical assistance, survey design, data analysis, significant technical procedures, professional editorial advice, and any other original research work used or reported in my thesis. The content of my thesis is the result of work I have carried out since the commencement of my research higher degree candidature and does not include a substantial part of work that has been submitted to qualify for the award of any other degree or diploma in any university or other tertiary institution. I have clearly stated which parts of my thesis, if any, have been submitted to qualify for another award.

I acknowledge that an electronic copy of my thesis must be lodged with the University Library and, subject to the policy and procedures of The University of Queensland, the thesis be made available for research and study in accordance with the Copyright Act 1968 unless a period of embargo has been approved by the Dean of the Graduate School.

I acknowledge that copyright of all material contained in my thesis resides with the copyright holder(s) of that material. Where appropriate I have obtained copyright permission from the copyright holder to reproduce material in this thesis.

Publications during candidature

- ***Peer Reviewed Publications***

Heffernan E, Cowburn K, Kinner S. The Insidious Problem Inside: A systematic review of the mental health problems of Aboriginal and Torres Strait Islander People in custody. *Australas Psychiatry* 2009; 17: S41-6.

Heffernan E, Andersen K, Kinner S. Enhancing research quality through cultural competence: A case study in Queensland prisons. *Australas Psychiatry* 2015; 2: 654-7.

Heffernan E, Andersen K, Dev A, Kinner S. Mental illness is highly prevalent among Aboriginal and Torres Strait Islander people in Queensland Custody. *Med J Aust* 2012; 197: 37-41.

Heffernan E, Andersen K, Davidson F, Kinner S. Post-Traumatic Stress Disorder among Aboriginal and Torres Strait Islander people in custody in Australia: prevalence and correlates. *J Trauma Stress* 2015; 28: 523-30.

Ober C, Dingle K, Clavarion A, Najman JM, Alati R, **Heffernan E**. Validating a screening tool for mental health and substance use risk in an Indigenous prison population. *Drug Alcohol Rev* 2013; 32: 611-7.

Carroll M, Kinner SA, **Heffernan E**. Medication use and knowledge in a sample of Indigenous and non-Indigenous prisoners. *Aust NZJ Public Health* 2014; 38: 142-6.

Thomas EG, Spittal MJ, **Heffernan E**, Taxman FS, Alati R, Kinner S. Trajectories of psychological distress after release: implications for mental health service need in ex-prisoners. *Psychol Med* 2016; 46: 611-21.

Every-Palmer S, Brink J, Chern TP, Choi WK, Hern-Yee JG, Green B, **Heffernan E**, et al. Review of psychiatric services to mentally disordered offenders around the Pacific Rim. *Asia Pac Psychiatry* 2014; 6: 1-17.

Borschmann R, Thomas E, Moran P, Carroll M, **Heffernan E**, et al. Self-harm following release from prison: A prospective data linkage study. *Aust NZJ Psychiatry* 2016; in press.

Green B, Denton M, **Heffernan E**, et al. From Custody to Community: Outcomes of Community-Based Support for Mentally Ill Prisoners. *Psychiatr Psychol Law* 2016; 1-11.

- **Book Chapters**

Heffernan E, Andersen K, Whitton G. Prison populations. In: Lee K, Freeburn B, Ella S, et al., editors. Handbook for Aboriginal Alcohol and Drug Work. Sydney: University of Sydney, 2012: 385-397.

Heffernan E, Andersen K, Kinner S. Mental Health and the Criminal Justice System. In: Purdie N, Dudgeon P, Walker R, editors. Working Together: Aboriginal and Torres Strait Islander Mental Health and Wellbeing Principles and Practice. ACT: Australian Government, 2013: 165-178.

- **Technical Reports**

Heffernan E, Andersen K, Dev A. Inside Out – The mental health of Aboriginal and Torres Strait Islander people in custody research report. Brisbane: Queensland Government; 2009.

Heffernan E, Andersen K, Davidson F, Waterson E. The Family Business: Improving the understanding and treatment of Post-Traumatic Stress Disorder among incarcerated Aboriginal and Torres Strait Islander women. Brisbane: Beyondblue; 2015.

- **Conference Abstracts**

Heffernan E. Trauma and Post Traumatic Stress Disorder amongst Aboriginal and Torres Strait Islander people in custody. Abstract accepted for: GPS 2016: Goals, purposes and strategies for prisoner and staff mental wellbeing in custody; 2016; Freemantle, Western Australia

Heffernan E, Davidson F, Clugston B, Kinner S. Responses to the mentally ill in custody: a national report card. Symposium Abstract accepted for: GPS 2016: Goals, purposes and strategies for prisoner and staff mental wellbeing in custody; 2016; Freemantle, Western Australia

Heffernan E. The Mentally Ill in Custody: An Unnecessary Recruitment of Adversity. Invited plenary presented at: Improving Health and Social Outcomes for Prisoners and Young Offenders: Evidence and Outcomes; 2016; Brisbane, Queensland.

Heffernan E. Mental Health and the Criminal Justice System. Paper presented at: Queensland Aboriginal and Islander Alcohol and Other Drugs Conference; 2015; Brisbane, Queensland.

Heffernan E, Anderson K. Custody to Community: A Public Health Challenge. Paper presented at: Integrity and Integration in Healthcare Delivery. 24th Annual RBWH Symposium; 2015; Brisbane, Queensland.

Heffernan E, Anderson K. Custody to Community Symposium: The Mental Health of Aboriginal and Torres Strait Islander People in Custody. Paper presented at: Creating Futures Conference: Practice, Evidence and Creativity in Tropical and Remote Settings; 2015; Cairns, Queensland.

Heffernan E, Andersen K. The Mental Health of Aboriginal and Torres Strait Islander People in Custody. Invited speaker at: Queensland Corrective Services, Board of Management meeting; 2015; Brisbane, Queensland.

Heffernan E. The Mental Health of Aboriginal and Torres Strait Islander People in Custody. Paper presented at: Far North Queensland Medico-legal society meeting; 2015; Cairns, Queensland.

Heffernan E. The Mentally Ill in Custody: An Insidious Public Health Problem. Paper presented at: Royal Australian and New Zealand College of Psychiatrist Annual Congress; 2015; Brisbane, Queensland.

Heffernan E. PTSD among Indigenous Women in Custody. Paper presented at: Beyond Blue Research Symposium; 2014; Brisbane, Queensland.

Heffernan E, Anderson K. Trauma and PTSD among Incarcerated Indigenous Women: A Shared responsibility. Paper presented at: Vulnerability and Responsibility. 34th Australian and New Zealand Association of Psychiatry, Psychology and the Law Congress; 2014; Sydney, New South Wales.

Heffernan E. Madness and the Media. Paper presented at: Connectivity. 23rd Annual RBWH Symposium; 2014; Brisbane, Queensland.

Heffernan E, Andersen K. Post-Traumatic Stress Disorder among Indigenous Women in Custody. Paper presented at: QFMHS Forum; 2014; Brisbane, Queensland.

Heffernan E. Mental Health in Custody: A Public Health Concern. Paper presented at: Forensic Psychiatry – Exploring New Territory. Faculty of Forensic Psychiatry, RANZCP Bi-National Conference; 2013; Darwin, Northern Territory.

Heffernan E. Why the Mental Health of People in Custody is a Public Health Problem. Invited and funded plenary presented at: Justice Health in Australia; 2013; Melbourne, Victoria.

Heffernan E. The Mentally Ill in Custody: A Public Health Problem. Invited plenary presented at: Justice Health in Australia: Equity in Health Care. Public Health Association of Australia; 2012; Canberra, Australian Capital Territory.

Heffernan E. Out of Sight, Out of Mind: The Mentally Ill in Custody. Invited plenary presented at: Queensland Branch RANZCP Annual Conference; 2011; Kingscliff, New South Wales.

Heffernan E. Out of Sight, Out of Mind: The Mentally Ill in Custody. Invited plenary presented at: Queensland District Court Judges Conference; 2011; Marcoola, Queensland.

Heffernan E, Anderson K. When the Predictable is Unacceptable - The Incarceration and Mental Health of Indigenous Australians. Paper presented at: Prediction: The Holy Grail. 30th Australian and New Zealand Association of Psychiatry, Psychology and the Law Congress; 2010; Surfers Paradise, Queensland.

Heffernan E, Andersen K. Inside Out: The Mental Health of Indigenous People in Custody. Paper presented at: Back to Basics: A Common-sense Approach. Australian Winter School in the Sun; 2010; Brisbane, Queensland.

Heffernan E, Andersen K. Inside Out: The Mental Health of Indigenous People in Custody. Paper presented at: Creating Futures; 2010; Cairns, Queensland.

Heffernan E. Madness, the Media and Musical Chairs: The Mentally Ill in Prison. Paper presented at: Old Superstitions or New Science. RANZCP Section of Forensic Psychiatry Annual Conference; 2009; Melbourne, Victoria.

Heffernan E, Andersen K. Inside Out: The Mental Health of Indigenous People in Custody. Paper presented at: Justice Health in Australia: Beyond the Convict Era – Meeting Challenges for the 21st Century; 2009; Melbourne, Victoria.

Heffernan E. Prison Mental Health Services in Australia. Paper presented at: Justice Health in Australia: Beyond the Convict Era – Meeting Challenges for the 21st Century; 2009; Melbourne, Victoria.

Heffernan E. Psychotic Illness amongst Indigenous People in Custody. Paper presented at: Justice Health in Australia: Beyond the Convict Era – Meeting Challenges for the 21st Century; 2009; Melbourne, Victoria.

Heffernan E, Andersen K. The Mental Health Problems of Indigenous Australians in Custody. Paper presented at: Creating Futures, Research, Practice and Policy; 2009; Cairns, Queensland.

Peer Reviewed Publications included in this thesis

Heffernan E, Cowburn K, Kinner S. The Insidious Problem Inside: A systematic review of the mental health problems of Aboriginal and Torres Strait Islander People in custody. *Australas Psychiatry* 2009; 17: S41-6.

Incorporated into **Chapter 1: Literature Review**

Contributor	Statement of contribution
Author: Heffernan	Study Design (85%) Wrote the paper (80%)
Author: Cowburn	Study Design (5%) Edited the paper (10%)
Author: Kinner	Study Design (10%) Edited the paper (10%)

Heffernan E, Andersen K, Kinner S. Enhancing research quality through cultural competence: A case study in Queensland prisons. *Australas Psychiatry* 2015; 23: 654-7.

Incorporated into **Chapter 2: Methods**

Contributor	Statement of contribution
Author: Heffernan	Study Design (75%) Wrote the paper (85%)
Author: Andersen	Study Design (20%) Edited the paper (5%)
Author: Kinner	Study Design (5%) Edited the paper (10%)

Heffernan E, Andersen K, Dev A, Kinner S. Mental illness is highly prevalent among Aboriginal and Torres Strait Islander people in Queensland Custody. *Med J Aust* 2012; 197: 37-41.

Incorporated into **Chapter 3**

Contributor	Statement of contribution
Author: Heffernan	Study Design (80 %) Data Analysis (80%) Wrote the paper (80%)
Author: Andersen	Study Design (15%) Edited the paper (5%)
Author: Dev	Data Analysis (20%) Edited the paper (5%)
Author: Kinner	Study Design (5%) Edited the paper (10%)

Heffernan E, Andersen K, Davidson F, Kinner, S. Post-Traumatic Stress Disorder among Aboriginal and Torres Strait Islander people in custody in Australia: prevalence and correlates. *J Trauma Stress* 2015; 28: 523-30.

Incorporated into **Chapter 4**

Contributor	Statement of contribution
Author: Heffernan	Study Design (80%) Data Analysis (75%) Wrote the paper (80%)
Author: Andersen	Study Design (15%) Edited the paper (5%)
Author: Davidson	Data Analysis (25%) Edited the paper (5%)
Author: Kinner	Study Design (5%) Edited the paper (10%)

Contributions by others to the thesis

Nil contributions

Statement of parts of the thesis submitted to qualify for the award of another degree

None

Acknowledgements

The data upon which this thesis is based were drawn from a survey of Aboriginal and Torres Strait Islander people in custody. I would firstly like to acknowledge the Aboriginal and Torres Strait Islander people in custody and also the community members who willingly participated in this research and thank them for their contributions.

An integral part of the success of this research was the attention to ensuring that it was conducted in a culturally informed manner. The research would not have been methodologically, ethically and culturally sound in the absence of Indigenous leadership. Central to this was key contributions from Ms Kimina Andersen and Ms Coralie Ober, both senior Indigenous clinicians and academics. The research from which this thesis was drawn could not have been successful without their leadership, guidance and expertise in ensuring the cultural integrity of the project. In addition I would like to thank the Indigenous researchers and mental health workers involved in the research. They approached the tasks including the key role of conducting interviews, with enthusiasm, dedication and skill. There were also members of the expert reference group whose contributions to the research were invaluable, particularly Professors Ernest Hunter and Stuart Kinner and Dr Noritta Morseau-Diop.

I would also like to acknowledge the significant contribution Forensic Mental Health Service Staff made to ensure the research project was successful. This includes the important work of Sandra Garner, Abhilash Dev and Daniel Negweso in co-ordination of the research project logistics, data management and intellectual input. Drs Mark Schramm and Katrina Chiu also generously contributed to the research by assisting the process of determining psychotic diagnosis, their expertise and support were very much appreciated. In addition there was substantial management support from Associate Professor Brett Emmerson, Dr Michelle Denton and Dr Elissa Waterson and I thank them for their support. The Mental Health, Alcohol and other Drugs Branch of Queensland Health were strong supporters of this research and provided funding to support the project. Without this commitment to Indigenous mental health the research could not have occurred, I particularly acknowledge the support of Drs Aaron Groves and Bill Kingswell.

My advisors, Professors John McGrath and Harvey Whiteford have been a constant source of support and encouragement. They have provided me with invaluable academic and practical advice about the research process and the writing of my thesis. I have learnt a lot from their generous mentorship and thank them for this. The late Ms Coralie Ober was also a co-advisor who provided me with invaluable cultural supervision and advice (Ms Ober passed away in 2015). Ms Ober's tireless and selfless dedication to the cause of Indigenous mental health was a source of inspiration.

I would finally like to acknowledge my wife Theresa and my children Eddie, James and Louisa who have been a constant support and have been nothing but incredibly patient with the hours I have had to spend isolated from the family. This thesis would not have been possible without them.

Keywords

Aboriginal and Torres Strait Islander, Indigenous, mental disorder, prisoners

Australian and New Zealand Standard Research Classifications (ANZSRC)

ANZSRC code: 11714, Mental Health, 50%

ANZSRC code: 111701, Aboriginal and Torres Strait Islander Health, 50%

Fields of Research (FoR) Classification

FoR code: 1103, Clinical Sciences, 100%

Table of Contents

Introduction	23
Chapter 1 – Literature Review	27
1.1 The Indigenous Population	27
1.2 The Indigenous Health Gap	28
1.3 Indigenous Mental Health	29
1.4 Indigenous Incarceration.....	37
1.5 Mental Disorder among Indigenous Prisoners.....	40
1.6 A Systematic Review of the Mental Health of Aboriginal and Torres Strait Islander People in Custody	42
1.7 Literature Update: 2009–2016.....	53
1.8 Literature Review Summary	61
Chapter 2 – Methodology.....	62
2.1 Cultural Considerations.....	63
2.2 Study Design and Locations	63
2.3 Establishing the Research Team	64
2.4 Participants and Sampling	65
2.5 Ethics.....	66
2.6 Procedures and Measures	70
2.7 Data Management and Analysis	72
2.8 Enhancing research quality through cultural competence: A case study in Queensland prisons	73
Chapter 3 – Mental illness is highly prevalent among Aboriginal and Torres Strait Islander people in Queensland Custody.....	80
Chapter 4 – Post-Traumatic Stress Disorder among Aboriginal and Torres Strait Islander people in custody in Australia: prevalence and correlates	94
Chapter 5 – Substance use disorders among Aboriginal and Torres Strait Islander people in custody: A public health opportunity	112
Chapter 6 – Discussion.....	125
6.1 Overview.....	125
6.2 Specific contributions to the literature.....	126
6.3 Limitations.....	134
6.4 Dissemination and translational activities.....	135
6.5 Future research	137
6.6 Conclusions	138
Bibliography	141

List of Tables and Figures

Tables:

Table 1: Mental Disorders: Specific Cause of Burden Fatal vs non-Fatal	37
Table 2: Social and Substance Use by Gender and Indigenous status*	57

Figures:

Figure 1: Population pyramid of Indigenous and non-Indigenous peoples, 2011	27
Figure 2: Leading causes of burden of disease and injury in Queensland Aboriginal and Torres Strait Islander people (Fatal and Non-Fatal Burden)	36
Figure 3: Incarceration rates (Age Standardised) 2005 – 2015 Indigenous vs non-Indigenous Australians	38
Figure 4: Incarceration Rates (Age Standardised) 2015 by Jurisdiction: Indigenous and non-Indigenous Australians	39

List of Abbreviations used in this thesis

ABS	Australian Bureau of Statistics
ACT	Australian Capital Territory
AIHW	Australian Institute of Health and Welfare
ATSIHS	Aboriginal and Torres Strait Islander Health Survey
AUDIT	Alcohol Use Disorders Identification Test
Aust	Australia
CCHO	Community Controlled Health Organisations
CC's	Correctional Centres
CIDI	Composite International Diagnostic Interview
ICD 10	International Classification of Mental and Behavioural Disorders 10 th Edition
IHS	Inmate Health Surveys
IMHW	Indigenous Mental Health Worker
NATSISS	National Aboriginal and Torres Strait Islander Social Survey
NHMRC	National Health and Medical Research Council
NPHDC	National Prisoner Health Data Collection
NSMHW	National Survey of Mental Health and Well Being
NSW	New South Wales
NT	Northern Territory
QCS	Queensland Corrective Services
Qld	Queensland
RCIADIC	Royal Commission into Aboriginal Deaths in Custody
SA	South Australia
SEWB	Social and emotional well-being
SF 36	Short Form 36
Tas	Tasmania
Vic	Victoria
WA	Western Australia

Note on Terminology

Indigenous – It is recognised that Aboriginal and Torres Strait Islander people are a heterogeneous group of people with diverse cultural practices, lands, languages and kinships. However, the term Indigenous will be used in this thesis to refer to Australian Aboriginal and Torres Strait Islander people. The definition of Indigenous Australian is based on the Australian Bureau of Statistics (ABS) definition (1);

"An Aboriginal or Torres Strait Islander is a person of Aboriginal or Torres Strait Islander descent, who identifies as being of Aboriginal or Torres Strait Islander origin and who is accepted as such by the community with which the person associates".

Describing Mental Health and Social and Emotional Well Being

The terms Social and Emotional Well-Being, mental health, mental health problems and mental disorder are often used interchangeably and can be a source of confusion when discussing the mental health of Indigenous Australians. I will define below the definitions that will be used in this thesis.

- **Social and Emotional Well Being (SEWB)** – This is understood to be a multidimensional concept that encompasses domains of health and well-being including connection to land, culture, spirituality, ancestry, family and community (2). It is therefore a broader concept than the physical and mental health of the individual, but encompasses this.
- **Mental Health** – The World Health Organisation definition of mental health is used in this thesis (3) "Mental health is defined as a state of well-being in which every individual realises his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community."
- **Mental Health Problems** – This includes, but is not restricted to, stress, anxiety or alcohol or drug problems. Individuals with mental health problems may not necessarily meet criteria for a mental disorder. This definition is

consistent with that used in Australia's second National Survey of Mental Health and Well Being (NSMHWB) (4).

- **Mental Disorder** – In this thesis mental disorder is defined by the World Health Organisation International Classification of Mental and Behavioural Disorders (5), this is consistent with the approach taken in the Australian NSMHW (4).

Introduction

“Commissioners could trace the familiar pattern of State intervention into and control of Aboriginal lives. The files start from birth; perhaps recording a child adopted out, perhaps its birth merely noted as a costly additional burden; through childhood, perhaps forcibly removed from parents after having been categorised as having mixed racial origins and therefore being denied a loving upbringing by parents and family; through encounters at school, probably to be described as truant, intractable and unteachable; to juvenile courts, magistrates courts, possibly Supreme Court; through the dismissive entries in medical records ('drunk again'), and in the standard entries in the note books of police investigating death in a cell ('no suspicious circumstances').”

(The lives of those who died 1.2.12, National Report Volume 1) (6)

This quote from the report of the Royal Commission into Aboriginal deaths in custody, published in 1991, mirrors the pathway into the criminal justice system of many of the individuals I have had contact with over the past fifteen years working as a psychiatrist in prisons in Australia. Although the outcome has rarely been a death in custody, mental health problems in custody are frequent and mortality and morbidity in transition from prison back to the community are not uncommon (7, 8). The complex social, historical and cultural issues that are intimately associated with the mental health of Indigenous people in custody have been a challenge beyond the capacity of criminal justice and mental health services (9, 10). Enhancing the understanding of the mental health of Indigenous people in custody by describing the prevalence and types of mental disorder in this group is one important step in addressing this challenge. It will contribute to the evidence base to help better meet the mental health needs of this group.

This thesis is based on data from a research project focused on the mental health of Aboriginal and Torres Strait Islander people conducted in Queensland correctional centres in 2008. I was the principal investigator of this research project. Prior to undertaking the research I had become the inaugural Clinical Director of Queensland

Health's Prison Mental Health Service, a mental in-reach service for people in custody. One clear goal was to establish a model of mental health service delivery for all inmates across the state of Queensland. While there was a reasonable evidence base informing the likely prevalence of mental disorders and clinical needs of non-Indigenous prisoners, very little was known about the mental health needs of Indigenous prisoners. In discussions with a senior Indigenous mental health colleague, who concurred with this observation, a decision was made to undertake research to examine the mental health of Aboriginal and Torres Strait Islander people in custody. The research project was designed to align as closely as possible to a Social and Emotional Well Being (SEWB) perspective acknowledging Indigenous Australians view of mental health (11). As such the research project included demographic, social, cultural, custodial, health service, and clinical domains and used both a quantitative and qualitative methodology (12).

This thesis is based on the clinical findings drawn from the research project. The thesis includes peer reviewed publications which contribute to Chapters 1 and 2 of the thesis and form the basis of Chapters 3 and 4. Chapter 5 is based on an invited manuscript that has been submitted for publication.

The aims of the thesis were;

- 1- To describe the 12 month prevalence of mental disorder amongst a systematic sample of Aboriginal and Torres Strait Islander people in custody.
- 2- To examine, in this cohort, potential relevant clinical correlates of mental disorder such as suicide ideation and attempts, health service utilisation prior to custody, intoxication at the time of arrest and experiences of trauma.

This thesis will address these aims in a systematic way incorporating the manuscripts described above:

Chapter 1 - Literature Review

This chapter will provide a review of the relevant literature. This will include an overview of the health of Indigenous Australians relative to non-Indigenous Australians, an overview of what is known about Indigenous mental health and Indigenous incarceration. It will also include a systematic review of the mental health

of Aboriginal and Torres Strait Islander people in custody (**Paper 1**). In addition, as the systematic review was published in 2009 new material has become available and an update of the literature relevant to the mental health of Indigenous Australians in custody has also been conducted and presented in the thesis for the period 2009-2016.

Chapter 2 - Methodology

The method of the research project from which the data were drawn will be outlined. Central to this method was ensuring the research was undertaken in a culturally informed manner and was consistent with the guidelines and ethical standards associated with health research involving Indigenous people (13). One of the unique outcomes of this thesis was the successful implementation of a method that blended standard empirical research approaches with a culturally informed research design. A description of this approach will be incorporated into the method chapter and outlined in detail (**Paper 2**).

Chapter 3 – Mental illness is highly prevalent among Aboriginal and Torres Strait Islander people in Queensland Custody

This chapter is based on the manuscript of a peer reviewed publication. The chapter will outline the key findings of the thesis, the 12 month prevalence estimates of mental disorders amongst the sample (**Paper 3**). The conclusions of the chapter include highlighting two particular findings that warranted further consideration; the prevalence of Post-Traumatic Stress Disorder (PTSD) and Substance Use Disorders. These are addressed in chapters 5 and 6 respectively.

Chapter 4 – Post-Traumatic Stress Disorder among Aboriginal and Torres Strait Islander people in custody in Australia: prevalence and correlates

This chapter is based on the manuscript of a peer reviewed publication. The chapter will describe the demographic, trauma experience, and custodial experience and correlates of PTSD and examine the co-occurrence of PTSD with other mental disorders and suicide thoughts and behaviours (**Paper 4**). The chapter highlights just how pervasive trauma experiences are amongst this population and discusses the clinical implications of these findings.

Chapter 5 – Substance use disorders among Aboriginal and Torres Strait Islander people in custody: a public health opportunity

This chapter is based on a manuscript that has been submitted for publication. A table of contribution by the authors is included in the chapter title page. The chapter describes in detail the nature and type of substance use disorders identified amongst the sample, including relevant demographic, mental illness, suicide, service use and offence related correlates (**Paper 5**). The findings are significant in that they highlight a substantial unmet need in the treatment of substance use disorders and identify opportunities for health intervention.

Chapter 6 – Discussion

The thesis will conclude with a discussion of the key findings of the study, its strengths and limitations and its contribution to the field. The relevant policy, clinical and research implications of the study will be discussed.

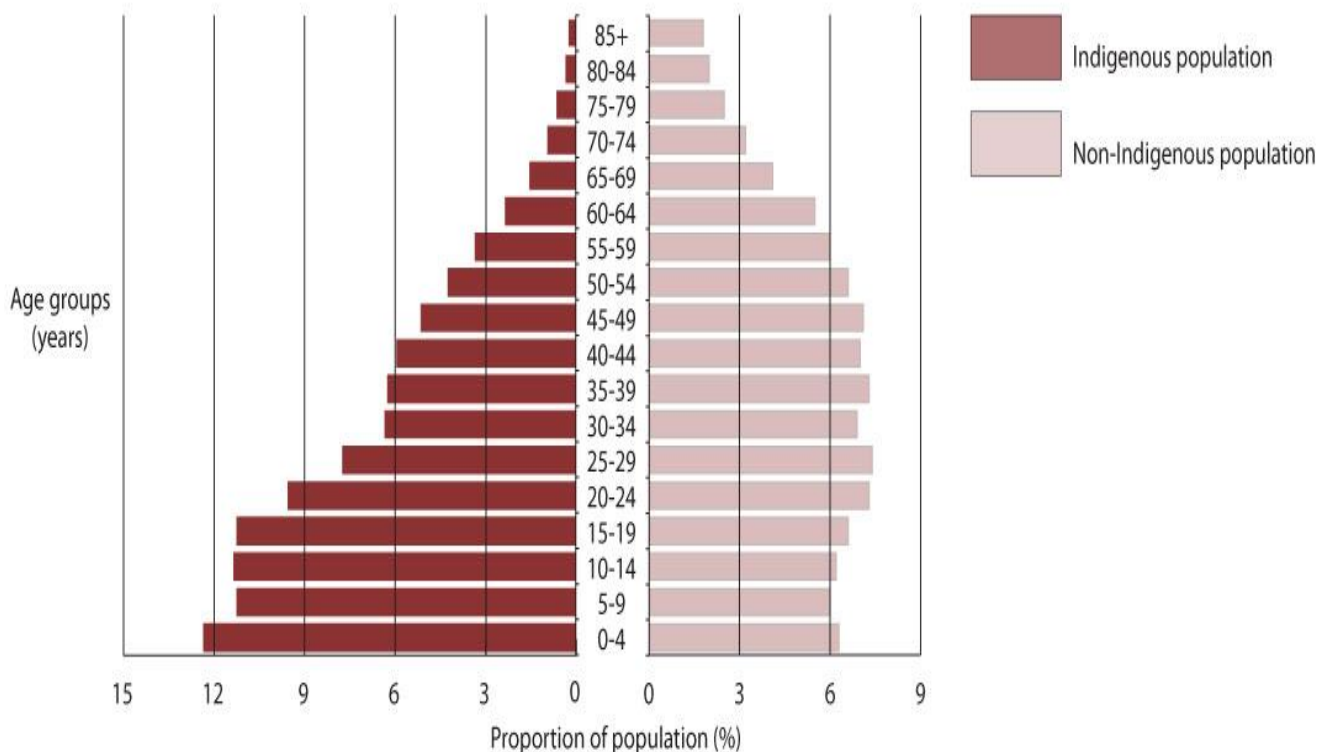
Chapter 1

Literature Review

1.1 The Indigenous Population

In 2011, the most recent Australian population census, it was estimated there were 548,370 people who identified as Aboriginal and/or Torres Strait Islander living in Australia (14). Based on this census it was estimated that in 2014 the Indigenous population grew to 713,600 and it was predicted that by 2026 there will be 925,000 Indigenous Australians, representing approximately 3.2% of the Australian population (15). The median age for Indigenous Australians in 2011 was 21 years compared to 37 years for non-Indigenous Australians and more than one in three (36%) of Australia's Indigenous people were under 15 years of age (Figure 1).

Figure 1: Population pyramid of Indigenous and non-Indigenous peoples, 2011



Source ABS, 2013 (16)

Australia's Indigenous population represent a diverse group of people with varied cultural practices and beliefs and with over 250 original languages (120 continue to be spoken). In the 2011 census 90% of Indigenous Australians identified as Aboriginal only, 6% identified as Torres Strait Islanders and 4% identified as both

Aboriginal and Torres Strait Islander. Over a third of Indigenous Australians were living in major cities (34.8%), with a further distribution across inner regional (22.0%), outer regional (21.8%), remote (7.7%) and very remote (13.7%) areas. Nearly two thirds of Indigenous Australians resided in the two Australian states, New South Wales (NSW) (31.4%) and Queensland (Qld) (28.4%), the next most populated state was Western Australia (WA) (12.7%).

Indigenous Australians have a shared history that is central to the understanding of contextualising the health inequalities, social disadvantage and high incarceration rates. This history has included the negative impacts on the social and emotional well-being visited upon Indigenous people through the colonisation of lands, the past policies and laws that have discriminated against them, the forced removal of children and the experiences of racism (6, 17-19). Health adversity of Indigenous people internationally has been strongly correlated to social determinants (20, 21). When ascribing cause to the health gap between Indigenous and non-Indigenous Australians Professor Michael Marmot wrote in the Medical Journal of Australia in 2011, “ the first is social disadvantage and the second (common to other Indigenous groups) is the particular relationship of Indigenous Australians to mainstream society” (22), p512.

1.2 The Indigenous Health Gap

In 2008 the then Prime Minister of Australia, Kevin Rudd, apologised to Aboriginal and Torres Strait Islander people for past injustices in the first act of the first sitting of the newly elected federal government (23). In doing so he specifically highlighted “profound grief, suffering and loss” experienced by Indigenous people and affirmed a commitment to close the gap between Indigenous and non-Indigenous Australians in life expectancy, educational achievement and economic opportunity. The closing the gap commitment, articulated in the Close the Gap Statement of Intent (24), had its origin in the Social Justice Report, 2005 (25). This report highlighted significant health inequality between Indigenous and non-Indigenous Australians in areas such as life expectancy, infant mortality, chronic and communicable disease, and mental health.

In 2012 the Council of Australian Governments agreed to six specific targets and time lines with respect to the Closing the Gap commitment (26);

- Close the gap in life expectancy within a generation (2031)
- Halve the gap in mortality rates for Indigenous children under 5 (2018)
- Ensure all Indigenous children aged 4 in remote communities have access to early childhood education (2013)
- Halve the gap in reading, writing and numeracy achievements for Indigenous students (2018)
- Halve the gap for Indigenous people aged 20-24 in Year 12 or equivalent attainment rates (2020)
- Halve the gap in employment outcomes between Indigenous and non-Indigenous Australians (2018).

The recent Close the Gap progress and priorities reports in 2014, 2015 and 2016 (27-29), noted modest improvements in progress such as life expectancy and maternal and child health and have now in addition highlighted incarceration, mental health and substance use disorders as priority areas of concern requiring dedicated attention.

1.3 Indigenous Mental Health

1.3.1 - An Overview

The 1995 Ways Forward report (11), was the first national Aboriginal and Torres Strait Islander Mental Health Policy and Plan and remains a landmark report for Indigenous mental health. The report built on the insights and recommendations that arose from a National Aboriginal Mental Health Conference in 1995. The report was based on a national consultancy that included Aboriginal Controlled Health Services, mental health and primary care services as well as Indigenous communities, consumers, health workers and carers. It was also based on a review of the existing Indigenous health reports and policy documents. Some of the key themes that emerged from the report included;

- The significant unmet mental health need amongst Aboriginal and Torres Strait Islander people.

- The importance of understanding Indigenous mental health in the context of the history of Indigenous people, including the impacts of colonisation, trauma, racism and social disadvantage.
- The importance of considering Indigenous mental health from the holistic perspective of health held by Indigenous peoples;

“Health does not just mean the physical well-being of the individual but refers to the social, emotional and cultural well-being of the whole community. This is a whole of life view and includes the cyclical concept of life-death-life” (11 p7).

Amongst the key recommendations made in this report was the need to provide mental health care that was culturally informed and reflective of the Indigenous views of health and mental health. Included in the recommendations were the requirement for a specific focus on areas particularly relevant to the Indigenous population such as trauma and grief, suicide prevention, alcohol and other drugs and forensic mental health including that “appropriate mental health services be made available to people in custody” (11 p8).

Although the Ways Forward report added significantly to the understanding of Indigenous mental health problems and challenges, it did not provide any information about the prevalence of mental disorder amongst Indigenous people.

Australia has had two major mental health epidemiological surveys that have estimated the prevalence of mental disorder in the general population; the first, the National Survey of Mental Health and Well Being (NSMHWB) was in 1997 (30) and the second, the Mental Health of Australia 2, was in 2007 (31). For the general Australian population the surveys provided a wealth of information about high prevalence disorders (anxiety, depressive and substance use disorders), service utilisation and the impact of these mental disorders on individuals function. They used well designed sampling strategies and well validated measures. A significant limitation, however, was that neither survey reported any data related to the mental health of Indigenous people. The reasons for this have been attributed to the incidental nature of recruitment of Indigenous Australians in the sample, the

assumption of low numbers in the sample and the challenge of potential bias associated with the identification of Indigenous status. It is also important to note that the surveys were limited to households and thus particular sub groups known to have a disproportionality high prevalence of mental disorder such as the homeless (32) and those in custody (33) were not included in the survey.

It remains the case that there has been no reported systematic survey of the mental health and well-being of Indigenous Australians either at a national or state and territory level. There are however several sources of data that have been used to inform the understanding of the mental health of the Indigenous community, these have included; general Indigenous population health surveys, surveys of mental disorder amongst particular sub groups of the Indigenous community and burden of disease studies including the use of administrative health data bases.

1.3.2 – General Health Surveys

There have been three national social surveys of Indigenous Australians, 1994, 2002 and 2008 (34-36), eight Health and Welfare reports, the most recent being 2015 (37) and two Health Surveys; the National Aboriginal and Torres Strait Islander Health Survey 2004-5 (n = 10,439) (NATSIHS) (38) and the Australian Aboriginal and Torres Strait Islander Health Survey 2012-13 (n = 12,900) (AATSIHS) (39). The surveys have varied in terms of sample size, the survey cohort, the age groups that have been included and the health and social domains that have been surveyed. In general they have focused on health from a chronic disease perspective, and on social domains such as demographics, education, employment, contact with the criminal justice system and Indigenous culture.

The strengths of these surveys have been the sample sizes and the focus on chronic disease. From a mental health perspective, however, the surveys have been limited. Mental health has been considered through the use of selected items from self-report mental health and wellbeing measures including the Short Form 36 (SF 36) (40), and 5 items from the Kessler psychological distress scale (41). While it is of note that the proportion of Indigenous Australians reporting high levels of psychological distress based on K5 measures increased from 27% in the 2004-5 to 30% in the 2012-13 health surveys, it has been difficult to contextualise the findings.

A summary of the various results from the different surveys over time would be beyond the scope of this thesis and probably not particularly informative to the subject matter, however there has been a systematic survey of all surveys that have included proxy measures of mental health published in 2012 (42). The review included all studies that reported measures of psychological distress including various versions of the Kessler scale, K5, K6, and K10 and Mental Health Inventory 15 and the Strengths and Difficulties Questionnaire. The reviewers compared available data for Indigenous Australians to comparable findings for non-Indigenous Australians and concluded that psychological distress was more prevalent amongst Indigenous Australians. For Indigenous adults the increased prevalence of high to very high psychological distress varied between 1.5 to 3 times higher when compared to non-Indigenous Australians. Importantly the reviewers noted that the role of mental ill health underlying these higher rates of psychological distress had not been adequately explored. They also noted the pressing need for consistent, systematic and culturally informed approaches to assessing mental health.

1.3.3 - Mental Disorder Surveys

There are no systematically surveyed representative samples estimating the prevalence of mental disorder for the general Indigenous community. There are however a number of studies that have estimated the prevalence of mental disorder among different sub groups in the Indigenous population. In a recently published thorough systematic review of the studies reporting these prevalence estimates (43) the authors concluded “there are large gaps in our knowledge of psychiatric morbidity among Indigenous Australians”. Below is a summary of the six relevant studies identified by the candidate that provide prevalence estimates of mental disorder.

A Queensland study in 2012 described the prevalence of clinician rated psychotic disorder amongst Aboriginal and Torres Strait Islander people aged 15 and over, who were open to the public mental health services in North Queensland (44). Using the number of open cases of individuals with psychotic disorder (males = 124, females = 47 [n = 171]) and the combined population of the communities within the catchment area (n = 10,217) a point prevalence for psychotic disorder of 1.68% (males 2.60%, females 0.89%) was identified. This point prevalence estimate was

substantially higher than the twelve month prevalence estimate for the general Australian community, 0.47% (45). The authors also addressed other health and social data, including the proportion of people who reported experiencing one or more adult incarcerations. Amongst individuals with a psychotic disorder this was 42.5% for males and 4.4% for females. The limitations of this study were that it relied on clinical judgement for diagnosis and public health service utilisation for case identification, and therefore may have suffered from measurement and selection bias. The findings however, are important, as despite the risk of bias the conclusions that this cohort has a higher prevalence of psychotic is convincing, particularly given the direction of bias was more likely to lead to an underestimate than an over estimate.

A second study published in 2012 also identified a high prevalence of mental disorder amongst an Indigenous population. This study, based in WA, used the Composite International Diagnostic Interview (CIDI) to assess for the prevalence of certain mental disorders amongst consenting individuals (104 males, 117 females) from three Aboriginal communities that were selected on the basis of self-reported exposure to trauma (97.3%) and accessibility (46). The survey reported lifetime prevalence estimates of Post-Traumatic Stress Disorder (PTSD), 55.2%, Depression, 24.1%, anxiety disorders other than PTSD, 17.2%, Alcohol Dependence, 33.5%, and Abuse, 73.8%, and Cannabis Dependence, 5.9%, and Abuse, 23.5%. This study had significant limitations in that participant communities were selected on the basis of high levels of self-reported trauma exposure and the author did not provide details of the sampling frame or recruitment fraction. The study did, never the less, describe a sample of Indigenous Australians with a high prevalence of mental disorder and supported other literature that highlights the potentially significant impact of trauma on Indigenous communities (19).

Two studies have reported prevalence estimates for depression amongst particular samples of Indigenous communities. The first, the Kimberley Assessment of depression study focused on individuals aged 46 to 89 (mean aged 60.9) (n = 250 males, 107 females) from 6 remote communities in the Kimberley and also the town of Derby in WA (47). The study aimed to develop a culturally informed and valid scale to assess depression, the Kimberley Indigenous Cognitive Assessment of

Depression (KICA-dep). The tool was validated against clinician assessed ICD-10 and DSM-IV diagnosis of depression of 144 participants and used to estimate the point prevalence of depressive disorder amongst the entire sample (7.7%). The study while important for this cohort could not be generalised to the Indigenous population; diagnosis were based on clinician assessment, not a structured interview process and were limited to a small sample of individuals over the age of 45 from remote Indigenous communities. A second depression study was focused on Indigenous patients with diabetes from 48 indigenous community health centres across four Australian jurisdictions (NT, NSW, SA, Qld) (48). This study was also based on clinician recorded diagnosis of depression, from a clinical audit of patient records for the period 2005 to 2009 (n = 1592). The point prevalence of depression for this sample was estimated to be 8.8%. While this study had the strengths of a good sample size and was conducted in multiple jurisdictions, again generalisability to the Indigenous community was limited as the study focused on patients with diabetes and considered only depression.

The remaining two mental disorder surveys relate to substance use disorders only. A study in Cape York, Qld, based on an opportunistic sample of 133 people aged between 17-47 (74 males and 59 females) were interviewed (28% of the community population) about cannabis use and assessed for cannabis dependency using the Severity of Dependence scale (49). The study identified that 66.2% of males and 30.5% of females in the sample were current users of cannabis and point prevalence of cannabis dependence was 32.3%. This study was limited by potential sample bias and a small sample size. A second study of substance use disorders focused specifically on alcohol use among women with a birth recorded on the WA health data base between 1985-2006 (50). The prevalence of an alcohol use disorder based on ICD-9 or 10 criteria was substantially higher amongst the sample of Aboriginal mothers 23.1% (n = 2,583) compared to non-Aboriginal mothers 2.3% (n = 5,839).

Overall, the available literature on the prevalence of mental disorders amongst the Indigenous community is limited and piecemeal. It highlights a significant gap in the health data for this population. This gap is stark when compared to the general

Australian community for whom there is extremely comprehensive national data about the prevalence of mental disorders.

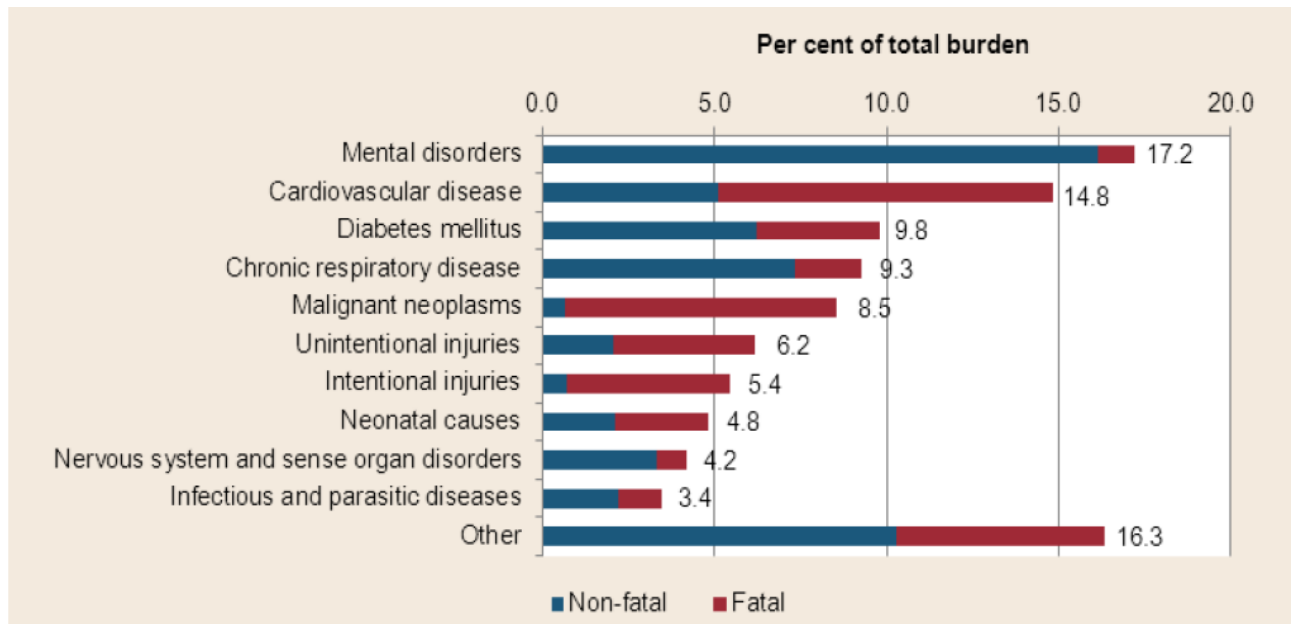
1.3.4 - Burden of Disease Studies

An estimate of the health burden of Indigenous Australians was published in 2003 (51). The total Indigenous health burden was estimated based on disability adjusted life years (DALYs). The study identified a significant health burden (95,976 DALYs) amongst the Indigenous community, representing opportunities for significant health gain, although the study was challenged by inaccurate and incomplete identification of Indigenous status.

Mental Disorders were estimated to have caused 15.5% of the total disease burden for Indigenous Australians in 2003. The major contributor to this was anxiety and depression (51%), alcohol misuse (19%) and schizophrenia (8%). The burden due to mental disorders occurred in Indigenous Australians at 1.6 times the rate for the total Australian population. In addition, a significant and concerning finding for young males (15-34 years) was that suicide was the major contributor (28%) to the total DALY for this age group and explained almost half of the health gap for young males. Overall the burden due to suicide occurred in Indigenous Australians at 3.2 times the rate for the total Australian population.

In 2014 Queensland Health published the first comprehensive description of the disease and injury burden affecting Aboriginal and Torres Strait Islander people in Queensland in 2007 (52). The authors highlighted the absence of survey data for mental illness and used psychological distress data from the 2004-5 NATSIHS (described above) for estimates of anxiety and depression and hospital data from health administrative data bases for other mental health conditions. The total burden of disease and injury was described in over 20 broad groups of causes. Mental Disorder was found to be the leading cause of disease burden and accounted for almost one-fifth of the total burden of disease and injury of Indigenous people in Queensland (Figure 2). Mental Disorder accounted for 14.1% (1,881 DALY's) of the male Indigenous burden and 20.4% (2,581 DALY's) of the female burden.

Figure 2: Leading causes of burden of disease and injury in Queensland Aboriginal and Torres Strait Islander people (Fatal and Non-Fatal Burden)



Source: (52 p8)

In 2007 rate of the burden of disease and injury in the Queensland Indigenous population was 2.1 times that of the non-Indigenous population, the highest differential occurred for diabetes (4.7) and the rate for mental disorders amongst Indigenous people was 1.5 times higher than for the non-Indigenous population. The most prevalent cause of disease burden amongst the Indigenous population was anxiety and depression; accounting for 15.1% of the female burden and 5.6% of the male burden. Suicide and self-inflicted injuries was also the sixth highest cause of burden (out of 188 specific causes) accounting for 4.6% of the male burden and 1.6% of the female burden. However the greatest contribution to the burden from mental disorders was the non-fatal burden (Table 2). These findings, although based on estimates from proxy measures of mental disorder, provide an important understanding of the mental health challenges faced by Indigenous Queenslanders and significantly can inform policy and health resource allocation.

Table 1: Mental Disorders: Specific Cause of Burden Fatal vs non-Fatal

Cause	% of non-fatal burden	% of fatal burden	% of total burden
All mental disorders	28.7	2.4	17.2
Anxiety and depression	18.2	0.0	10.2
Alcohol dependence and harmful use	2.0	1.7	1.9
Schizophrenia	2.9	0.0	1.6
Heroin or polydrug dependence and harmful use	1.3	0.6	1.0
Personality disorders	1.3	0.0	0.8
Other mental disorders	3.0	0.1	1.8

Source: (52 p21)

1.3.5 Summary: Mental Health of Indigenous Australians

All the available data supports the premise that Indigenous Australians suffer from higher levels of psychological distress and disease burden related to mental disorders relative to non-Indigenous Australians. One significant limitation, however, is the absence of any large scale comprehensive systematic survey of the prevalence of mental disorders for the general Indigenous community.

Having discussed the important background of what is known about the health gap and the mental health of the general Indigenous population, this literature review will now focus specifically on what is known about the incarceration and mental health of Indigenous people in custody.

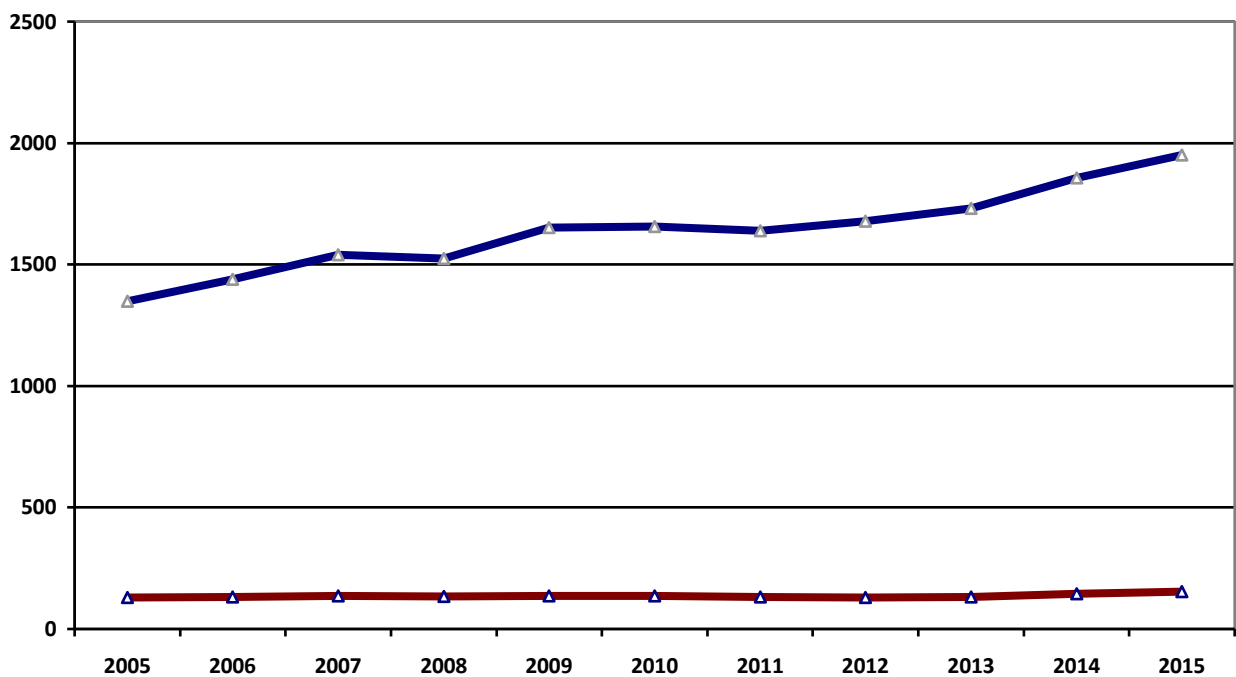
1.4 Indigenous Incarceration

On June 30 2015, the date of the last reported annual Australian prison census (53), there were 36,134 people in adult custody. At the time 27% (9,885) of the adult custodial population identified as Indigenous, despite Indigenous people representing only 2% of the Australian adult population (15). The over representation of Indigenous Australians in custody has been prominent in the Australian consciousness since the RCIADIC report was released in 1991 (6). At that time the rate of Indigenous incarceration was substantially elevated relative to the non-

Indigenous population leading the commissioners to conclude “*Too many Aboriginal people are in custody too often.*” 1.3.3 (6).

Since the commencement of the RCIADIC, over 25 years ago, the rate of incarceration of Indigenous people has continued to rise. This is clearly evident in the comparison of age standardised incarceration rates of Indigenous and non-Indigenous people over the last decade (Figure 3). Over this decade the ratio has increased from 10.3 (2005) to 12.8 (2015). Based on the 2015 Australian prison census the age standardised incarceration rates per 100,000 population were 1,951 for Indigenous people and 153 for non-Indigenous people.

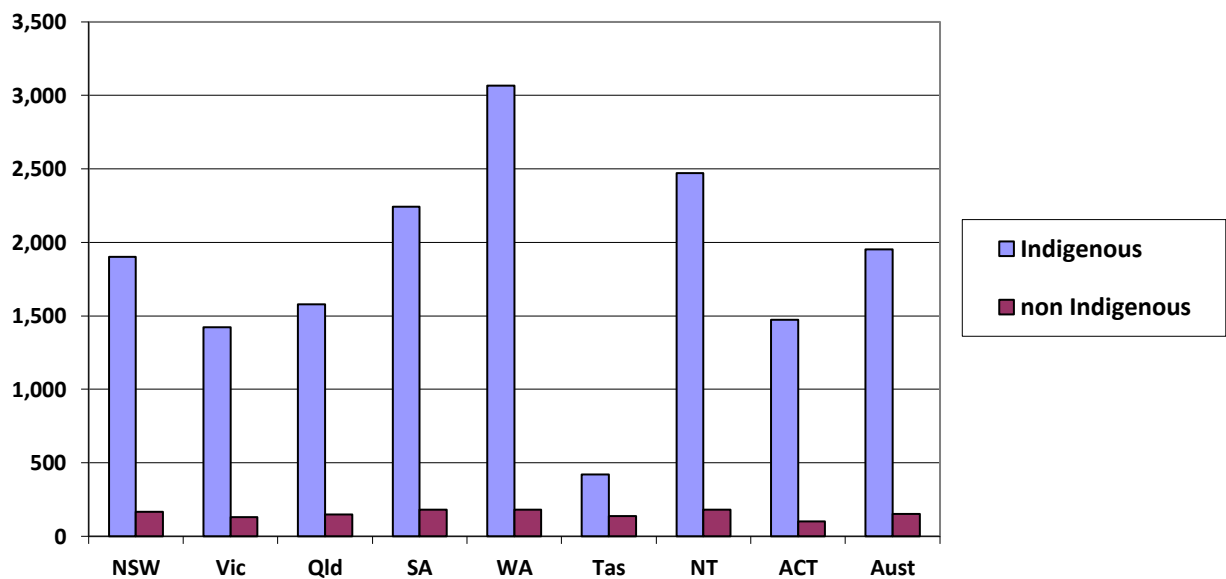
Figure 3: Incarceration rates (Age Standardised) 2005 – 2015 Indigenous vs non-Indigenous Australians



Source: ABS, 2015 (53)

These marked differences in incarceration rates are evident across all Australian jurisdictions (Figure 4), but particularly high in WA and the Northern Territory (NT).

Figure 4: Incarceration Rates (Age Standardised) 2015 by Jurisdiction: Indigenous and non-Indigenous Australians



Source: ABS, 2015 (53)

The number of prisoners in 2015 who identified as Indigenous increased by 7% from 9,265 in 30 June 2014 to 9,885 prisoners. Indigenous prisoners were also younger on average than non-Indigenous inmates (median age 31.3 years compared to 35.4 years). The proportion of prisoners who had been incarcerated previously was higher for Indigenous inmates (77% or 7,628 prisoners) than non-Indigenous prisoners (50% or 13,220 prisoners). Figures from 2014 also indicate a disproportionate incarceration of Indigenous youth (aged 10-17), they were 15 times more likely to be under youth justice supervision and were 26 times more likely than non-Indigenous youth to be incarcerated (54), representing over half of all those in detention (59%).

The questions regarding the vast over representation of Indigenous Australians in custody were thoroughly considered in the report of the RCIADIC and were well summarised in the quote below;

“the more fundamental causes for the over-representation of Aboriginal people in custody are not to be found in the criminal justice system but in those factors which bring Aboriginal people into conflict with the criminal justice system in the first place.

The view propounded by this report is that the most significant contributing factor is the disadvantaged and unequal position in which Aboriginal people find themselves in the society - socially, economically and culturally.” 1.7.1 (6)

The over representation of Indigenous people in custody is a complex problem. Just like health, social determinants are central to incarceration (20, 55, 56). This nexus between social adversity, poor health and incarceration of Indigenous people can at least in part be understood in terms of the impact of factors such as the colonisation of lands and the forced removal of children, discrimination, the recruitment of social adversity including unemployment, poverty, poor education, substance misuse and a lack of social capital (7, 57-61). This is evident in the prisoner population who, when compared with the general community, have higher levels of unemployment, unstable accommodation, lower levels of education, and poorer access to health services (62, 63). However, for Indigenous inmates who report more frequent contact with the criminal justice system (64), this is even more pronounced. When compared with their non-Indigenous counterparts, they report higher levels of unemployment and lower levels of education (7) and are more likely to have been placed in care as a child and to have experienced parental incarceration, with one in three reporting that they had a parent imprisoned when they were children (7).

Further, for Indigenous Australians being charged by police or imprisoned in the preceding five years is strongly correlated with abuse of alcohol or other drugs, failure to complete high school, unemployment, financial stress, crowded accommodation and being a member of the ‘stolen generation’ (60). Experiences of trauma, discrimination, domestic violence, mental health problems and mental illness, are also strongly associated with incarceration (64-66).

1.5 Mental Disorder among Indigenous Prisoners

It has been well established from surveys of prison populations both internationally (33) and in Australia (67) that the prevalence of mental disorder is markedly higher among incarcerated populations than the general community. From community surveys such as the Australian survey of mental health and wellbeing it has also been found that the presence of a mental disorder was far more common among those who reported a history of incarceration (41%) than those who reported no

history of incarceration (19%) (4). While the association between mental disorder and incarceration was well described for the general prisoner population, for Aboriginal and Torres Strait Islander people there appeared to be very little evidence on this topic. This was despite their over representation in custody, despite a Royal Commission into deaths in custody identifying mental health as a key issue of concern and despite recognition of the significant mental health burden suffered by Indigenous Australians.

Therefore a key step for this thesis was to identify the existing literature available on the topic of mental disorder amongst Indigenous Australians in custody. To address this a systematic review of the literature was conducted in 2009 at the commencement of this thesis. The manuscript of the published systematic review is provided (section 1.6).

1.6 A Systematic Review of the Mental Health of Aboriginal and Torres Strait Islander People in Custody

Heffernan E, Cowburn K, Kinner SA. The Insidious Problem Inside: A systematic review of the mental health problems of Aboriginal and Torres Strait Islander People in custody. *Australas Psychiatry* 2009; 17: S41-6.

(Hyperlink, Impact Factor, Citations, see **Appendix X**)

Objective

Despite recognition of the extremely high rates of mental illness among custodial populations and the fact that Indigenous people represent around one-quarter of Australia's custodial population, little is known about the mental health of Aboriginal and Torres Strait Islander people in custody. Mental health is an important component of social and emotional wellbeing for Indigenous people and this paper considers current evidence regarding the mental health status of Indigenous Australians in custody.

Method

A systematic review was undertaken of the quantitative literature relating to the mental health problems of Indigenous people in custody in Australia.

Results

Despite high incarceration rates for Indigenous people and evidence that both mental health problems and rates of mental illness are extremely high in this group, studies in this area are few and limited in scope.

Conclusion

The first step toward addressing the marked social and mental health problems for Indigenous people in custody is to systematically identify the nature and extent of these problems.

Key Words: Aboriginal and Torres Strait Islander, custody, Indigenous, mental illness, mental health, prison.

Introduction

The health inequalities of Aboriginal and Torres Strait Islander people compared with non-Indigenous Australians have been well described (1, 2). One of the major health and social issues faced by Indigenous people is high incarceration rates (3). The Royal Commission into Aboriginal Deaths in Custody found that "too many Aboriginal people are in custody too often" (s1.3.3)(4) and concluded that custody should be a sanction of last resort. Since this enquiry, nearly two decades ago, incarceration rates of Indigenous people have continued to rise. At the last published prison census, 30 June 2007 (5) Indigenous people represented around one-quarter (24%) of the entire custodial population and were 13 times more likely (age adjusted) to be incarcerated than non-Indigenous people.

Incarceration and its correlates, including experiences of trauma, discrimination, domestic violence, substance misuse, mental health problems and mental illness, impact significantly on the broader social and emotional wellbeing of Indigenous people and their communities (6). One of the leading contributors to poor social and emotional wellbeing and a major contributor to the Indigenous health gap (2) is mental health problems. The extent of these problems for Indigenous communities has been partly articulated through the major population surveys. High rates of psychological distress, life stresses, problematic drinking and contact with the criminal justice system have been identified among adults (7, 8). Even among children, rates of significant emotional and behavioural difficulties and serious suicidal ideation are unacceptably high (9). It is thus not surprising that mental illness, substance misuse and suicide are key national strategic priorities for Indigenous health (10).

The population surveys, however, do not include Indigenous people in custody, and it is reasonable to suspect that the process of incarceration may only compound the experiences of trauma, grief and loss that are associated with mental health problems (11). For the general custodial population the prevalence of mental illness is much higher than for the general community (12, 13). It is surprising that so few studies have focused on the prevalence of mental health problems among Indigenous people in custody, given that they are a high-risk group, represent

around one-quarter of the Australian custodial population and have been subject to a Royal Commission related to high custodial death rates (4).

The purpose of this paper is to systematically review the available literature regarding the prevalence and correlates of mental health problems and mental illness among Indigenous people in custody in Australia. A choice was made to limit the scope of this review to quantitative research, however it was acknowledged that this approach would only partly contribute to an understanding of the broader construct of social and emotional wellbeing (6) and would not incorporate the important contribution of qualitative research (15).

Search Strategy

A systematic search of the literature to identify papers focusing on quantitative studies describing the mental health of Indigenous people in custody was undertaken. Given the preponderance of 'grey literature' in the area of prisoner health, emphasis was placed on searching both published and unpublished ('grey') literature from 1980 onwards.

Electronic databases were the primary source of literature. Systematic searches were performed using the following databases: Medline, CINAHL, PubMed, and PsycInfo. Google and Google Scholar search engines were also used to identify additional published and unpublished literature.

We also searched Indigenous-specific sources including the Indigenous Justice clearing house (www.indigenousjustice.gov.au) and the Indigenous Health Infonet (www.healthinfonet.ecu.edu.au) and a website focusing on research relevant to custodial matters, the Bureau of Crime Statistics and Research (www.bocsar.nsw.gov.au).

Search terms were Indigenous, Aboriginal, mental health, mental illness, social and emotional wellbeing, custody and prison.

A total of 219 articles were identified and potentially relevant abstracts were reviewed. Initial screening excluded 208 articles predominantly because they did not

relate to Aboriginal or Torres Strait Islander people in custody or have a significant focus on mental health. This left 11 articles for further review; three of these were population surveys and did not include people in custody. The remaining eight studies specifically addressed Indigenous people in custody. The references of these articles were also reviewed to ensure that no potentially relevant quantitative studies were missed; no additional relevant publications were identified. In total, the systematic search identified eight published studies relevant to the mental health of Indigenous people in custody (Table 1).

Evidence on the Topic:

Custody: mental illness and trauma

At least seven Australian studies have reported the prevalence of mental illness among samples of people in custody (16-22). The quality of these studies varies significantly, and only those that disaggregate findings on the basis of Indigenous status will be considered here. The largest and the most systematic of these, undertaken by Butler and colleagues in New South Wales (20), found that in a population of 1214 men and 273 women 43% had a diagnosis of at least one major mental disorder in the preceding 12 months. The 12-month prevalence of mood disorders was 19.9%, of anxiety disorders 36.2% and of psychosis 8.9%.

A later paper (23) based on the same survey, specifically reported on the mental health of the Indigenous people surveyed: 226 Aboriginal men and 51 Aboriginal women. Although this remains the largest health survey of prisoners in Australia, it is unclear how the Indigenous sample was obtained and how it compared to the population of Indigenous people in custody at the time. Furthermore, although the screening tools used in this survey had been widely used in other large population and prisoner surveys before, many of them had not been validated with an Indigenous population. It is also unclear whether the interviews were conducted by Indigenous people, to be consistent with culturally appropriate research and reduce the risk of measurement error related to cultural bias of the research instruments. Although important, these limitations are not unique to this study. Conducting research in a culturally appropriate manner (24) is a limitation common to many quantitative studies in a custodial environment.

Table 1: Quantitative studies of mental health problems of Indigenous people in custody

Author, year and location	Indigenous Sample	Method of mental health assessment	Relevant outcomes
Butler et al. (2001) (20) NSW	226 males 51 females	CIDI-auto	Prevalence of mental illnesses
Hockings et al. (2002) (22) QLD	53 females	SF-36, BDI and AUDIT	Mental health history, Substance use, depression
Lawrie (2003) (26) NSW	50 females	Socio-demographic, mental Health, trauma and substance use survey	Self reported experiences of mental health, substance use and trauma
Stathis (2007) (27) QLD	212 male and female youths	MAYSI 2	Substance use, depression and Anxiety risk
Day (2008) (28) SA	46 males	STAXI-2 TSI, TAS, RaLES, GES	Trauma, discrimination, anger
Weatherburn et al (2006) (29) NSW	9359 males and Females (NATSISS)	Associations between Socio-demographic and substance use variables with being 'charged' or imprisoned	Economic and social factors associated with criminal justice system contact
Putt et al. (2005) (30)	534 males (DUCO) and 702 males (DUMA)	Socio-demographic, offending and drug use characteristics	Substance abuse and offending
Hobbs et al. (2006) (31) WA	4934 males and females	Database linkage; hospital admissions, contacts with mental health services, death registers	Standardized mortality and morbidity ratios

Despite the potential limitations, the findings of this study indicate a remarkably high prevalence of mental illness and psychological distress among Indigenous people in custody, particularly women. Diagnoses were made using the Composite International Diagnostic Interview (25). Twelve month prevalence rates of mood disorder were 13.1% for males and 43.1% for females; for anxiety disorders, 34.4% for males and 58.6% for females. The most common anxiety disorder was posttraumatic stress disorder, which was identified in almost 20% of males and 50% of females. A further 6.6% of males and 20.3% of females screened positive for psychosis. Nearly 50% of males and over 85% of Indigenous females reported medium or high levels of psychological distress.

Another important study was the first systematic survey of female prisoners' health status in Queensland conducted in 2002 by Queensland Corrective Services (22). This was a survey of 212 female prisoners across the three female correctional centres in the state; 25% of the study sample was identified as Indigenous. Among other health measures the survey considered substance use, mental health, suicide and abuse history. The survey also included three standardized tools: the Alcohol Use Disorders Identification Test (AUDIT), the SF-36 Health Survey and the Beck Depression Inventory (BDI).

Based on AUDIT scores, the proportion of Indigenous women who were harmful drinkers (53.8%) was four times that of non-Indigenous women (13.2%). While the data reflecting self-reported illicit drug use were not stratified by Indigenous status, overall nearly two-thirds of the sample (62.7%) reported regular use of an illicit drug in the 12 months before incarceration. In terms of seeking treatment for substance use problems, Indigenous women were less likely than non-Indigenous women to have sought help for a drug or alcohol problem.

Two-thirds of the sample reported prior assessment or treatment for an emotional or mental problem; 31.6% of the sample obtained BDI scores consistent with moderate or severe depression. Half of the sample reported having thought about committing suicide; Indigenous women were more likely than non-Indigenous women to have had suicide thoughts and to have engaged in self harm. Over one-third of the sample (38%) reported being physically or emotionally abused by someone caring for them

before the age of 16 and a similar proportion (37%) reported experiencing sexual abuse before the age of 16. Of the 51 Indigenous women surveyed, 29% reported having been removed from their family as a child.

A 2003 New South Wales study of Indigenous females (26), prompted by the high rate of incarceration among Indigenous women, used a combination of quantitative and qualitative methods. Selected results of the quantitative survey conducted by five female Aboriginal researchers will be reported here. At the time of the survey there were 104 Indigenous females in custody and 50 (48%) of these were surveyed. A total of 16% reported that they had been diagnosed with a mental illness; half reported that this was schizophrenia. Most of the women reported regular drug use and 68% reported drug use at the time of their offending. Nearly three-quarters of the women reported that they had been victims of child abuse, mostly sexual abuse, and 78% reported being victims of violence as an adult. Just over half the women (52%) reported that they had come from a family affected by the 'stolen generation'.

Mental health problems and psychological distress were also prominent in a sample of Indigenous young people (aged 10-17 years) surveyed in a youth detention centre in Queensland in 2006. Over a 6-month period 96 of the 212 Indigenous people referred were screened with the MAYSI 2, a 52-item mental health screening tool developed for youth in the criminal justice system in the United States (27). Over 80% of the Indigenous youth that were screened scored above the cut off for a mental health problem (59% drug and alcohol, 29% anger problems, 25% depressions/anxiety, 30% somatic complaints, 15% suicide ideation and 25% thought disturbance). The study also found that nearly 20% of Indigenous males and 55% of Indigenous females reported significant exposure to traumatic experiences.

This study used a screening tool developed for and normed against an American youth population. It is likely that differences in culture, language and schooling will impact on the validity of the results and measurement bias is therefore a risk. Furthermore, the findings were not stratified by sex and in the absence of comparative data for those not screened (n = 116), it is impossible to assess the representativeness of the findings. Despite these methodological weaknesses, the findings of this study are broadly congruent with those of the Western Australian

Aboriginal Child Health Survey (WAACHS) and make a significant contribution to the understanding of mental health problems of incarcerated Indigenous youth.

A fourth, small custodial study conducted in South Australia attempted to identify differences between Indigenous and non-Indigenous male inmates on a variety of measures related to trauma, experiences of discrimination and anger (28). The sample included 46 self-identified Indigenous males and 49 European Australasian males (40% sample of the regional prison). The Indigenous prisoners were found to have higher levels of anger problems, more frequent experiences of separation and loss of loved ones, and higher levels of trauma-related symptoms. Given the small sample size and recruitment from only one prison, these findings are difficult to generalize; however, the observed effect sizes were large and consistent with other studies, highlighting trauma and loss as prominent experiences among Indigenous people in custody.

Offending: social factors and substance abuse

At least two studies have attempted to explore the role of social factors and substance abuse in the offending behaviour of Indigenous people in custody. Using data from the 2002 National Aboriginal and Torres Strait Islander Social Survey (NATSISS), Weatherburn and colleagues examined the relationship between social and economic variables and being 'charged' or imprisoned in the preceding 5 years. The authors found that abuse of alcohol or other drugs, failure to complete year 12, unemployment, financial stress, crowded accommodation and being a member of the 'stolen generation' were significantly associated with being charged or imprisoned. These findings had robust effect sizes, however were challenged by all the factors associated with a population survey (cross-sectional design, differing time measures for variables, measurement and recall bias).

The specific relationship between substance misuse and offending in Indigenous males was considered in more detail in a study by Putt and colleagues (30). The data for that study were drawn from two different sources: the Drug Use Careers of Offenders (DUCO) project (2135 adult male prisoners) and the Drug Use Monitoring in Australian police detention (DUMA) study (5797 adult detainees including 702 Indigenous). The two sources differ in the nature of offender characteristics as the

former are imprisoned and the latter are detained by police; however the authors took this into account in their analysis of the data. The Indigenous participants were more likely to report alcohol and cannabis dependence and to associate substance use with their offending, compared with the non-Indigenous group. The Indigenous men were younger, had more frequent and earlier contact with the criminal justice system, had lower levels of education and were more likely to be unemployed.

Mortality and morbidity after release

In most Australian jurisdictions ethical and legal constraints have limited the capacity of researchers to use database linkage to explore health and social questions. The important development of the Western Australian Data Linkage System allowed Hobbs and colleagues to link health data with Department of Justice data and enabled the researchers to examine the progress of a large cohort (13 667) released from custody in WA between 1995 and 2001 (31). There was a minimum 2-year follow up and an average follow up of over 4.5 years. The majority of the cohort were male (88.3%) and 36.1% were Indigenous. After appropriate adjustment for age the study demonstrated that released prisoners as a group have significantly higher mortality and morbidity than the general community.

The mortality rates per 1000 person-years were 4.5 for Indigenous females and 7.9 for Indigenous males. Compared with the general population, Indigenous females leaving custody were three times more likely to die (rate ratio of 3.1) and Indigenous males nearly twice as likely to die (rate ratio of 1.8). The risk of death was greatest soon after release.

In terms of morbidity, released prisoners had much higher hospital admission rates, including mental health service contact, than the general community. Rates of admission were greatest for injury, poisoning and mental disorders. Indigenous prisoners were between three and four times more likely than the general community and twice as likely as the Indigenous community to be admitted to hospital. Prisoners who had hospital admissions or mental health service contacts in the 5 years before release were nearly twice as likely to have such contacts after release.

Summary and Conclusions

The strong suggestion from the available literature is that Indigenous people in custody have high rates of complex mental health problems. The literature also suggests that they face high rates of social adversity, substance misuse, trauma and health problems both prior to and after leaving custody. One of the concerning and consistent findings is the extent of these problems among Indigenous women. Indigenous youth in custody also emerge as a particularly vulnerable group. The data suggest that Indigenous people in custody are likely to have high mental health treatment needs while incarcerated and that the transition back to the community is a particularly vulnerable period.

This review has highlighted the marked shortfall in both the quantity and quality of research regarding the mental health of Indigenous people in custody. The current data are piecemeal and there is very limited information about the nature, types and treatment of mental health problems for Indigenous people in custody.

There is a clear need for further research, and for future studies to incorporate a focus on social and emotional wellbeing and use a culturally informed method. It is likely that a mix of qualitative and quantitative research approaches would be optimal. The lack of culturally validated mental health research tools is problematic but the recent development of the Indigenous Risk Impact Screen (32) suggests that this is not an insurmountable problem. In the short term, further cross-sectional and longitudinal studies are critically needed; in the longer term, standardized screening for all people entering custody is both achievable and important. To this end, there is progress toward a national minimum data set for people entering custody, with a nationally consistent approach to measuring Indigenous status (33).

While the available information paints a bleak picture about Indigenous people in custody, it helps to identify some of the major problems that are potentially amenable to improvement and defines a way forward.

References – See Appendix I

1.7 Literature Update: 2009–2016

Given the systematic review (Paper 1) was concluded in 2009, an update of subsequent literature relevant to the topic of the mental health of Indigenous people in custody is provided below.

The first approach to systematically collecting data about the health of incarcerated Australians commenced in 2009 with the first National Prisoner Health Data Collection (NPHDC) (68). The stated intent of this process was to provide a series of regular (initially annual, then biannual) reports of national prisoner health based on agreed health indicators published by the Australian Institute of Health and Welfare (AIHW). The initial report had 2 components; a survey of prison entrants (n=549) from the 27,000 prisoners in custody at the time and an audit of health records (n=3,700). Below are some selected results that are relevant to this thesis.

The survey conducted in 2009, included 141 Indigenous inmates in the prison entrant's sample. In terms of mental health variables Indigenous people when compared to non-Indigenous people reported lower levels of;

- Mental health disorder (self-report) (26% vs 41%)
- Taking medication for a mental health problem (9% vs 10%)
- High or very high psychological distress measured by K10 (26% vs 31%)
- Self-harm thoughts in 12 months (9% vs 10%).

The history of lifetime self-harm was the same for both groups (18% vs 18%).

In terms of health risk behaviours Indigenous people when compared to non-Indigenous people reported higher levels of;

- At risk alcohol consumption in the last 12 months (65% vs 47%)
- Illicit drug use in the last 12 months (72% vs 71%)
- Injected drug use (lifetime) (61% vs 53%).

The 2010 prisoner health survey (69) reported similar findings to the 2009 survey. Indigenous Australians were oversampled, representing 43% of the total survey sample (n = 610). The 2010 survey was limited to six jurisdiction; NSW and Vic did

not participate. Given the similarities to the 2009 survey the findings will not be presented here.

The 2012 prisoner health survey (70) included; a survey of prison entrants (n = 794), an audit of health records (n = 4000) and an audit of medication files (n = 9000). The only jurisdiction that did not contribute was WA. The survey also included data from prison dischargee's (those expected to be released within 4 weeks). The mental health findings were also very similar with the 2009 and 2010 surveys. Indigenous prisoners when compared to non-Indigenous prisoners reported lower levels of; "high" or "very high" psychological distress (22% vs 38%), previous diagnosis of a mental health problem (29% vs 43%), taking mental health related medication (13% vs 26%) and self-harm thoughts for both males (5% vs 16%) and females (17% vs 32%). At the time of discharge two thirds (66%) of Indigenous inmates reported their mental health was either "a lot better" (43%) or "a little better" (23%) since entry into prison.

The most recent NPHDC survey was in 2015 and was the most comprehensive prisoner health survey thus far including data from 1,011 prison entrants, 437 prison discharges, 9,500 prison health records and all jurisdictions participated (although NSW provided only entrants data only) (71). Again there were striking similarities to previous surveys, some selected results are highlighted below.

Indigenous prisoners entrants when compared to non-Indigenous prisoner entrants reported lower levels of;

- "High" or "very high" psychological distress (20% vs 34%).
- A previous diagnosis of a mental health problem (44% vs 51%)
- Taking mental health medication (25% vs 27%)
- Self-Harm thoughts (12 months) (11% vs 14%).

Indigenous prisoners entrants when compared to non-Indigenous prisoners reported higher levels of;

- High risk alcohol use (12 months) (54% vs 33%)
- Ever injected drugs (lifetime) (46% vs 44%).

At the time of discharge nearly 4 out of 5 (78%) of Indigenous inmates reported their mental health was either “good” or “better” at the time of release. In terms of health service utilisation, 92% of Indigenous inmates had a health assessment at the time of entry into prison and 58% visited a health clinic during the two week survey period. Mental health medication was prescribed to less Indigenous inmates while in prison (18%) compared to non-Indigenous inmates (24%).

While the NPHDC series is laudable and has been extremely valuable in providing comparative data and data trends for many health conditions amongst prison entrants, the mental health data has been limited. In addition the jurisdictional participation has varied and there has been difficulty in determining the generalisability of the Indigenous sample.

The finding that Indigenous inmates report less mental health concerns than non-Indigenous inmates is also difficult to reconcile with community and other prison health surveys. One explanation is that two of the key proxy measures for mental illness, previous diagnosis and currently taking medication, rely on equivalent access to mental health care in the community to support comparisons. Indigenous Australians experience significant barriers to accessing mental health care (72) and thus the use of access to mental health care and prescribed medication as a proxy measure for mental illness may introduce measurement bias, and under represent the proportion of Indigenous prison inmates with mental illness. In addition the survey design and method has been criticised by the National Congress of Australia’s First Peoples in terms of accurately representing the mental health problems for Indigenous people, “the census itself is not designed specifically to target Aboriginal and Torres Strait Islander prisoners; nor is there evidence of specific strategies to ensure culturally appropriate data collection from Aboriginal and Torres Strait Islander prisoners” (73 p4), “the way in which data is gathered can have a significant impact on the nature and quality of what is ultimately reported” (73 p5).

Another series of prisoner health surveys that are relevant to this thesis were the Inmate Health Surveys (IHS) conducted in NSW in 1996, 2001 and 2009 (74). The results from the 2001 IHS have been previously outlined in this literature review. The 2009 survey was a stratified random sample from 30 adult correctional centres (26

male and 4 female). Indigenous inmates were over sampled; of the 996 participants there were 312 Indigenous participants (males 259, females 53) (31%). This sample was the subject of a specific report, the 2009 Inmate Health Survey: Aboriginal Health Report (7). This report made a significant contribution to the understanding of the social and mental health needs of Indigenous inmates. The survey found that while all inmates reported significant social disadvantage, Indigenous inmates were particularly disadvantaged in social areas that have been associated with health (20, 21) and measures of substance misuse (Table 2).

Mental health status was assessed by self-reported access to treatment by a doctor or psychiatrist for an emotional or mental problem (males 44.5%, females 52%), admission to a psychiatric hospital (males 14.5%, females 22%) and use of psychiatric medication (males 17%, females 31%) and access to counselling or a psychologist for a mental problem (males 29%, females 33%). In addition the Beck Depression Inventory was used for rating depression. The proportion of moderate or severe depression in males was 34% and females was 51%. Suicide thoughts were frequent (males 34%, females 39%) as were attempts (males 23%, females 37%).

While the authors noted the high prevalence of mental health problems amongst the Indigenous cohort, they also identified limitations, similar to those for the NPHDC data. These included that the mental health findings for Aboriginal people may have been biased by under reporting due to access and barriers to treatment in the community. Despite this the authors stated that, "Significant health gains in the social and emotional wellbeing of Aboriginal inmates are possible with a focus on interventions and services that are culturally competent, holistic and targeted to ensure they have the greatest benefit for Aboriginal people" (7 p47).

Table 2: Social Factors and Substance Use by Gender and Indigenous status*

	Male (%)		Female (%)	
	Non-Indigenous (n= 538)	Indigenous (n= 259)	Non-Indigenous (n=146)	Indigenous (n=53)
Education < Year 10	43	73	39	60
Unemployed (6mths pre-custody)	60	87	43	64
Placed in care as a child	22	46	27	45
Parent Incarcerated (during childhood)	10	36	12	31
Juvenile Detention	33	61	17	34
Previous Incarceration	56	81	41	59
Risky Drinking Behaviour (AUDIT Score 8+)	57	74	36	51
Ever Used illicit Drugs	84	88	74	88
Regular illicit drug use (previous year)	38	51	51	62

* Based on findings from the 2009 Inmate Health Survey: Aboriginal Health Report (7)

A study focusing on the post release experiences of prisoners also highlighted the social and substance use challenges faced by Indigenous people (75). Baseline health and social measures were obtained from surveys of inmates across 7 Queensland correctional centres in 2008 (n = 1,115). Prisoners were followed up in the community across several time points. The study sample enabled comparison between Indigenous (n = 274) and non-Indigenous (n = 881) prisoners. Amongst the

sample a significantly higher proportion of Indigenous prisoners (all $p < 0.001$) reported less than 10 years education (57.3% vs 38.5%), removal from the family as a child (31.0% vs 15.2%), unemployment prior to custody (70.8% vs 46.1%) income below the poverty line (46.4% vs 27.1%) and previous incarcerations as a juvenile (48.5% vs 20.2%) and as an adult (82.1% vs 59.9%).

Similar to other prison surveys the self-reported diagnosis of lifetime mental illness was significantly lower amongst Indigenous prisoners (32.1% vs 46.4% $p < 0.001$). The Alcohol Use Disorders Identification Test (AUDIT) findings indicated that Indigenous prisoners were significantly more likely to report alcohol dependence than non-Indigenous prisoners (45.3% vs 22.4%, $p < 0.001$). Using multivariate analysis, and adjusting for variables that were significant, the authors identified income below the poverty line (AOR 1.85, 1.11-3.08) and daily cannabis use (2.30, 1.34-3.95) as significantly associated with alcohol dependence among Indigenous inmates. Although the AUDIT had not been validated in an Australian Indigenous population and data were collected by self-report, the sample size and ability to adjust prevalence estimates for sampling bias were strengths of the study. The findings were consistent with other key studies, emphasising the association between alcohol dependence and incarceration for Indigenous prisoners and the correlation with social disadvantage.

A WA survey of 146 maximum secure prisoners published in 2012 (76), included 22 Indigenous males and 21 Indigenous females. While the aim of the study was to evaluate a survey instrument, mental health questions were also incorporated into the survey. The findings were remarkably similar to previously cited studies, identifying that non-Indigenous inmates were significantly more likely than Indigenous inmates (OR = 2.32, $p < 0.05$) to report a history of treatment for “emotional or mental health problems”. Indigenous females cited depression ($n = 8$), anxiety ($n = 2$) and schizophrenia ($n = 2$) as the reasons for seeking treatment. Indigenous males cited depression ($n = 2$), anxiety or coping problems ($n = 1$), schizophrenia or PTSD ($n = 3$) and “bipolar, suicidal ideation/tendencies, anger and grief” ($n = 3$). While this study may have been appropriate for piloting a survey instrument, in terms of adding to the understanding of mental disorders amongst Indigenous inmates, like the majority of studies on this topic, the Indigenous sample

was incidental, small, and the survey used broadly defined self-report mental health measures.

There has only been one study published since the systematic review conducted for this thesis in 2009 that has focused specifically on the prevalence of mental disorder amongst a sample of Indigenous prisoners. This was the 2013 Koori Prisoner Mental Health and Cognitive Function Study (77) conducted in Victoria. This study was undertaken subsequent to the Queensland study (78) and the candidate was an invited consultant to the Victorian study and assisted in the development of the study design.

A total of 122 Indigenous inmates were surveyed (107 males, 15 females) to determine the prevalence of mental disorders using the Mini International Neuropsychiatric Interview. While the survey included multiple health domains, for the purpose of this literature review the focus will be on the mental disorder findings. The study found that 72% of males and 92% of females had a lifetime diagnosis of mental illness (anxiety, mood or psychotic disorder) and 76% of males and 93% of females had a lifetime diagnosis of a substance use disorder. The lifetime prevalence of mental disorder included; affective disorder (males, 53% and females, 74%), anxiety disorder (males, 48% and females, 57%) and psychotic disorder (males, 9.8% and females, 14.3%). Suicide thoughts were highly prevalent (lifetime, 67% and 12 month, 27%) and approximately half of the sample (51%) reported that they had attempted suicide. Current substance dependence was present among half the males, 50% and two thirds of the females 66.7% and alcohol dependence was the most common substance dependence (males 41.2%, females, 33.3%).

This study had a number of other important domains including cultural, social, health service use, intellectual functioning and qualitative data based on stakeholder interviews. This was an important survey as like the Queensland survey (12), the study from which this thesis is drawn, the Victorian study used culturally informed methods, considered multiple domains of mental health and used a mixed methods (quantitative and qualitative) approach to data collection. The study identified that the majority of participants suffered from some form of mental illness with major depression and PTSD being the most prevalent mental illness and alcohol

dependence being the most common mental disorder. The findings from this study support the importance of using an appropriate structured clinical diagnostic tool when determining prevalence estimates of mental disorder among Aboriginal and Torres Strait Islander people. This approach helps to minimise the risks, highlighted earlier, of underestimates associated with self-report and the use of other proxy measures to determine mental health prevalence. The main limitation to the study was the relatively small sample size. The study made 18 recommendations focusing on system level changes and clinical practice changes that were required to improve service delivery to the Indigenous prisoners in Victoria.

Another important study relevant to the mental health of Indigenous prisoners was published in late 2015. The Indigenous Australians with Mental Health Disorders and Cognitive Disability in the Criminal Justice System (IAMHDCD) (79) was conducted in NSW. This study used linked administrative data sets (criminal justice and human services) and purposive sampling to identify 2,731 individuals. From this sample there 676 Indigenous people (583 males and 93 females) who had contact with NSW prisons and had also been diagnosed with a mental disorder or intellectual disability. The cohort was drawn from the 2001 and 2009 NSW Inmate health surveys (discussed above) and the NSW Corrective Services State-wide Disability Service data set. One particular strength of the study was that the data sets contained lifelong administrative information, another strength was that the data sets included both Indigenous and non-Indigenous cohorts enabling comparison across a variety of variables. The project also included a qualitative study of Indigenous individuals with a mental health disorder or cognitive impairment (MHDCD), their families and community members.

The quantitative analysis focused on a comparison of Indigenous and non-Indigenous persons. The Indigenous cohort with MHDCD were significantly more likely to have had earlier and more frequent contact with the criminal justice system including police contact and custody. They were significantly more likely to have been placed in out of home care, to have higher rates of homelessness, and to have had a higher prevalence of “complex needs” (multiple diagnoses and disability). Indigenous women in the cohort experienced the highest rate of complex needs and also experienced significantly greater disadvantage relative to non-Indigenous

women in terms of rates of homeless, remands into custody, out of home care as a child and early contact with the criminal justice system.

The strength of this study was the ability to take a life course approach to the understanding of contact between Indigenous people with a MHDCD and contact with the criminal justice system. The study concluded Indigenous men and women with MHDCD experience “multiple, interlocking and compounding disadvantageous circumstances” (79 p10), that relate to early and frequent contact with the criminal justice system. The study used purposive sampling and was thus not designed to enable prevalence estimates of MHDCD. However, although limited to one Australian jurisdiction this study provided the most detailed understanding to date of the recruitment of adversity for Indigenous people with a MHDCD who have contact with the criminal justice system. The study also proposed a number of important principles and strategies to help address this challenge, these will be considered further in the discussion section of this thesis.

1.8 Literature Review Summary

Prior to the commencement of this thesis there was very limited information about the prevalence of mental disorder amongst Indigenous Australians in custody, **Paper 1**, a systematic review on this topic (p40), revealed the limitations in existing data at the commencement of the thesis. The use of routine and large scale health data surveys of the custodial population such as the National Prisoner Health Data Collection and the Inmate Health Surveys in NSW have been extremely valuable and important exercises in improving the understanding of prisoner health generally since that time. However, they have been limited in terms of reliable mental health data, particularly with respect to Indigenous people. The recently published 2013 Victorian Koori Prisoner Mental Health and Cognitive Function Study and the 2015 IAMHDCD study, both discussed above, both cited the work of this thesis and both have also highlighted the nexus between mental disorder, adversity and incarceration faced by Indigenous Australians.

Chapter 2

Methodology

This thesis is based on clinical findings of a survey conducted across six Queensland Correctional Centres (CC's) over a nine week period in May and July 2008. The research was funded by the Queensland Mental Health, Drug and Alcohol Branch (\$600,000). The candidate was the principal investigator.

The survey included 3 components;

- a) Clinical Diagnostic Interviews using the Composite International Diagnostic Instrument (CIDI) Version 2.1 (80) and where indicated psychiatrist assessments for psychotic disorder.
- b) A Questionnaire that included pre-custody, custody, cultural and post release domains (Appendix VI)
- c) Qualitative interviews.

This thesis is based on key clinical findings from the survey, including;

- CIDI data that provided twelve month prevalence estimates of mental disorders and also data on trauma experiences.
- Data obtained from clinical interviews providing prevalence estimates of psychotic disorders.
- Selected relevant clinical data from components of the questionnaire (demographics, health service use prior to custody, suicide thoughts and acts and self-assessed intoxication at the time of arrest).

The method for the survey while outlined in this chapter, will also be outlined in the peer reviewed manuscripts in Chapters 4, 5 and 6. While it was inevitable that key components of the method were included in each manuscript and therefore are repeated in the thesis, the method section in each paper has been tailored to the content of the paper and thus highlights unique aspects of the method and analysis relevant to the particular area of the research. The general methodological processes and considerations are outlined below.

2.1 Cultural Considerations

A key aspect of designing the research method was the recognition that research involving Aboriginal and Torres Strait Islander people needed to be culturally informed and adhere to processes that were underpinned by respect for the unique history, culture and research experiences of Indigenous Australians (13, 81). The processes and methodological adaptations that were undertaken to ensure a culturally appropriate research method have been described in Paper 2 (p69). For the purposes of clarity the study design, location, participants, sampling, ethical undertakings, and measures and procedures will be outlined first. However, aspects of the culturally informed method commenced well before data collection and were integral throughout all stages of the research process including data collection, analysis, interpretation, writing, outcomes and the translation activities of this study.

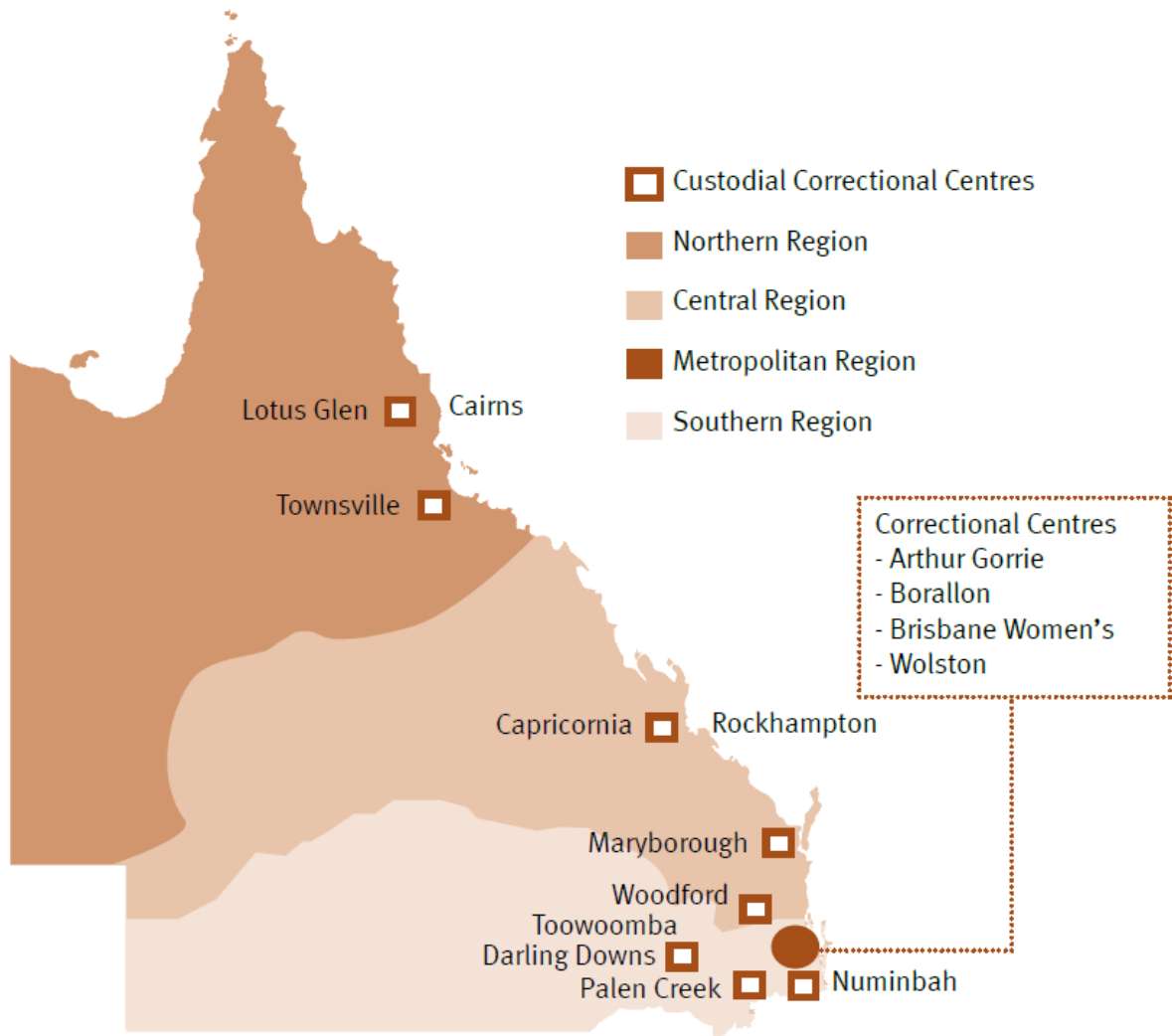
2.2 Study Design and Locations

The study was a cross sectional survey of males and females in adult custody in Queensland who self-identified as Indigenous (Aboriginal, Torres Strait Islander or both Aboriginal and Torres Strait Islander). Data were collected from six correctional centres across the state of Queensland, at the time there were nine correctional centres (CC's), excluding low security centres ("prison farms"). Queensland Corrective Services (QCS) provided a centre by centre breakdown of incarcerated individuals from a census taken prior to the commencement of the study. On 1 January 2008 there were 1270 males and 95 females who identified as Indigenous across all nine main correctional centres and the low security sites. The census data informed the selection of the study sites.

The six CC's selected as study sites were, Lotus Glenn, Townsville, Arthur Gorrie, Woodford, Wolston, and Brisbane Women's (Figure 5). This was based on the numbers of Indigenous prisoners in the centre and representativeness in terms of custodial status (remanded or sentenced) and correctional status (mainstream or protection). The six study sites housed approximately 75% of all male and 90% of all female Indigenous prisoners incarcerated in the state of Queensland at the time. The centres were geographically dispersed across the state, the distance from Brisbane where the research team was based, to Arthur Gorrie, Wolston, and Brisbane Women's was approximately 45 kilometres (km's) South West, for Woodford this

was approximately 100 km's North West, for Townsville this was 1,335 km's North and Lotus Glen was 1850 km's North.

Figure 5: Location of major correctional centres in Queensland



Source Adapted from QCS 2008 annual report (82)

2.3 Establishing the Research Team

The candidate and Indigenous project manager determined that data collection needed to be undertaken in a culturally appropriate and ethically safe manner by individuals with training and experience in the field of research. In the state of Queensland at the time there were Indigenous Mental Health Workers (IMHW's) trained and employed by Queensland Health mental health services. As these individuals were ideally qualified to be research assistants for this project the

candidate wrote to all Executive Directors of Area Mental Health Services in Queensland requesting release of their IMHW's for a specified period in mid-2008 to enable them to participate in the research project, including training and data collection phases. This process was successful and a team of 12 IMHW's was made available for the data collection phase. In addition to recruitment of IMHW's an expert reference group was established that included Indigenous academics and clinicians (see paper 2) to inform and guide the research process.

Following finalisation of the research design, the initial consultations described in paper 2, and the recruitment of IMHW's the data collection phase was undertaken. Prior to commencement of data collection a two week training programme was conducted for the IMHW's that involved orientation to CC's, the use of research tools, ethical and emergency health procedures and mental health and capacity assessment training. There was a significant logistical exercise required to support data collection that included ensuring QCS security clearance and authorisations for all research assistants to enter relevant CC's, as well as flights and accommodation to access study sites and supervision arrangements. The Indigenous project manager provided on-site supervision and cultural leadership for the IMHW team. The candidate oversaw all aspects of the data collection phase and provided clinical support and supervision and support to the project manager, and where indicated other team members, through regular face to face meetings and daily phone contact.

2.4 Participants and Sampling

The intention was to interview a 25% sample of Indigenous males and all consenting Indigenous females detained in custody in Queensland at the time of data collection. It was estimated that 75% of all Indigenous males ($n = 953$) and 90% of all Indigenous females ($n = 86$) were housed in the six study sites. Therefore to obtain a 25% sample of the entire Indigenous male cohort ($n = 1270$) every third male in the study site would be approached to participate ($n = 318$). Given the relatively few females in custody it was planned that all females would be approached to participate in the survey.

Inclusion criteria: All males and females in adult custody, who identified themselves as an Indigenous Australian and who were judged by a trained interviewer to have the capacity to consent to participate.

Exclusion criteria: Individuals who did not consent to participate or who were judged as unfit or unsafe to be interviewed. Those whose English language skills were considered insufficient to enable informed consent or participation in the interview were excluded, with the exception of Torres Strait Islanders who spoke Kriol, as trained interviewers who spoke Kriol were available.

Sampling is a significant challenge in correctional centres. There are a large number of movements, releases and receptions to a correctional centre on a daily basis, particularly for centres that receive remand prisoners (this included five study sites). As an example the Arthur Gorrie CC was estimated to have approximately 40 receptions and releases a day during the study period. The number of people in custody at any one time during the study period was likely to have varied, thus complicating the sampling process. In order to cater for this challenge the sample frame for each individual centre was determined by use of the nominal role on day one of data collection at that centre.

A census taken by QCS of all Indigenous prisoners in Queensland custody on 30 June 2008, a day during the data collection period, was used for comparison with the sample. The census data indicated there were 1497 (1381 males and 116 females) in Queensland CC's. This data reflected an increase of 9.7% of Indigenous people in Queensland custody over a six month period between the initial census data (01/01/2008) and the census taken during the data collection period (30/06/2008).

2.5 Ethics

The ethical dimensions of this study were complex. Firstly this was research involving Aboriginal and Torres Strait Islander people. It was critical that the research design was culturally informed and consistent with key values articulated in the National Health and Medical Research Council (NHMRC) Guidelines for Ethical Conduct in Aboriginal and Torres Strait Islander Health Research including reciprocity, respect and equality (13). How this was achieved is discussed in detail in

paper 2. Secondly, the research involved a prisoner population. The NHMRC statement for the ethical conduct of research involving humans (83) identifies prisoners as “people in a dependent or unequal relationship” (Section 4.3 p59) and “people who may be involved in illegal activity” (section 4.6 p67). Processes in the prison setting that required particular attention included consent, confidentiality and participant safety. In addition mechanisms to address any urgent clinical concerns of participants and the safety and well-being of the research assistants were essential (84).

An ethical framework for prisoner research, proposed by Font (85), was used to guide the research process. This framework requires consideration of the balance between excluding prisoners from research to protect against the risk of abuse and ensuring prisoners have access to research that they can benefit from. The principles considered in this research are paraphrased below;

- a) Research should have a high probability of direct benefit to prisoners and not more than the proportional risk.
- b) Research with prisoners is only justified if the results cannot be obtained by research in the community.
- c) Research should only occur if a group benefit can be expected for the prisoners.
- d) Research should only proceed with prisoners if the risks are low.
- e) Adequate informed consent processes and confidentiality should be in place.
- f) Adequate health care facilities must be made available to participants.
- g) Approval must be sort from an independent research ethics committee.

It was the view of the research team, the expert reference group and key stakeholders who were engaged in the consultation process, including the Indigenous prisoners, communities and organisations (see paper 2) that the subject matter was a priority for this group. In addition it was considered that the potential benefits through translational activities justified the research and that the likelihood of risk to participants from a survey conducted in a culturally informed manner was low.

2.5.1 Consent and Confidentiality

Consent for participation in this study was obtained from a signed consent form (see Appendix VI, p5 and 6). Prior to the consent process information about the study, including the voluntary nature of participation were provided in both verbal and written forms (see Appendix VI, p3). The “Information for Participants” form was provided directly to individuals at the time of seeking consent. It had also been made freely available to prisoners at each CC during an information session that was conducted prior to the data collection phase by the Indigenous project manager. It was made clear to prisoners that the research team were independent of QCS’s and that they were associated with the in-reach mental health services, ensuring that prisoners understood the potential relationship between the research survey and potential translational activities.

Importantly the consent forms once signed were removed from the coded questionnaire to avoid any risk of identification of individuals’ responses. One consent form was provided to the individual, the other, once signed was immediately placed into a sealed envelope in front of the prisoner to reassure them that their confidentiality was protected. It was made clear prior to the consent process that participation in the study was voluntary and that participants had the right to withdraw from the study at any stage. It was also made clear that the information collected was confidential and de-identified.

All interviews were conducted in confidential interview rooms in the health centres of the correctional facilities. Data were recorded by the interviewer and were not available to correctional staff and all data were only identifiable by a unique code. Questionnaires and consent forms were stored in locked cabinets in a Queensland Health facility and electronic data was coded, encrypted and password protected on Queensland Health computers with access only available through permission from the candidate.

2.5.2 Participant Safety

Both the project manager and candidate had significant clinical experience in the area of delivering mental health care to Indigenous people in custodial settings. The candidate was the Clinical Director of the mental health in-reach services provided to

four of the study sites and provided supervision and support to the mental health teams that provided clinical care in the two Northern sites. Thus there were established relationships, clinical pathways and mechanisms for information sharing in place at each of the study sites prior to commencement of data collection. In addition the candidate and project manager met with the General Managers, Nurse Unit Managers, Indigenous Liaison Officers and mental health teams at every study site to ensure there was a clear understanding of the research, the processes involved and the potential clinical implications.

During the data collection period the project manager was always on site in the health centre to support research assistants. The candidate was always available on call to provide advice for any clinical concerns such as a participants presenting as acutely unwell or expressing a risk to themselves or others. There was access to immediate health assessments and health care should it be required.

Any information that a research assistant considered relevant to ensure the necessary treatment of participants was discussed with the project manager and, when considered appropriate, was made available to health staff, with the participant's consent. If consent was not provided and the information was not considered to place the individual or others at significant risk (a determination made through consultation between the candidate and project manager) then that information was not disclosed. Certain circumstances required mandatory disclosure of information to relevant health professionals. This included if it was determined that an individual was at an imminent risk of significant harm to themselves or others. Decisions about mandatory disclosure of such information were the responsibility of the candidate.

Any participant who required immediate medical or mental health treatment were referred to relevant health staff. All participants were provided with an opportunity for debriefing or referral for further mental health consultation, if concerns were raised during the interview.

Ethical clearance for the study was provided by the West Moreton Health Service District Human Research Ethics Committee (Appendix VII) and the study was also

approved by the Queensland Corrective Services Research Committee (Appendix VIII).

2.6 Procedures and Measures

Data were collected by face to face interviews conducted in the health centres of the relevant CC's. Information was recorded on paper using a questionnaire (Appendix VI) and on laptop computers using the Composite International Diagnostic Instrument (CIDI). Interviews were conducted in a manner that ensured flexibility in the delivery, in order to meet the needs of the participant. Interviews took between 60-150 minutes to complete, depending on the complexity of the issues identified.

Interviews were conducted in four parts:

Part 1 – Introduction. Provision of information about the research and consent process (Appendix VI).

Part 2 – Interview using the questionnaire. Questions covered multiple domains including demographic, custody experiences, health service access, the Indigenous Risk Impact Screen (86), substance use and offending, suicide thoughts and actions and cultural experiences. In addition, the Psychosis Screener (PS) was administered; anyone who screened positive to any of the questions was identified as requiring a clinical interview (see Part 3).

Part 3 – Clinical Diagnostic Interviews. The CIDI version 2.1 was used to determine the prevalence of mood, anxiety and substance use disorders. The CIDI is a comprehensive, well validated, fully standardised interview that can be used to assess mental disorders according to ICD-10 and DSM-IV criteria (80). In this study we chose to report the ICD-10 (5) findings to be consistent with other major national and international surveys (31, 87, 88).

While the CIDI had not been validated with Aboriginal and Torres Strait Islander people, it was validated internationally in numerous cultures and languages (80). It had been used in the largest Australian survey of prison mental health (88) and the National Survey of Mental Health and Well Being (30). Both of these surveys

included Indigenous Australians in their sample. In addition we sort the views of the expert reference group and conducted a pilot with the IMHW's to obtain their view about the applicability to an Indigenous participant. The mood, anxiety and substance use modules were considered appropriate for use with Indigenous people. We chose to use the 12 month rather than the lifetime version of the CIDI to reduce the risk of recall bias.

The CIDI was not used to establish the prevalence of psychotic disorders, because it was recognised that some reported experiences that are considered culturally congruent experiences may be misinterpreted as psychotic symptoms (89, 90). Given the potential risk for cultural bias in the diagnosis of psychotic illness in Indigenous people using the CIDI module the candidate devised a three part method for establishing the presence or absence of a psychotic disorder.

- a) First, participants were screened for symptoms of psychosis using the self-report Psychosis Screener, a well-recognised and valid screening instrument for detecting risk of psychotic illness (31). Those who screened positive were invited to participate in a clinical interview.
- b) Second, clinical interviews were conducted by forensic psychiatrists experienced in working in a custodial setting. Detailed information from the interviews were recorded on a proforma (Appendix IX). The diagnostic process was based on the clinical interview and the LEAD (Longitudinal history, Expert opinion and All Data) process for diagnosis (91).
- c) Information recorded on the proforma was reviewed by a diagnostic panel comprised of two forensic psychiatrists (including the candidate) and a cultural advisor (an Indigenous mental health clinician). If required, the psychiatrist who conducted the interview was also consulted by the panel. A consensus diagnosis was reached.

Part 4 – Closure. Following completion of the questionnaire, the interviewer provided the participant with an opportunity to raise any concerns or problems that may have arisen as a result of the interview.

2.7 Data Management and Analysis

Data from the questionnaires were coded and entered into excel spreadsheets to enable analysis. Data from the CIDI programme were extracted directly from laptop computers and entered into excel spreadsheets and merged with the corresponding code to match the individuals CIDI and questionnaire responses.

Variables were created in the Stata data editor and all analysis were undertaken in Stata. Initially Stata 11 and 12 (92) was used and this was updated to Stata 13 (93) when this became available. The candidate oversaw all components of data management, a research assistant entered and cleansed data and undertook the preliminary creation of variables in collaboration with the candidate. The candidate conducted the majority of data analysis as indicated in Chapter 1.

Data analysis has been described in the methods sections of Chapters 3-5. The analysis included descriptive statistics and where relevant and appropriate included Relative Risks (RRs) or Odds Ratios (ORs) with 95% confidence intervals (95%CI) for comparisons between variables. In Chapter 5 multivariate logistic regression was used to examine associations between substance use disorders and relevant covariates selected on clinical grounds.

2.8 Enhancing research quality through cultural competence: A case study in Queensland prisons

Heffernan E, Andersen K, Kinner S. Enhancing research quality through cultural competence: A case study in Queensland prisons. *Australas Psychiatry* 2015; 23: 654-7

(Hyperlink, Impact Factor, Citations, see **Appendix X**)

Objective

To describe the processes undertaken to maximise cultural competence in a complex research project and illustrate how this enhanced the quality of the research and impact of the research outcomes.

Methods

An epidemiological survey of the mental health of Indigenous people in custody in Queensland was conducted using culturally competent research processes.

Results

The research process that enhanced cultural competence is described. The research outcomes were positive in terms of participant and community experiences, participation rates, publications and other research outputs, capacity building and translation of research findings.

Conclusions

This paper describes in practical terms how to conduct culturally competent research and how this approach enhanced the scientific rigour of a complex Indigenous health research project. Indigenous health research should be conducted using a culturally competent method.

Keywords: Indigenous population; prisons; research design; cultural competence; mental disorders

Introduction

Indigenous health research is underfunded (1) and often poorly implemented (2). Cultural competence is central to successful Indigenous health research (3) and there is a well-articulated system of knowledge, skills, values and attributes that contribute to cultural competence (4). These processes lead to better participant, community and research outcomes (5, 6) and should be a routine part of research with Indigenous people. Nevertheless, there remains a perceived tension between methods that enhance cultural competence and concepts of scientific rigour (7), to the extent that these frameworks are sometimes considered incompatible (2).

In this paper we argue that culturally competent and scientifically rigorous research methods in Indigenous health research are not only compatible, but complementary. We describe the development and implementation of a research project that investigated the mental health of Indigenous Australians in prison, with the goal of enhancing mental health service delivery (8). Indigenous Australians remain dramatically over-represented in prisons and many suffer from poor health and mental disorders (8, 9). One important barrier to progress in this area has been a lack of practical guidance on how to implement culturally competent research. Here we describe the methodological challenges we encountered and the responses we adopted to simultaneously enhance cultural competence and scientific rigour.

Ensuring Cultural Competence

Indigenous Leadership

A key component of culturally competent research is having Indigenous leadership embedded into research governance at all levels (6, 10). This ensures that research activities are culturally safe and that appropriate support and supervision for Indigenous and non-Indigenous research staff is available. For this research, an Indigenous research manager was recruited to jointly lead the project. In addition independent guidance was obtained from an expert reference group comprising 4 Indigenous and 3 non Indigenous clinicians and academics. The group initially met monthly during the research design phase and then quarterly throughout the duration of the project to monitor cultural integrity, identify potential risks, and provide input into consultation, report writing and translation of findings.

Priorities, Partnerships and Consultation

The findings from the 1991 Royal Commission into Aboriginal Deaths in Custody (11) and other investigations since have identified mental health as a priority for Indigenous people in the community and in custody (12-14). It was necessary to establish this issue as a research priority and confirm this through consultation. Consultation was also critical to establish meaningful connections with Indigenous people in custody, and with representative communities and other stakeholders. Without establishing trust, rapport and working relationships, involvement of potential participants in the research process could be compromised. A key to culturally competent research is recognising that consultation is an essential component (15, 16) that should be allocated sufficient resources and time prior to, during and after data collection and analysis.

Participant and Community Consultation

Consultation helps establish agreements and expectations, develop connections and partnerships, engage Indigenous expertise and knowledge, and establish a mechanism for research translation. Our research was relevant to all Indigenous communities in Queensland, including those in custody who may identify with prison-based communities as well as their community of origin. As such, over a period of eighteen months we undertook consultation at custodial centres and with 30 community and stakeholder groups in urban, rural and remote settings. Each consultation was given unique consideration based on the cultural protocols of the relevant community.

Consultations generally covered four key areas:

- 1- Introducing the researchers, their cultural heritage, experience and expertise, the goals of the research and advice on the importance of the research to the community.
- 2- Describing the proposed method and seeking advice regarding the appropriateness of language, questions, mental health concepts and potential risks and benefits for participants and communities.
- 3- Establishing how the knowledge gained would be returned to the community, how it may be used and translated into practice.

- 4- Obtaining information about experiences of family and friends with mental health problems returning from custody, including a focus on the types of services that might benefit them and any barriers to access.

The consultations provided important information to inform the research and translation process. The investment of time and money to ensure that ethical, conceptual and methodological processes were culturally sound, prior to commencement of data collection, was rewarded during the later phases of the research including the high participation rate (8).

Capacity Exchange

Research can build capacity in a variety of ways, including enhancing the skills of researchers, participants, community members and health systems (10, 16). Capacity exchange is part of a culturally competent research process. During the study 12 Indigenous mental health workers from Queensland were recruited as research assistants and trained to undertake data collection. The experiences of these individuals, their connections to communities and understanding of mental health, made them ideally suited to the research interview process. Training included advanced psycho-education, risk assessment, research skills including use of diagnostic instruments and survey tools, and interpreting quantitative and qualitative data. Indigenous research assistants also built the capacity of non-Indigenous mental health staff involved in the care of participants, through education and training opportunities. An important component of participation in the research process was cultural supervision; a process of reflection, support and learning, guided by an individual with knowledge, skills and experience with Indigenous culture and community issues (17). Research assistants also received clinical and research supervision.

Feedback from participants suggested that the interview process was well accepted and the involvement of Indigenous research assistants was perceived as a positive, valuable experience. We believe this enhanced rapport and communication, and resulted in more informed, detailed and accurate responses to surveys. This is a consistent finding in Indigenous health research (18).

Methodological Adaptation

Although a primary aim of the research was to estimate the prevalence of mental disorder, any consideration of mental health needed to be based on an Indigenous perspective; “The Aboriginal concept of health is holistic, encompassing mental health and physical, cultural and spiritual health” (13). Therefore, in addition to clinical enquiry our survey included questions about social, community, custodial and health domains as well as cultural practice and used both quantitative and qualitative questions (19).

Mental disorders were assessed using the Composite International Diagnostic Instrument (CIDI) version 2.1 (20). Although it had not been validated for an Australian Indigenous population it had been used extensively in research involving Indigenous people (21). An expert reference group for this project considered that the CIDI mood, anxiety and substance use modules would be suitable and would have a relatively low risk of measurement bias.

Assessment for psychotic disorders followed a three-step method designed to reduce the potential for culturally congruent experiences to be misinterpreted as psychotic symptoms (22). First, participants were screened for psychosis risk using a well-validated 7 item screener (23), that covers delusional beliefs and a history of being diagnosed with schizophrenia. Use was supported by the expert reference group and individuals who endorsed any item were considered a positive screen. Second, individuals who screened positive were interviewed by a forensic psychiatrist with data recorded on a proforma. Third, the proforma was presented to a diagnostic panel of two forensic psychiatrists and an Indigenous mental health clinician, to determine if a diagnosis of psychotic illness was valid. This process resulted in several instances of diagnosis being reviewed, including examples of where culturally congruent experiences had been a source of diagnostic confusion for the psychiatrist.

Outcomes

Cultural competence enhances outcomes in Indigenous health research, but these outcomes are difficult to quantify (7). From a process perspective, the feedback from participants, the engagement of communities and the experiences of researchers

supports the value of culturally competent research. From an outputs perspective, the findings have been presented at 20 national conferences, published in a government report (19), scientific literature (8) and cited in the first report of Australia's National Mental Health Commission (12) and the Closing the Gap Progress report (24). In addition, the methodology was highlighted as an example of culturally appropriate research during a national address by the National Congress of Australia's First Peoples (25). Most important, but most difficult to quantify, are the translational outputs of the study. These have included capacity exchange within and beyond the research team, success in attracting additional, nationally competitive funding for research in the area of Indigenous mental health in custody, and enhancements to mental health services for Indigenous people in custody in Queensland.

Conclusions

Although it is now expected that health research with and for Indigenous Australians will be conducted in a way that is culturally competent, there remains uncertainty about how to undertake culturally competent research, and a fear that doing so may somehow compromise methodological rigour. In this paper we have described the steps taken to enhance cultural competence in research and identified how this enhanced the research experience for participants and their communities, improved the scientific rigour of the study, and increased the potential for translation and meaningful outcomes for Indigenous people. Cultural competence and methodological rigour in Indigenous health research should not be considered in contest, but rather symbiotic with and integral to quality health research that can genuinely improve health outcomes for Indigenous people.

References – See Appendix II

Chapter 3

Mental Illness is highly prevalent among Aboriginal and Torres Strait Islander people in Queensland Custody

Heffernan E, Andersen K, Dev A, Kinner S. Prevalence of mental illness among Aboriginal and Torres Strait Islander people in Queensland Prisons. *Med J Aust* 2012; 197: 37-41

(Hyperlink, Impact Factor, Citations to date, see **Appendix X**)

Abstract

Objective: To estimate the prevalence of mental disorder in a representative sample of Aboriginal and Torres Strait Islander people in Queensland prisons.

Design: Cross-sectional assessment of mental health using a screening questionnaire, CIDI and clinical interviews, conducted by Indigenous mental health clinicians who undertook specific training for this purpose, with support from forensic psychiatrists when indicated.

Setting: Six of the nine major correctional centres across the state of Queensland that housed 75% of all Indigenous males and 90% of all Indigenous females in Queensland prisons at the time of the survey.

Participants: Adults who self-identified as Indigenous and were incarcerated in Queensland prisons between May and June 2008. The sample included 25% of all Indigenous males (n = 347, aged 18 – 62 years) and 62% of all Indigenous females (n = 72, aged 18 – 57 years). The recruitment fraction for males was 71.3% and for females was 81.2%.

Main Outcome Measures: Diagnoses of anxiety, depressive and substance use disorders were made using the CIDI; diagnosis of psychotic illness was determined through psychiatrist interviews supplemented by a diagnostic panel.

Results: The 12 month prevalence of mental disorder was 72.8% among men and 86.1% among women. This comprised of anxiety disorders (males 20.2%, females 51.7%); depressive disorders (males 11.4%, females 29.2%); psychotic disorders (males 8.1%, females 25.0%) and substance use disorders (males 65.5%, females 69.2%).

Conclusions: The prevalence of mental disorder among Indigenous adults in Queensland custody is very high compared to community estimates. There remains an urgent need to develop and resource culturally capable mental health services for Indigenous Australians in custody.

Introduction

Aboriginal and Torres Strait Islander people are fourteen times more likely to be incarcerated than non-Indigenous Australians and represent 26% of the custodial population (1) despite being less than 3% of the Australian population (2). There are complex links between incarceration, social adversity and poor mental health for Indigenous people (3-5). While it is recognised that the prevalence of mental disorder among the general prison population is much higher than in the community (6, 7), knowledge about the prevalence of mental illness amongst Indigenous people in custody is limited and piecemeal (8). This is particularly disconcerting given that the report of the Royal Commission into Aboriginal Deaths in Custody (9), released two decades ago, highlighted the need to better understand the mental health of Indigenous Australians in custody .

A recent report on the general health of Aboriginal inmates (5) which included screening items related to mental health problems (e.g. depression, suicidal ideation, substance use, history of mental health treatment and use of psychiatric medication) suggested that the prevalence of mental disorder amongst Indigenous inmates was high. Similarly, the high rates of death by drug overdose and suicide (10, 11) and of hospital admissions for severe mental illness in this group (12) in the immediate post release period support this premise. Understanding and addressing the mental health problems of Indigenous people in custody should be a health priority and must be done in a way that is both culturally competent and scientifically rigorous.

Although previous studies have pointed to a high prevalence of mental illness among Indigenous prisoners (8), many have suffered from ill-defined sampling frames that jeopardise generalisability, a lack of systematic screening within this sampling frame, exclusive reliance on screening instruments to identify possible mental illness, and most importantly, a lack of cultural sensitivity in the conceptualisation of mental illness, study design and implementation.

The aim of this study was to estimate the prevalence of mental disorders, (depressive, anxiety, psychotic and substance use disorders), among a large and representative sample of Indigenous prisoners. It employed systematic sampling and gold-standard methods for the assessment of mental illness and for the first time,

introduced culturally-sensitive methods of diagnosing psychotic illness in Indigenous prisoners.

Methods

Design and Participants

Participants were sampled from six of the nine high secure correctional centres across Queensland that included both sentenced and remanded prisoners and contained approximately 75% of Indigenous males and 90% of Indigenous females in Queensland prison at the time. Surveys were conducted over an eight-week period in May and June 2008, and the time spent at each centre varied from one to two weeks. Prior to visiting the centres Indigenous inmates were provided with information about the survey in verbal and written form to ensure that participants understood the purpose and voluntary nature of participation.

Potential participants were identified from the nominal role on the first day that the researchers visited that centre. Of those who self-identified as Indigenous on the nominal role (Aboriginal, Torres Strait Islander or both Aboriginal and Torres Strait Islander), all females (100% sample) and every third male (33% sample) on the nominal role were approached to participate in the study. Participants received AUD\$10 for their time. Excluded from the sample were those who did not consent to participate and those judged to be unable to provide informed consent or considered too physically or mentally unwell to participate.

Procedure and Measures

Data were collected via face-to-face interviews in confidential settings within the custodial centres. The questionnaire was administered by trained interviewers, contained both quantitative and qualitative domains, and included questions covering demographic, social, custodial, mental health, health care and cultural characteristics.

In addition, interviewers administered the Composite International Diagnostic Instrument (CIDI) version 2.1 using a laptop computer to assess participants for depression and anxiety disorders during the previous 12 months. A modified version of the substance disorder module was administered, with questions about substance

use directed at the 12 months prior to incarceration to cater for the incarcerated population.

The CIDI is a comprehensive, well validated, fully standardised interview that can be used to assess mental health disorders according to ICD-10 criteria (13). Individuals can meet diagnostic criteria for more than one mental disorder; we anticipated that co-occurring disorders were likely. While the CIDI has not been validated for an Australian Indigenous population, it was chosen because (a) Indigenous mental health experts consulted in the design of this research judged that it was appropriate to diagnose depression, anxiety and substance use disorders in this population, and (b) the CIDI has been widely used with Indigenous populations in other large prisoner studies (14) and in major national mental health epidemiological surveys (15).

To prevent culturally congruent experiences being misinterpreted as psychotic experiences (16) the full CIDI interview was not used to identify psychotic disorders; instead we adopted a three-step process. First, the sample was screened with the CIDI psychosis screener, included in the questionnaire, to identify potential cases. Second, those who screened positive underwent face-to-face interviews with a forensic psychiatrist, who used the interview and all available clinical data to determine the presence or absence of a diagnosis. Third, this information, recorded in a standardised format, was reviewed by a diagnostic panel comprised of two psychiatrists and a cultural advisor (an Indigenous mental health clinician) to reach a consensus diagnosis.

The members of the research team were predominantly Indigenous Australians and all were qualified mental health care professionals. They were trained in the use of the research tools, ethical and emergency care procedures. They were provided with onsite cultural and health care supervision and had access to a psychiatrist and centre health staff if required. The study involved Indigenous people in the design, implementation, data collection and interpretation of results. The research was supported, monitored and informed by a comprehensive consultation process with both Aboriginal and Torres Strait Islander community members.

Ethical Approval

The study design and protocol were approved by the Queensland Health West Moreton Research Ethics Committee and was consistent with guidelines for ethical conduct in Aboriginal and Torres Strait Islander health research (17).

Data Analysis

Quantitative data were analysed using Stata v12.0; descriptive statistics were reported, and the relative risk of diagnosis by sex was determined.

Results

On 30 June 2008 there were 5,544 adults in Queensland prison (18), of whom 1,381 males and 116 females identified as Indigenous. In the six centres surveyed there were 1,036 Indigenous males and 88 Indigenous females.

Of the 487 males approached to participate in the study 347 were interviewed; 92 declined to participate, 45 were released, transferred or not available and 3 were judged too unwell to be seen due to mental illness. The mean age of male participants was 31.5 years (SD 9.4) and of the male non-participants was 28.8 years (SD 8.18), this difference was statistically significant ($p = 0.03$). Of the 88 females approached to participate in the study 72 were interviewed; 10 declined to participate, 5 were either released or not available and 1 was judged too unwell to be seen due to a physical illness. There was no statistically significant difference in the mean age of female participants (29.2 years, SD = 8.5) and non-participants (30.47 years, SD = 8.35) ($p > 0.05$).

Of the 419 individuals who participated in the study, all completed the questionnaire and were screened for psychosis; 396 (94.5%) of these individuals also completed the CIDI automated interviews for anxiety, depressive and substance use disorders, (331 males and 65 females). Of the 23 individuals who did not complete the CIDI, 6 (3 males and 3 females) were diagnosed with a psychotic disorder. Those who did not complete the CIDI were included in the prevalence estimates for psychotic disorders (Table 3), however for comparability purposes these 23 participants are excluded from Figure 1 (below), which is limited to the 396 individuals who completed both the questionnaire and the CIDI.

Demographics and Custodial Experience

The majority of participants (79.7%) identified as Aboriginal (Table 1), over half were not in a relationship, the majority were unemployed and most did not complete beyond a year 10 education, with around a quarter of men (23.0%) and a fifth of women (19.4%) not having completed year eight schooling. The majority of the sample was sentenced prisoners (63.7%), the remainder were individuals who were remanded in custody. Nearly half the sample (46%) had been incarcerated 4 or more times. Over half of the males (52.2%) and 37.5% of the females reported having spent time in youth custody, with 23% of males and 10% of females having spent more than a year in youth custody.

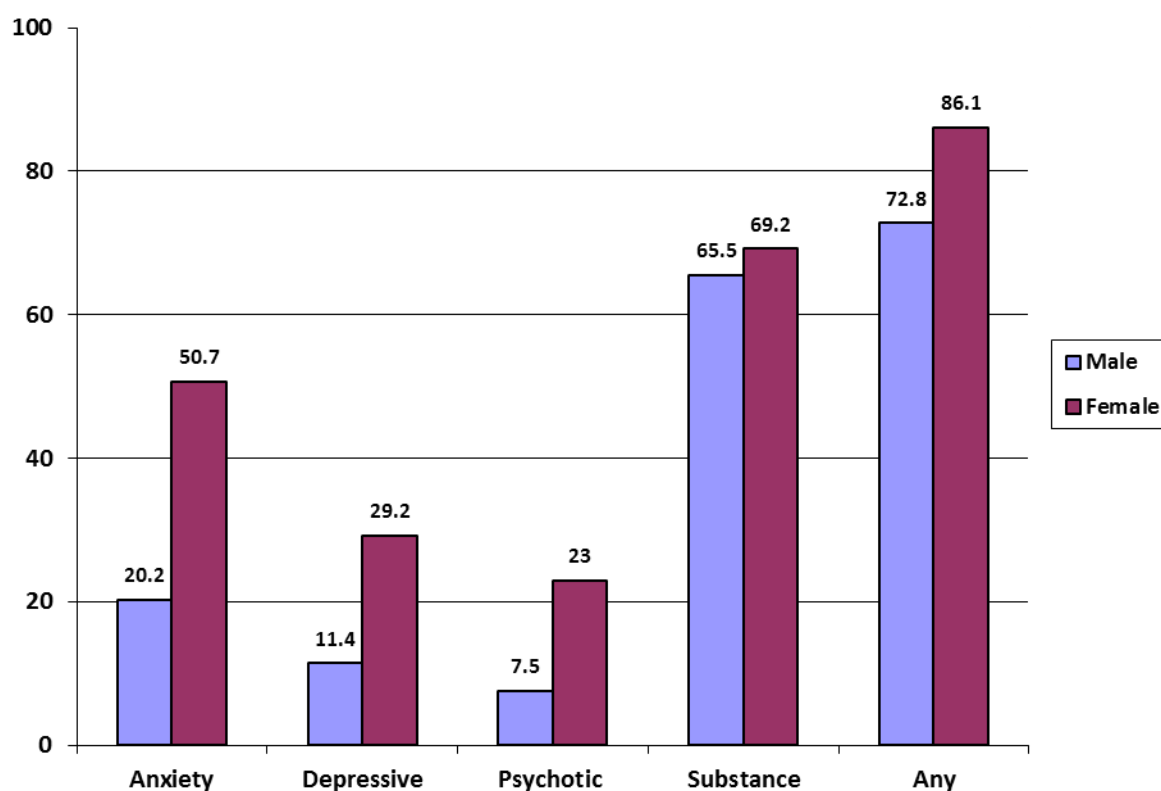
Table 1 Demographic characteristics of participants by gender

	Male (n= 347)		Female (n=72)		Total (N=419)	
	n	(%)	n	(%)	n	(%)
Indigenous Status						
Aboriginal	276	(79.5)	58	(80.6)	334	(79.7)
Torres Strait Islander	33	(9.5)	4	(5.5)	37	(8.8)
Aboriginal and Torres Strait Islander	38	(11.0)	10	(13.9)	48	(11.5)
Currently in a Relationship	174	(50.1)	29	(40.1)	203	(48.4)
Education Attainment of year 10 or less	276	(79.5)	60	(83.2)	336	(80.2)
Primary Income from Social Welfare	197	(56.8)	62	(86.1)	259	(61.8)
Custodial Status						
Remanded	109	(31.4)	32	(44.4)	141	(33.6)
Sentenced	231	(66.5)	36	(50.0)	267	(63.7)
Unknown	7	(2.0)	4	(5.4)	11	(2.6)
Previous Incarceration						
First Time	61	(17.5)	19	(26.5)	80	(19.1)
2-3 times	113	(32.5)	22	(30.5)	135	(32.2)
4-5 times	70	(20.2)	11	(15.2)	81	(19.3)
6 or more times	94	(27.1)	18	(25.0)	112	(26.7)
not known	9	(2.7)	2	(2.7)	11	(2.6)

Prevalence of Mental Health Disorders

Of the 396 individuals who completed both the questionnaire and the CIDI the majority of men (72.8%) and women (86.1%) suffered from at least one mental health disorder in the preceding twelve months (Figure 1). Two thirds (66%) suffered from a substance use disorder, 25.2% from an anxiety disorder, 14.3% from a depressive disorder and 10.1% from a psychotic disorder. Mental health disorders were more common among the remanded sample (84.4%) than the sentenced sample (70.4%) (RR = 1.12, 95% CI 1.08-1.33, $p = 0.002$).

Figure 1 Twelve month prevalence of mental disorder, by gender (n = 396)



Women were significantly more likely than men to report suffering from an anxiety disorder (RR = 2.5, 95% CI 1.8-3.5), a depressive disorder (RR = 2.6, 95% CI 1.6-4.1) or a psychotic disorder (RR = 3.1, 95% CI 1.8-5.3). The most common anxiety disorder amongst both men and women was post-traumatic stress disorder and the most prevalent depressive disorder was major depression (Table 2).

Table 2 Twelve month prevalence of anxiety and depressive disorder, by gender

	Male (n=331)		Female (n=65)		<i>p</i> Value	Total (N=396)	
	n	(%)	n	(%)		n	(%)
Anxiety							
Panic Disorders	2	(0.6)	3	(4.6)	<i>p</i> = 0.008	5	(1.2)
Agoraphobia	5	(1.5)	4	(6.1)	<i>p</i> > 0.05	9	(2.2)
Social Phobia	4	(1.2)	8	(12.3)	<i>p</i> < 0.001	12	(3.0)
Generalised Anxiety Disorder	8	(2.4)	3	(4.6)	<i>p</i> > 0.05	11	(2.7)
Specific Phobias	15	(4.5)	14	(21.5)	<i>p</i> < 0.001	29	(7.3)
Obsessive Compulsive Disorder	4	(1.2)	0	(0.0)	<i>p</i> > 0.05	4	(1.0)
Post Traumatic Stress Disorder	40	(12.0)	21	(32.3)	<i>p</i> < 0.001	61	(15.4)
Any Anxiety Disorder*	67	(20.2)	33	(50.7)	<i>p</i> < 0.001	100	(25.2)
Depression							
Major Depressive Episode	34	(10.2)	15	(23.0)	<i>p</i> = 0.004	49	(12.3)
Dysthymic Disorder	9	(2.7)	7	(10.7)	<i>p</i> = 0.003	16	(4.0)
Total Depressive Disorders*	38	(11.5)	19	(29.2)	<i>p</i> < 0.001	57	(14.3)

*Individuals could have more than anxiety or depressive disorder

Of the 419 individuals administered the psychosis screener 17% (n = 71) screened positive. Of these, 8 males and 1 female were unable to be assessed by a psychiatrist as they were either released or transferred prior to the assessment. Of the remaining 62 individuals, 28 males (8.1%) and 18 females (25%) were found to have a psychotic disorder (Table 3).

Table 3 Twelve month prevalence of psychotic disorder, by gender

Disorder	Male (n=347)		Female (n=72)		<i>p</i> Value	Total (N=419)	
	n	(%)	n	(%)		n	(%)
Schizophrenia	15	(4.3)	9	(12.5)	<i>p</i> = 0.007	24	(5.7)
Substance Induced Psychotic Disorder	7	(2.0)	7	(9.7)	<i>p</i> < 0.001	14	(3.3)
Schizoaffective Disorder	4	(1.2)	0	(0)	<i>p</i> > 0.05	4	(1.0)
Psychotic Disorder (Not Otherwise Specified)	2	(0.6)	2	(2.8)	<i>p</i> > 0.05	4	(1.0)
Any Psychotic Disorder	28	(8.1)	18	(25.0)	<i>p</i> < 0.001	46	(11.0)

The majority of both men and women had a substance use disorder (Table 4), most commonly alcohol dependence (48.2%) or cannabis dependence (20.9%). Most individuals who had a substance use disorder had the more severe form, dependence.

Table 4 Twelve month prevalence of substance use disorder, by gender

ICD 10 Diagnosis	Male (n=331)		Female (n=65)		<i>p</i> Value	Total (N=396)	
	n	(%)	n	(%)		n	(%)
Alcohol	170	(51.3)	39	(60.0)	<i>p</i> > 0.05	209	(52.7)
Dependence	155	(46.8)	36	(55.3)	<i>p</i> > 0.05	191	(48.2)
Harmful Use	15	(4.5)	3	(4.6)	<i>p</i> > 0.05	18	(4.5)
Amphetamine	36	(10.8)	4	(6.1)	<i>p</i> > 0.05	40	(10.1)
Dependence	34	(10.2)	4	(6.1)	<i>p</i> > 0.05	38	(9.6)
Harmful Use	2	(0.6)	0	(0.0)	<i>p</i> > 0.05	2	(0.5)
Cannabis	70	(21.1)	17	(26.1)	<i>p</i> > 0.05	87	(21.9)
Dependence	66	(19.9)	17	(26.1)	<i>p</i> > 0.05	83	(20.9)
Harmful Use	4	(1.2)	0	(0.0)	<i>p</i> > 0.05	4	(1.0)
Opioids	32	(9.6)	7	(10.7)	<i>p</i> > 0.05	39	(9.8)
Dependence	32	(9.6)	7	(10.7)	<i>p</i> > 0.05	39	(9.8)
Harmful Use	0	(0.0)	0	(0.0)	<i>p</i> > 0.05	0	(0.0)
Sedatives	6	(1.8)	4	(6.1)	<i>p</i> > 0.05	10	(2.5)
Dependence	0	(0)	1	(1.5)	<i>p</i> > 0.05	1	(0.2)
Harmful Use	6	(1.8)	3	(4.6)	<i>p</i> > 0.05	9	(2.2)
Others*	28	(8.4)	11	(16.9)	<i>p</i> > 0.05	39	(9.9)
Dependence	24	(7.2)	11	(16.9)	<i>p</i> > 0.05	35	(8.8)
Harmful Use	4	(1.2)	0	(0.0)	<i>p</i> > 0.05	4	(1.0)
Any Substance	217	(65.5)	45	(69.2)	<i>p</i> > 0.05	262	(66.1)
Dependence	208	(62.8)	43	(66.1)	<i>p</i> > 0.05	251	(63.3)
Harmful Use	23	(6.9)	3	(4.6)	<i>p</i> > 0.05	26	(6.5)

*Includes Hallucinogens, Volatile Solvents and Psychoactive Substances, and other stimulants

Discussion

Among the Indigenous inmates sampled, most men and women were diagnosed with at least one mental disorder, whereas the 12 month prevalence of mental disorder among adults in the Australian community is estimated at 20% (15). Given the vast over-representation of Indigenous people in prison, their frequent transition between prison and the community, and the high prevalence estimates of mental disorder in this group, the consequences of inadequate health care (7, 19) must inevitably impact on Indigenous communities. The prevalence of depression and anxiety disorders, especially post-traumatic stress disorder, was high in this sample, and is similar to prevalence estimates of general prison populations (14), highlighting the critical need for adequate mental health services in prison settings (7). The high prevalence of diagnosed psychotic disorder, particularly among women (25%) is of concern and consistent with other Australian studies that have used screening tools to estimate the prevalence of psychosis in prisoners (14, 20). Psychotic disorder is associated with significant morbidity (21) and increased risk of re-incarceration (22). These findings highlight a critical mental health need for these individuals both in custody and during the transition back to their communities.

This study, like others before it (8), identified a high rate of substance use problems among Indigenous prisoners. However, most previous studies have relied exclusively on screening instruments to do this, whereas this study has, for the first time, robustly estimated the diagnostic prevalence of substance abuse and dependence among Indigenous prisoners. Alcohol and cannabis dependence were the most prevalent substance use disorders identified. The National Indigenous Drug and Alcohol Committee recently highlighted the lack of opportunities that exist for Indigenous people to access appropriate treatment for these problems in custody (23). They suggested that if available, culturally appropriate interventions are likely to be successful, and provided clear recommendations about how to implement these services. Evaluation of such services, in a way that is both culturally sensitive and scientifically rigorous, is an essential next step.

Sampling is a challenge for any research with custodial populations due to difficulties accessing all custodial centres and due to daily releases, transfers and receptions. However, given the centres we sampled contained 75% of all Indigenous males and

90% of all Indigenous females in custody at that time and the high recruitment fractions for both populations it is likely that the risk of sampling bias was minimised. Similarly the risk of recall bias is likely to have been reduced by using twelve month prevalence estimates for mental disorders. It is possible that such high estimates of psychotic disorder, particularly for the female population, might indicate measurement bias. However, given the comprehensive and culturally sensitive method used to make the diagnosis, we believe that these findings are accurate. Furthermore, any measurement bias would be at least partially offset by likely under-detection of psychotic disorders, due to false negatives on the psychosis screener and the loss from the sample of some individuals who screened positive, but could not undergo diagnostic interviews due to their release.

The small age difference between male participants and non-participants (about 2.5 years) is unlikely to have substantially biased our prevalence estimates given the size of the male sample and that the mean age of this sample (31.5 years) was similar to the mean age of the total Indigenous male population in Queensland prisons at the time of the survey (30.6 years). A key strength of this research was the extensive consultation conducted with both Aboriginal and Torres Strait Islander communities and the involvement of Indigenous people in all aspects of the research process. Inevitably in this field of research cultural bias is a risk. We aimed to ensure that any cultural bias or response bias was minimised through the use of a culturally informed research method and trained, culturally competent interviewers. This process helped to ensure that the research had integrity, and was not only of value, but most importantly not harmful to Indigenous people.

The information that was obtained from this research is crucial to the planning and implementation of adequate mental health services for Indigenous people in contact with and leaving the criminal justice system. For mental health services to be effective they must be culturally capable, and accessible both in custody and in the community, with a focus on enabling continuity of care between the two. Such services can only be achieved through appropriate resourcing and stewardship. Their development is not only supported from a public health perspective, but also from a human rights and ethical perspective (24, 25).

While the marked over-representation of Indigenous people in Australian prisons remains a significant concern, prisons provide an opportunity for health care for a population who under-access health care in the community, both before and after release from custody (26). Although reducing the Indigenous incarceration rate remains a priority, improving the mental health of Indigenous Australians, including those who come into contact with the criminal justice system, is also important. Access to appropriate treatment may help prevent the 'revolving door' of incarceration.

This study, the first of its kind in Australia, provides an opportunity for service planning and policy making to be based on reliable estimates of the nature, type and extent of mental disorder amongst Indigenous people in custody. In embracing the challenge of closing the Indigenous health gap it is critical that the mental health problems of Indigenous people in custody be addressed.

References – see Appendix III

Chapter 4

Post-Traumatic Stress Disorder among Aboriginal and Torres Strait Islander people in custody in Australia: prevalence and correlates

Heffernan E, Andersen K, Davidson F, Kinner S. PTSD among Aboriginal and Torres Strait Islander people in custody in Australia: prevalence and correlates. *J Trauma Stress* 2015; 28: 523-30.

(Hyperlink, Impact Factor, Citations, see **Appendix X**)

Abstract

Mental disorder and trauma experiences are highly prevalent amongst individuals in custody, however, the impact of PTSD is rarely considered. Indigenous Australians are incarcerated at thirteen times the rate of non-Indigenous Australians and report high levels of trauma exposure and psychological distress. In further analysis of the largest systematic study of mental disorder amongst Indigenous Australians in custody ($N = 396$) we found that the 12-month prevalence of PTSD was high in both men (12.1%) and women (32.3%). Having PTSD was also associated with high rates of co-occurring mental disorders (anxiety 31.2%, depression 32.8%, psychosis 24.6% and substance use, 75.4%), lifetime suicidal ideation (50.1%) and suicide attempts (34.4%). Individuals with PTSD, compared to those without, were more likely to experience other mental disorders $OR = 2.42$, 95% CI [1.12, 5.80] $p = .022$ and lifetime suicide thoughts $OR = 2.43$, 95% CI [1.34, 4.39] $p = .001$ and attempts $OR = 2.56$, 95% CI [1.33, 4.83] $p = .002$ and high rates of intoxication at the time of arrest. Despite this, most (58.9%) had not accessed any form of mental health care prior to incarceration. These findings highlight the need to identify and manage PTSD in community and custodial populations.

Introduction

It is well established that mental disorders are highly prevalent in prisoner populations worldwide (1). Most studies of mental disorder in prisoners have focused on psychotic, mood and substance use disorders, yet those that report on post-traumatic stress disorder (PTSD) reveal prevalence estimates orders of magnitude higher than would be expected in a general community sample (2-4). In Australia, trauma experiences and PTSD are far more common among prisoners than in the community (5, 6). There is, however, limited information about PTSD in incarcerated Aboriginal and Torres Strait Islander people. This is despite the pervasive role that trauma plays in the mental health burden faced by Indigenous Australians (7), despite the marked health disparities between Indigenous and non-Indigenous Australians (8), and despite the fact that Indigenous Australians are over-represented in Australian prisons by an age-adjusted factor of 13 (9).

A Royal Commission into Aboriginal deaths in custody in 1989 (10) noted not only the high rate of incarceration of Indigenous people but also the significant role of historical trauma in relation to the mental health needs of this group. Despite recommendations focused on meeting these needs, the incarceration rate has continued to rise and trauma experiences and mental health problems have remained highly prevalent (11, 12).

The 12-month prevalence of PTSD in the Australian population is estimated to be 6.7% (13), however, there are no reliable national estimates of PTSD for Aboriginal and Torres Strait Islander people. Given that Indigenous Australians have reported much higher levels of psychological distress (14) and have a greater burden of disease than non-Indigenous Australians (15) it is likely that PTSD is also highly prevalent in this population. A study of three communities in Western Australia ($N = 221$) found that 55% of individuals met lifetime ICD 10 criteria for a diagnosis of PTSD (16). The high prevalence of psychological distress among Indigenous Australians is thought to relate to the traumatic impacts of colonisation, the forced removal of children by the State, and policies and practices that resulted in social, economic, and cultural discrimination (7, 17, 18).

Two studies have described the prevalence of mental disorders in incarcerated Indigenous Australians. The first, a study of 285 Indigenous people in the Australian state of New South Wales, found the 12-month prevalence of PTSD to be extremely high: 19.5% for males and 49.2% for females (19). Similarly, a study of 396 incarcerated Indigenous people in the state of Queensland found that the 12-month prevalence of PTSD was 12.0% in males and 32.3% in females (20). The high prevalence of PTSD, the over representation of Indigenous Australians in custody, and the complex interaction of trauma, incarceration, and mental illness (21, 22) justify the need to better understand the nature, correlates and trauma experiences associated with PTSD among this population.

An enhanced understanding of PTSD for Indigenous people in custody is critical to developing appropriate mental health treatment responses. Significant cultural differences in experiences and expression of trauma and mental health problems place Indigenous Australians at risk of misdiagnosis and ineffective management (7, 23). This is particularly pertinent in prison settings, given the limited availability of culturally competent mental health services (24-26) and the high rates of morbidity and mortality suffered by individuals in their transition from custody back to the community (27-29).

The aim of this paper was to identify the demographic, trauma experience and custodial and offence-related correlates of PTSD in incarcerated Indigenous Australians, and to examine the co-occurrence of PTSD with other mental illness, substance use disorders and suicidal thoughts and behaviours.

Method

Participants and Procedure

This study is based on further analysis of data from Australia's largest systematic study of the prevalence of mental disorder among Indigenous people in custody (20). The survey was conducted across six of the nine high secure correctional centres in the Australian state of Queensland. These centres held approximately 75% of Indigenous males and 90% of Indigenous females in Queensland prisons at the time. The sample included both sentenced and remanded (pre-trial) prisoners who self-identified as Indigenous (Aboriginal, Torres Strait Islander, or both) on the

correctional centre nominal role. Surveys were conducted over a 9-week period in May and July 2008. The study was approved by the Queensland Health West Moreton Research Ethics Committee. Participants were provided with information about the survey in verbal and written form to ensure that they understood the purpose and voluntary nature of participation. Consent to participate in the study was obtained in writing, via a signed consent form.

We planned a priori to approach all females (100% sample) and every third male (33% sample) on Day 1 of survey commencement at each centre to participate in the study. Those who did not consent to participate, those judged unable to provide informed consent and those considered too physically or mentally unwell to participate were subsequently excluded from participation. A census of the Indigenous custodial population on day one of the survey period was used to assess sampling fraction and sample representativeness. At the time of the census there were 1,381 Indigenous males ($M = 31.57$ years $SD = 9.83$) and 116 Indigenous females ($M = 31.36$ years $SD = 8.44$) in custody in Queensland.

Of the 487 males approached to participate in the study, 347 (25.1% of the census male sample) were interviewed; 92 declined to participate, 45 were released, transferred, or not available, and 3 were judged too unwell to be seen due to mental illness. Of the 88 females approached to participate in the study, 72 (62.1% of the total female census sample) were interviewed; 10 declined to participate, 5 were released, and 1 was judged too unwell to be seen due to a physical illness. The final sample size was 419 participants and 396 (males 331, females 65) completed both the questionnaire and CIDI components of the interview. All analyses were limited to these 396 individuals.

Of the 396 participants 80.1% identified as Aboriginal, 8.1% identified as Torres Strait Islander, and 11.8% identified as both. Male participants ($M = 31.48$ years, $SD = 9.42$ years) were on average 2.7 years older than male non-participants ($M = 28.82$ years, $SD = 8.18$, $p = .032$). There was no statistically significant difference in the age of female participants ($M = 29.15$ years, $SD = 8.49$) and non-participants ($M = 30.47$ years, $SD = 8.35$). The demographic characteristics of the final sample ($N = 396$) are outlined in Table 1, disaggregated by gender and PTSD status. There were

no significant differences in demographic characteristics (Table 1) or the number of adult incarcerations (1 to 3 = 52.7%, 4 or more = 47.3%) between those with and without PTSD (Table 1).

Table 1 Demographic characteristics of the sample by gender and PTSD* diagnosis

Variable	Male				Female				Total			
	No PTSD (n = 291)		PTSD (n = 40)		No PTSD (n = 44)		PTSD (n = 21)		No PTSD (n = 335)		PTSD (n = 61)	
	n	%	n	%	n	%	n	%	n	%	n	%
Age (years)												
< 30	151	51.9	23	57.5	17	40.9	15	71.4	169	50.5	38	62.3
31-39	82	28.1	12	30.0	17	38.6	4	19.1	99	29.6	16	26.2
> 40	58	19.9	5	12.5	9	20.5	2	9.5	67	20.0	7	11.5
Current relationship	137	47.1	22	55.0	8	38.1	19	43.2	156	46.6	30	49.1
Education <year 10	236	81.0	31	77.5	33	75.0	20	95.2	269	80.2	51	83.6
Custody status												
Sentenced	201	69.7	17	42.5	19	43.2	7	33.3	220	65.7	31	50.8
Remanded	85	29.2	23	57.6	21	47.8	14	66.7	106	31.6	30	49.2
Not Known	5	1.8	0		4	9.1	0		9	2.7	0	

*PTSD = Post Traumatic Stress Disorder

Measures

Data were collected via face-to-face interviews in confidential settings within the custodial centres. Inmates were provided with verbal and written information about the survey and received a payment for their time. Interviews were conducted by Indigenous researchers with mental health experience, trained in the use of the research tools, ethical and emergency care procedures. They were provided with onsite cultural and health care supervision and had access to a psychiatrist and health staff if required. Indigenous clinicians and researchers were key contributors to research management, design, implementation, data collection and interpretation of results. The research was supported, monitored and informed by a comprehensive consultation process with Aboriginal and Torres Strait Islander communities (12).

Mental health assessments were made via a questionnaire, a diagnostic instrument and, where indicated, clinical interviews for diagnosing psychotic disorders. The questionnaire contained both quantitative and qualitative domains, and included questions covering demographic, social, custodial, mental health, health care and cultural characteristics. Included were questions specific to having experienced lifetime, twelve month or current suicide thoughts or lifetime suicide attempts. In addition, participants were asked if they were intoxicated with alcohol or other drugs at the time of the events that led to their incarceration.

The Composite International Diagnostic Instrument (CIDI) version 2.1 (30) was administered using a laptop computer to assess participants for depression, anxiety, and substance use disorders in the past 12 months according to ICD-10 criteria. Although the CIDI had not been validated for an Australian Indigenous population, it is a comprehensive and fully standardised interview (31) that has been validated internationally in numerous cultures and languages. In addition, it was chosen because Indigenous mental health experts and Indigenous mental health workers who examined and trialled the tool considered the depression, anxiety, and substance use disorders modules to be culturally appropriate for this population, and the CIDI had been used widely with Indigenous populations in other large prisoner studies (19) and in major mental health surveys in Australia (32) and internationally (33).

The CIDI was not used to establish the prevalence of psychotic disorders as it was judged by Indigenous mental health experts that its use could introduce a risk of cultural bias,

given that some culturally congruent experiences can be misinterpreted as psychotic symptoms. Instead, the CIDI psychosis screener was used to identify those who may have been at risk of a psychotic disorder. All those who screened positive were interviewed by a forensic psychiatrist whose findings were presented to a diagnostic panel, including two psychiatrists and a cultural advisor; the panel determined if a diagnosis of psychotic disorder was to be made.

With respect to PTSD, the standard CIDI 2.1 module assessed exposure to nine potentially traumatic events, listed in Table 2. In addition to the traumatic events, the standard CIDI module asks individuals if they suffered “other extremely stressful or upsetting events” or “suffered great shock” because someone close to them had suffered one of the nine events. Relevant symptom profiles are then assessed in order to determine whether a diagnosis is present.

Data Analysis

Data were analysed using Stata v13.0 (34). Descriptive statistics were calculated. Odds Ratios (OR) with 95% confidence intervals (95% CI) were reported for analyses comparing PTSD and non-PTSD groups on the following variables: demographics, trauma events, mental disorders, substance use disorders, and suicide thoughts and attempts. Odds ratios were calculated using Stata 13 IC case control calculator with exact confidence intervals and a chi squared test of independence. We chose to group diagnoses of harmful substance use and substance dependence into one category (substance use disorders), because substance dependence accounted for 95.8% of all substance use diagnoses in the sample. There was missing data for the following variables; lifetime suicide thoughts ($n = 3$) these were counted as negative responses, adult incarceration ($n = 10$) and pre-custody health service use ($n = 15$).

Results

The 12-month prevalence of PTSD was 15.4% in the full sample ($N = 396$), 12.1% in males and 32.3% in females. The prevalence of PTSD was significantly higher among females than among males $OR = 3.47$, 95% CI [1.77, 6.67], $p < .001$. The mean age of onset of PTSD was not significantly different between males ($M = 17.98$ years, $SD = 9.04$) and females ($M = 19.05$ years, $SD = 9.72$).

Trauma experiences were pervasive amongst the sample; the mean number of trauma events for males without PTSD was 2.33, $SD = 2.07$ (range 0-9) and with PTSD was 3.88, $SD = 1.98$ (range 1-9), for females without PTSD it was 2.66 (range 0-8) and for those with PTSD it was 4.76 (range 1-8). Both men and women with PTSD were significantly more likely than those without PTSD to report being the victim of rape or other sexual assault, or the victim of a serious attack or assault. In addition, men with PTSD were significantly more likely than men without PTSD to report traumatic experiences of involvement in a life threatening accident, torture or terrorism, witnessing someone being badly injured or killed or experiencing great shock because of trauma that happened to someone else. Women with PTSD were significantly more likely than those without PTSD to report being threatened with a weapon, held captive, or kidnapped (see Table 2).

Among men with PTSD, the two most prevalent trauma experiences reported as the “most serious trauma” were sexual assault (22.5%, age of onset rape $M = 10.14$ years, sexual molestation $M = 10.50$ years) and serious physical assault (17.5%, age of onset $M = 21.0$ years) or witnessing someone being badly injured or killed (17.5%, age of onset $M = 23.4$ years). For women the two most common serious trauma experiences were sexual assault (23.8%, age of onset rape $M = 15.33$ years, sexual molestation $M = 10.50$ years) or were in the “other” category (28.6%, age of onset $M = 24.7$ years).

Individuals with a diagnosis of PTSD were significantly more likely than those without a PTSD diagnosis to suffer from any mental disorder $OR = 2.42$, 95% CI [1.12, 5.80], $p = .022$. Among those diagnosed with PTSD, 31.2% were also diagnosed with another anxiety disorder, 32.8% with depression, 24.6% with psychosis and 75.4% with a substance use disorder (Table 3). There was no significant association between PTSD and any substance use disorder, however disaggregation by substance type (Table 3) revealed that individuals with PTSD were significantly more likely than those without PTSD to suffer from a cannabis use disorder $OR = 2.14$, 95% CI [1.12, 4.00], $p = .011$ or another drug disorder $OR = 2.82$, 95% CI [1.00, 7.30], $p = .021$. The prevalence of alcohol, amphetamine, opioid and sedative use disorders was also higher among those with PTSD, however these group differences did not reach statistical significance at $p < .05$.

Table 2 Frequency of trauma events by gender and PTSD* diagnosis

Variable	Males						Females					
	No PTSD (n = 291)		PTSD (n = 40)		OR	[95% CI]	No PTSD (n = 44)		PTSD (n = 21)		OR	[95% CI]
	n	%	n	%			n	%	n	%		
Life threatening accident	101	34.7	22	55.0	2.3	[1.1, 4.8]**	11	25.0	6	28.6	1.1	[0.3, 3.8]
Sexual assault	22	7.6	9	22.5	3.6	[1.3, 8.9]**	12	27.3	12	57.1	3.6	[1.1, 12.2]*
Sexually molested	39	13.4	13	32.5	3.1	[1.4, 6.9]**	12	27.6	12	57.1	3.6	[1.1, 12.1]*
Fire, flood, other natural disaster	48	16.5	10	25.0	1.6	[0.7, 3.8]	8	18.2	5	23.8	1.4	[0.3, 5.8]
Serious physical attack or assault	106	36.4	21	52.5	1.9	[0.9, 4.0]*	22	50.0	18	85.7	6.0	[1.4, 35.4]**
Threatened with weapon; kidnapped	114	39.2	20	50.0	1.6	[0.8, 3.2]	17	38.6	16	76.2	5.1	[1.4, 20.6]**
Tortured or the victim of terrorism	8	2.7	4	10.0	3.9	[0.8, 5.5]*	4	9.1	3	14.3	1.6	[0.2, 10.9]
Had direct combat experience in a war	11	3.8	2	5.0	1.9	[0.2, 9.8]	0		0		2.6	[0.8, 8.6]
Witnessed bad injury or death	129	44.3	30	75.0	3.8	[1.7, 8.9]***	15	34.1	12	57.1		-
Other very stressful or upsetting event	51	17.5	11	27.5	1.8	[0.8, 3.9]	9	20.5	9	42.9	2.9	[0.8, 10.5]
Witness trauma to someone close	48	16.5	13	32.5	2.4	[1.1, 5.3]*	7	15.9	7	33.3	2.6	[0.7, 10.5]

* $p < .05$. ** $p < .01$. *** $p < .001$.

*PTSD = Post Traumatic Stress Disorder

Table 3 Association between PTSD* and other mental disorders by gender

Variable	Male				Female				OR	[95% CI]
	No PTSD		PTSD		No PTSD		PTSD			
	n	%	n	%	n	%	n	%		
Anxiety (not PTSD)	30	10.3	6	15.5	12	27.3	13	61.9	3.16	[1.57, 6.15]***
Depression	22	7.6	12	30.0	7	15.9	8	38.1	5.15	[2.50,10.37]***
Psychosis	20	6.9	5	12.5	5	11.4	10	47.6	4.04	[1.83, 8.63]***
Alcohol	148	50.9	22	55.0	25	56.8	14	66.7	1.35	[0.75, 2.45]
Amphetamines	8	2.8	2	5.0	0	-	2	9.5	2.87	[0.61,11.10]
Cannabis	59	20.3	11	27.3	7	15.9	10	47.6	2.14	[1.12, 4.00]*
Opiates	26	8.9	6	15.0	5	11.4	2	9.5	1.48	[0.56, 3.52]
Sedatives	5	1.7	1	2.5	2	4.6	1	4.8	1.59	[0.16, 8.62]
Other drugs ^a	12	4.1	5	12.5	5	11.4	3	14.2	2.82	[1.00, 7.30]*
Total substance use	186	63.9	31	77.5	30	68.2	15	71.4	1.69	[0.88, 3.40]
Total mental disorders (not PTSD)	201	69.1	34	85.0	35	79.5	18	85.7	2.42	[1.12, 5.80]

^a hallucinogens, volatile substances, psychoactive substances.

* $p < .05$. *** $p < .001$.

* PTSD = Post Traumatic Stress Disorder

Overall, those with PTSD had significantly more co-occurring mental health conditions than those without PTSD ($Mdn = 3$, range 1-12 vs. $Mdn = 1$, range 0-10) and this was the case for both males ($Mdn = 2$, range 1-10, vs. $Mdn = 1$, range 0-6) and females ($Mdn = 5$, range 1-12, vs. $Mdn = 1$, range 0-10).

In terms of suicide thoughts and acts, compared with those who did not have PTSD, individuals with a diagnosis of PTSD were significantly more likely to report having

had suicidal thoughts, both in the past 12 months and in their lifetime (Table 4). Those with PTSD were also significantly more likely to report having attempted suicide at some stage in their life.

Table 4 Association between suicidal thoughts and attempts, and PTSD*

Variable	No PTSD (n = 335)		PTSD (n = 61)		OR	[95% CI]
	n	%	n	%		
Thoughts						
Lifetime	100	29.9	31	50.8	2.43	[1.34, 4.39] **
12mths	28	8.4	15	24.6	3.58	[1.64, 7.52] ***
Current	5	1.5	3	4.9	3.41	[0.51, 18.02]
Lifetime attempts	57	17.0	21	34.4	2.56	[1.33, 4.83] **

** $p < .01$ *** $p < .001$

*PTSD = Post Traumatic Stress Disorder

Fewer than one third (22.8%) of participants reported accessing mental health care (Psychiatrist, General Practitioner, Community or Inpatient Mental Health Service, Psychologist or Counsellor) in the 12 months prior to custody; there were no significant differences in health care utilisation between those with and without PTSD. The proportion reporting accessing mental health care before custody was higher among women (41.7%) than among men (19.3%) $OR = 2.98$, 95% CI [1.58, 5.34], $p < .001$.

In terms of self-reported intoxication and offending, 67.2% of participants with PTSD ($n = 41$) reported being under the influence of alcohol at the time of the event that led to their incarceration, and 62.2% ($n = 38$) reported being under the influence of illicit drugs at this time.

Discussion

We found that PTSD was highly prevalent among Aboriginal and Torres Strait Islander people in prison. The 12-month prevalence of PTSD was 12.1% for males and 32.3% for females. The significance of these findings is highlighted by comparison with the general Australian population, where the estimated 12 month prevalence of PTSD is 4.3% in men and 8.3% in women (13). We also identified a significant association between PTSD and experiences of sexual and physical trauma, particularly early in life with the mean age of onset of PTSD for both men and women being late adolescence.

We identified for the first time that PTSD among Indigenous Australians in custody was associated with high rates of co-occurring mental illness and substance use disorders, and high rates of suicide ideation and suicide attempts. These findings suggest that correctly diagnosing PTSD in custodial settings is critical. Failure to identify this highly prevalent and core clinical problem could result in misguided treatment, perpetuating poor clinical outcomes and increasing the risk of poor health outcomes including self-harm and suicide in affected individuals.

Clinical services in custodial settings need to be cognisant not only of the high prevalence of PTSD among prisoners in general, but also the particular risk amongst Indigenous people in custody. Commensurate with this is a need to understand the historical and social context that may contribute to experiences of PTSD amongst Indigenous people, and the cultural context that may shape the expression of this disorder. In addition, the high prevalence of sexual assault identified as the most serious trauma in both men and women highlights a particular clinical challenge that relates to understanding the needs associated with this type trauma and incorporating this understanding into the approach to mental health care.

In this study co-occurring mental disorder and severe substance use disorder was normative. These findings are consistent with those from studies in the general population, where individuals with PTSD often experience co-occurring mental illness and substance use disorders (35, 36). Although high levels of co-occurring disorder may in part be explained by overlapping symptom clusters, particularly with respect to anxiety and depressive disorders, it would certainly not account for such

high rates of these disorders and would not account for the prevalence of psychotic disorders, particularly given the methodology used to make the diagnosis in this study. Nor would overlapping symptom clusters account for the high rates of substance use disorders in this sample.

To contextualise the extent of co-occurring disorders it is relevant to compare to the general Australian population where the prevalence of co-occurring anxiety and affective disorder is 4.5% for women and 2.8% for men. In our study 38.1% of women and 30% of men had co-occurring PTSD and depressive disorder. The prevalence of co-occurring anxiety and substance use disorder in the general Australian population is 1.4% for women and 2.1% for men (13); in our study substance use disorder co-occurred with PTSD in 75.4% of women and 77.5% of men. Given that co-morbidity is associated with poorer health outcomes and greater functional impairment (13), any effective treatment of PTSD needs to also consider the treatment of co-occurring disorders, particularly substance use.

The most prevalent co-occurring substance use disorder in this study was alcohol (59.0%) and two thirds of participants with PTSD reported being intoxicated with alcohol at the time of offending. The association between alcohol use disorders, PTSD and incarceration is also evident in other studies (1, 22, 37). Given emerging evidence that integrated treatment for those with comorbid PTSD and substance use can be effective in prisons (38) clinical services should adopt an integrated approach to meeting these needs. Treatment of alcohol use disorders in custody, and after return to the community, has the potential to both reduce the extreme substance-related mortality and morbidity faced by Indigenous Australians after release from prison (27-29), and may also contribute to reducing recidivism (37). Currently these needs are not being met (22).

Consistent with other studies in both prison and community settings (39, 13), in this study the odds of suffering PTSD were around three and half times higher for females. This is particularly pertinent for Indigenous women who are 22 times more likely than non-Indigenous women to be incarcerated (9). Given this, there is an urgent need to improve screening processes to identify those at risk of PTSD, and to better understand how to manage this condition in custody and in transition back to

the community. It is important to note that the most frequently reported most serious trauma event by Indigenous women was the “other” category (28.6%), highlighting that further work is required to better understand and inform assessment and treatment approaches for Indigenous women in custody.

Despite the very high prevalence of mental disorder identified amongst participants in this study, more than half had not accessed any form of mental health care in the 12 months prior to their incarceration. The reasons for this low level of mental health care contact are likely to be multifaceted, and will require further investigation to inform targeted health service responses (40). Improved access to treatment for PTSD and other mental disorders after release from custody may help to ameliorate some of the poor health, social, and criminal justice outcomes seen in this population.

Although the present study focussed on Indigenous Australians in custody, the findings are likely to have relevance for other incarcerated populations, for whom mental disorders, including PTSD, are common (1, 4). Given the remarkably high prevalence of PTSD in this population, we believe that assessment for PTSD should be a routine component of mental health care in custodial settings. The treatment of mental disorder in custodial settings should be prioritised in a manner consistent with the prevalence. This should be reflected in resourcing and access to appropriately qualified mental health and drug and alcohol specialists, and importantly must also include access to individualised psychological therapies. In addition, any treatment programmes must acknowledge and be responsive to the cultural needs of the individual.

One limitation of this study was that the CIDI 2.1 had not been validated in an Australian Indigenous population, such that we may have over- or underestimated the prevalence of PTSD and other mental disorders. This tool, however, has been used widely in Australian health surveys (13) and has been validated in numerous countries across numerous cultures (31). We have no reason to believe that the CIDI modules we used would be unsuitable for use with Indigenous Australians. In addition to other methodological adaptations in our study (12) we consulted Indigenous mental health experts about the use of anxiety, depressive, and

substance use disorder modules and were advised that these modules were unlikely to be a source of measurement bias due to cultural differences. With respect to PTSD diagnosis, it is possible that the prevalence has been underestimated given limitations in the options of trauma type available within the prompt questions of the CIDI 2.1. The more recent version of CIDI (World Mental Health CIDI), with an expanded list of trauma options, has been shown to generate higher PTSD prevalence estimates (41). A second limitation of this study relates to sampling. It is possible that our sample was not representative of the Indigenous custodial population in Queensland, although we estimated, based on census data, that we interviewed 25% of all Indigenous males and 62% of all Indigenous females in custody at the time of our survey. We cannot guarantee the generalisability of this sample and based on sample size the statistical power may have been low for some comparisons, particularly within subgroups. Similarly, although this is the largest systematic study of an Australian incarcerated Indigenous population, we only sampled participants from one Australian state that accounted for 24% of Australia's Indigenous prisoners (9). While we therefore cannot guarantee that our findings will be relevant in other Australian jurisdictions, we have no reason to believe that they will not be relevant. Indeed, national research suggests that the health profile of Indigenous prisoners is strikingly similar across Australian jurisdictions (5). Key strengths of the study include efforts to undertake the study in a culturally appropriate manner, the relatively large and representative sample, and the use of well-validated assessment tools.

The findings from this study emphasise not only the high prevalence of PTSD, but also the complex nature of this condition in terms of the association with co-occurring disorders, suicidality, poor access to health care and risks of recidivism. The high rates of mental disorder and incarceration in Australia's Indigenous people are linked, and reflect broader social inequity: "inequalities in health arise from inequalities in society" (42). Health inequalities for Australia's Indigenous population remain stark, and although the links between social inequalities and health inequalities are evident worldwide for Indigenous populations (43), there remain many opportunities for improving health care and health outcomes for Indigenous people. Although incarceration should be a sanction of last resort, it nevertheless

provides opportunities to identify and treat unmet health needs, including high-prevalence mental disorders such as PTSD.

References – see Appendix IV

Chapter 5

Substance use disorders among Aboriginal and Torres Strait Islander people in custody: A public health opportunity

Heffernan E, Andersen K, Davidson F, Kinner S. Substance use disorders among Aboriginal and Torres Strait Islander people in custody: A public health opportunity. 2016; (submitted for publication, April 2016).

Contributor	Statement of contribution
Author: Heffernan	Study Design (85%) Data Analysis (75%) Wrote the paper (80%)
Author: Andersen	Study Design (10%) Edited the paper (5%)
Author: Davidson	Data Analysis (25%) Edited the paper (5%)
Author: Kinner	Study Design (5%) Edited the paper (10%)

Abstract

Introduction and Aims: To describe the prevalence, type, and mental health correlates of substance use disorders in a large sample of incarcerated Indigenous Australians.

Design and Methods: An epidemiological survey of the mental health of Indigenous people in custody in the state of Queensland, Australia was conducted using culturally informed methods. The prevalence, type and mental health correlates of substance use disorders were determined using a diagnostic interview and questionnaire.

Results: In a sample of 396 Indigenous people (331 males, 65 females) the prevalence of any substance use disorder was 66%. Alcohol dependence (males 47%, females 55%) was the most common type of substance use disorder, followed by cannabis dependence (males 20%, females 26%). Mental illness (anxiety, depression and psychotic disorder), and lifetime suicide thoughts and attempts, were significantly more likely among those with a substance use disorder. The majority of the sample reported intoxication with alcohol (70%) and/or other drugs (51%) at the time of arrest. Most individuals (87%) had not accessed alcohol and other drug services in the 12 months prior to custody.

Discussion and Conclusions: Substance dependence was normative in this sample and was associated with other forms of mental health adversity, yet most individuals reported no access to health services prior to incarceration. Effectively responding to substance dependence for Indigenous Australians is a public health and criminal justice priority. Culturally capable alcohol and other drug treatment services in custody and in the community are critical, and should be co-located and coordinated with mental health services.

Keywords: Indigenous population; prisons; alcohol; drugs; mental disorders

Background

The 2015 Australian Medical Association report card on the health Aboriginal and Torres Strait Islander people (Indigenous Australians) described significant concern over the escalation in incarceration rates (1). The report rightly interpreted this problem as symptomatic of the health disparity between Indigenous and non-Indigenous Australians. The age standardised rate of incarceration for Indigenous Australians is 13 times that of non-Indigenous Australians (2) and the majority of Indigenous people in custody suffer from mental disorders (3, 4). Substance use disorders in particular are key drivers of this high incarceration rate (5-7) and a significant contributor to the health burden and health inequality of Indigenous Australians (8, 9). Substance use in Indigenous Australians has negative impacts on physical (10), social and community well-being (11). The Australian National Mental Health Commission described the high rates of incarceration of Indigenous people as “shocking” (12) and noted the relationship with the high prevalence of mental disorder in this group. These concerns were also highlighted in a recent annual report that monitors Australia’s progress in addressing the health gap between Indigenous and non-Indigenous Australians (13).

While the custodial setting offers an opportunity (albeit a regrettable one) to access treatment for health-related problems, poor health outcomes post-release including relapse to risky substance use and the elevated risk of preventable morbidity and mortality (14-17) suggest that this rarely translates into sustained health improvements. A key challenge in reversing these poor public health and criminal justice outcomes is ensuring adequate access to culturally appropriate alcohol and other drug (AOD) treatment services for prisoners (11) and for the same individuals after they return to the community.

A recent study of prison entrants in Australia identified just how prevalent problematic substance use is for both Indigenous and non-Indigenous prisoners. However, it also highlighted the need for different service responses to address these challenges for Indigenous people (18). One critical first step in developing such services is understanding patterns of AOD service utilisation before incarceration and the extent and types of substance use diagnosis in this population. We undertook further analysis of data from Australia’s largest systematic study of

mental disorders amongst Indigenous people in custody (3) to describe the prevalence and type of substance use disorder amongst a sample of Indigenous men and women in Queensland custody, and to explore the associations between substance use disorder and other mental disorders, arrest and community health service utilisation in this group prior to incarceration.

Methods

The methodology for this study was a cross sectional survey using a standardised diagnostic instrument and a questionnaire (3).

Participants

Surveys were conducted in six of the nine correctional centres in the state of Queensland. The six targeted centres held approximately 75% of Indigenous males and 90% of Indigenous females incarcerated (either remanded in custody (pre-trial) or sentenced) in Queensland at the time. From these centres 100% of the females and 33% of the males who self-identified as Indigenous (Aboriginal, Torres Strait Islander or both) were approached to participate in the study. Excluded from the sample were those who did not consent to participate, those judged unable to provide informed consent, and those considered too physically or mentally unwell to participate.

Measures

Data were collected via face-to-face interviews in confidential settings within the custodial centres. Prisoners were provided with information about the survey in verbal and written form to ensure that they understood the purpose and voluntary nature of participation. Interviews were conducted by Indigenous researchers with mental health experience, who were trained in the use of the research tools, ethical and emergency care procedures. The research assistants were supported by an Indigenous manager and clinician, and a psychiatrist was available if required. The study relied on the involvement of Indigenous people in the design, implementation, data collection and interpretation of results, and was informed by a comprehensive community consultation process (19).

Assessments were made via a questionnaire, a diagnostic instrument and, where indicated, clinical interviews for diagnosing psychotic disorders. The questionnaire covered demographic, social, custodial, mental health, health care and cultural characteristics. Participants were asked about their history of suicide thoughts and acts (current, past 12 months, lifetime), and about utilisation of AOD services and services for mental health care (psychiatrist, psychologists, general practitioner, inpatient or community mental health services or counsellor) in the 12 months prior to custody.

The Composite International Diagnostic Instrument (CIDI) version 2.1 (20) was administered to assess participants for depression and anxiety during the previous 12 months, and substance use disorders during the 12 months prior to custody. To cater for an incarcerated population we modified the standard CIDI questions for substance use disorders from the past 12 months to the 12 months before incarceration, and used ICD-10 criteria for harmful use and dependence (21).

Ethics Approval

The study design and protocol were approved by the Queensland Health West Moreton Research Ethics Committee and were consistent with guidelines for ethical conduct in Aboriginal and Torres Strait Islander health research (22).

Data Analysis

Data were analysed using Stata v13.0 (23); descriptive statistics are reported, and Odds Ratios (ORs) with 95% confidence intervals (95%CI) are reported for comparisons between those with and without a substance use disorder. We used multivariate logistic regression to adjust for factors that may influence the association between substance use disorders and relevant covariates selected on clinical grounds.

Results

Sample

During the survey period there were 1381 Indigenous males and 116 Indigenous females in custody in Queensland. Of 487 males approached to participate in the study, 347 (71%) were interviewed, 92 declined to participate (19%), 45 were

released (9%), transferred or not available and 3 (1%) were judged too unwell to be seen due to mental illness. Of the 88 females approached to participate in the study 72 (82%) were interviewed; 10 declined to participate (11%), 5 (6%) were released and 1 (1%) was judged too physically unwell to be seen. Among the final sample of 419 individuals, 396 (95%) completed the diagnostic interview and were included in this study. Of these, 81% identified as Aboriginal, 8% as Torres Strait Islander and 12% as both. The mean age of male participants was 31.5 years and was 28.8 years for male non-participants, this difference was statistically significant ($p = 0.03$). There was no statistically significant difference in the mean age of female participants (29.2 years) and non-participants (30.47 years) ($p > 0.05$).

Demographic Characteristics

The majority of participants were male (84%), not in a relationship (53%), had less than 10 years of education (59%) and had been in custody on more than 1 occasion (81%). One third (34%) had at least one mental illness (anxiety, depressive or psychotic disorder). Those with a substance use disorder were on average significantly younger, more likely to be on remand, and more likely to have a mental illness than those without a substance use disorder (Table 1). Given there were no significant differences in the prevalence of substance use disorders (Table 2) and demographic variables between males and females (all $p > 0.05$) they were grouped together for the purpose of regression analysis.

Table 1: Demographic characteristics and odds of mental illness according to substance use disorder (SUD)

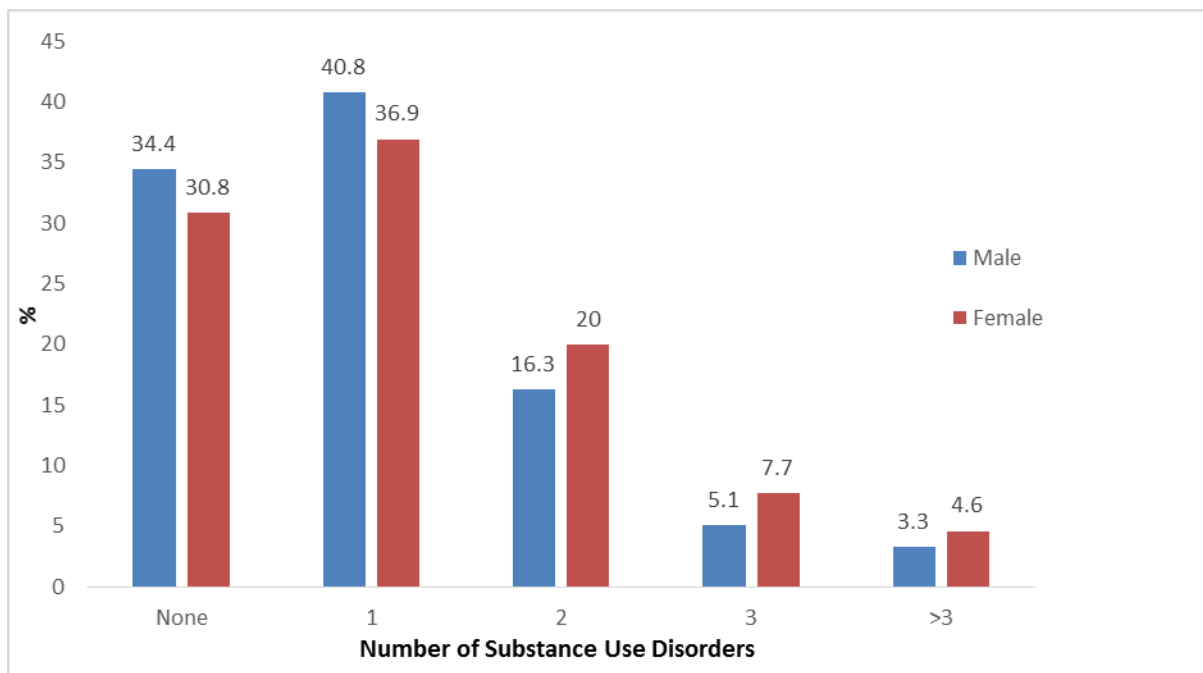
	No SUD (n=134)		SUD (n=262)		OR (95% CI)
	n	%	n	%	
	Age in years				
<30	59	44	147	56	
30+	75	56	115	44	1.63 (1.05-2.53) <i>p</i> =0.023
Gender					
Female	20	15	45	17	
Male	114	85	217	83	1.18 (0.67-2.10) <i>p</i> =0.568
Current Relationship	60	45	126	48	1.14 (0.75-1.74) <i>p</i> =0.532
Education <year 10	70	52	162	62	1.48 (0.97-2.26) <i>p</i> =0.067
Custody Status*					
Remanded	36	27	98	40	
Sentenced	94	70	158	60	1.61 (1.02-2.56) <i>p</i> =0.037
Adult Incarceration*					
1-3	75	57	129	51	
4 or more	56	43	126	49	1.31 (0.86-2.00) <i>p</i> =0.215
Mental illness	35	26	100	38	1.75 (1.10-2.76) <i>p</i> =0.017

* missing data n= 1

Substance Use Disorders

Two thirds of participants (66%) had at least one substance use disorder, almost always including substance dependence (63%). The most prevalent substance use disorder for both men and women was alcohol dependence (males 47%, females 55%), followed by cannabis dependence (males 20%, females 26%). There were no significant differences in the prevalence of substance use disorders (Table 2) between males and females (all *p* > 0.05). A high proportion of both males (25%) and females (32%) had multiple, co-occurring substance use disorders (Figure 1).

Figure 1: Co-occurring substance use diagnoses by gender



Those with a substance use disorder were significantly more likely to be less than 30 years of age (37% vs. 29%, $p = 0.02$), to be on remand (pre-trial detention) (40% vs. 27%, $p = 0.04$) and to have a mental disorder (38% vs. 26%, $p = 0.02$). Associations for potential explanatory variables (Table 1) with substance use disorders were examined using a backward stepwise multivariate logistic regression analysis. The associations between substance use disorder and age less than 30 (AOR = 1.60, 95% CI 1.05-2.44, $p = 0.03$) and mental illness (AOR = 1.72, 95% CI 1.09-2.73, $p = 0.02$) remained statistically significant (LR $\chi^2(2) = 10.7$).

Table 2: Prevalence of substance use disorder according to sex

ICD 10 Diagnosis	Male (n=331)		Female (n=65)		Total (N=396)	
	n	(%)	n	(%)	n	(%)
Alcohol	170	(51.3)	39	(60.0)	209	(52.7)
Dependence	155	(46.8)	36	(55.3)	191	(48.2)
Harmful Use	15	(4.5)	3	(4.6)	18	(4.5)
Amphetamine	36	(10.8)	4	(6.1)	40	(10.1)
Dependence	34	(10.2)	4	(6.1)	38	(9.6)
Harmful Use	2	(0.6)	0	(0.0)	2	(0.5)
Cannabis	70	(21.1)	17	(26.1)	87	(21.9)
Dependence	66	(19.9)	17	(26.1)	83	(20.9)
Harmful Use	4	(1.2)	0	(0.0)	4	(1.0)
Opioids	32	(9.6)	7	(10.7)	39	(9.8)
Dependence	32	(9.6)	7	(10.7)	39	(9.8)
Harmful Use	0	(0.0)	0	(0.0)	0	(0.0)
Sedatives	6	(1.8)	4	(6.1)	10	(2.5)
Dependence	0	(0)	1	(1.5)	1	(0.2)
Harmful Use	6	(1.8)	3	(4.6)	9	(2.2)
Others*	28	(8.4)	11	(16.9)	39	(9.9)
Dependence	24	(7.2)	11	(16.9)	35	(8.8)
Harmful Use	4	(1.2)	0	(0.0)	4	(1.0)
Any Substance	217	(65.5)	45	(69.2)	262	(66.1)
Dependence	208	(62.8)	43	(66.1)	251	(63.3)
Harmful Use	23	(6.9)	3	(4.6)	26	(6.5)

*Others = hallucinogens, volatile substances, stimulants other than amphetamines

Behavioural and health service correlates of substance use disorder

Selected behavioural and health service correlates of substance use disorder are shown in Table 3. At the time of the incident that led to their arrest the majority of participants (males 70%, females 66%) reported being under the influence of alcohol and just over half (males 51%, females 51%) reported being under the influence of illicit drugs, including cannabis (70%), amphetamines (38%) and opioids (20%). Those with a substance use disorder were significantly more likely than those without a SUD to be under the influence of alcohol (49% vs. 21% $p=0.03$) or other drugs (38% vs. 13% $p < 0.001$) at the time of their arrest. Only a minority of participants reported accessing AOD treatment services (13%) or mental health care (23%) in the twelve months prior to custody. Those with a substance use disorder were significantly more likely than those without a substance use disorder to have accessed AOD services (15% vs. 8% $p = 0.03$). Finally, those with a substance use disorder were significantly more likely than those who did not have a substance use disorder to have had lifetime suicide thoughts (OR = 1.68, 95% CI 1.03-2.78, $p = 0.03$) and to have attempted suicide at some point in their life (OR = 1.91, 95% CI 1.05-3.61, $p = 0.03$).

Table 3: Associations between suicidality, intoxication at the time of arrest, service access, and substance use disorder (SUD)

	No SUD (n=134)		SUD (n=262)		OR (95% CI)
	n	%	n	%	
Suicidal Thoughts and Attempts					
Thoughts (Lifetime)	33	25	93	36	1.68 (1.03-2.78) $p=0.028$
Thoughts (12mths)	12	9	31	12	1.36 (0.65-3.02) $p=0.383$
Thoughts (Current)	2	2	6	2	1.55 (0.27-15.86) $p=0.592$
Attempt (Lifetime)	18	13	60	23	1.91 (1.05-3.61) $p=0.025$
Under Influence of substance at the time of arrest					
Alcohol	84	63	192	73	1.63 (1.02-2.60) $p=0.029$
Drugs*	50	37	150	57	2.25 (1.44-3.53) $p<0.001$
Service access in the 12 months pre custody					
Mental Health Care#	29	22	58	22	1.03 (0.61-1.78) $p=0.906$
AOD Service	10	8	40	15	2.23 (1.05-5.18) $p=0.027$

*missing data n=3 (counted as not intoxicated)

#missing data n=15 (10 with SUD)

Discussion

Key Findings

The challenges of substance misuse among Aboriginal and Torres Strait Islander people in Australian custody have been highlighted previously. However, this study has, for the first time, articulated the prevalence, type, co-occurrence and correlates of clinical substance use disorder diagnosis in a systematically surveyed cohort. Substance dependence is highly prevalent (males 63%, females 66%) and substantially more prevalent than hazardous use in this cohort; this is the reverse of what is found in the general Australian community (24). This finding is consistent with suggestions of a causal link between substance dependence and incarceration for Indigenous Australians (11). Alcohol dependence was the most prevalent substance disorder (males, 47% and females, 55%). This has significant clinical implications for health services in custody, which are responsible for both the acute management of substance withdrawal and the longer-term management of recovery and rehabilitation.

Another key finding from this study was the high prevalence of cannabis dependence, with one in five males and over a quarter of females diagnosed as dependent. Co-occurring substance use disorders were also common, with more than a quarter of the sample having two or more substance use disorders. In addition, a substantial proportion had a mental illness, either a psychotic, mood or anxiety disorder (males 29%, females 60%) and, consistent with findings from community studies (25), mental illness was significantly more common amongst those with a substance use disorder. Similarly, while the prevalence of suicide ideation and attempts were high in this group, lifetime suicide thoughts and attempts were significantly more common in those with a substance use disorder. This highlights the complex mental health needs of this group and illustrates the critical importance of providing integrated, culturally informed mental health and substance use care, both in custody and after return to the community.

Our findings also support the role of substance misuse as a significant contributor to the disproportionate incarceration rate for Indigenous people. The majority of individuals in our study reported being under the influence of alcohol and approximately half reported being under the influence of illicit drugs, most often cannabis, at the time of offending. Importantly, those with a substance use disorder were significantly more likely to report intoxication at the time of their arrest. Coupled with well-established evidence of substance-related morbidity and mortality after release from custody (14, 26, 27) it seems

logical that a focus on the provision of adequate and culturally appropriate drug and alcohol interventions would not only serve as an important public health intervention, but assist in reducing the incarceration (and re-incarceration) rate of Indigenous people (11, 28).

This study highlights the critical need to ensure adequate drug and alcohol and mental health treatment for Indigenous Australians in custody. The return to risky substance use after release from custody is normative and predictable (29, 30), as is the high rate of mortality and morbidity of Indigenous Australians following release from custody (14, 15, 26). A recent national review of supply, demand and harm reduction strategies in Australian prisons identified limitations in culturally appropriate approaches to drug and alcohol services for Indigenous Australians and no substantial focus on continuity of care into the community (31). The latest annual snapshot of publicly funded alcohol and drug treatment services in Australia provide no information on what is provided for Indigenous Australians in custody (32). The striking lack of information on culturally competent AOD services for this population stands in stark contrast to the recognition of this as a priority health area for the national campaign to close the health gap between Indigenous and non-Indigenous Australians (33). There is knowledge, evidence and proposals about how to achieve success in this area (11, 34) and it is timely that this becomes a public health priority in Australia.

Strengths and Limitations

Key strengths of this study include the efforts undertaken to ensure that the methodology was culturally appropriate, the relatively large and representative sample, and the use of well-validated assessment tools. One challenge of research in custodial settings is achieving systematic sampling, given the rapid flow of people in and out of custody on a daily basis. We attempted to address this by surveying centres that contained the majority of Indigenous prisoners and we estimated that we interviewed 25% of all males and 62% of all females. Nevertheless, we cannot guarantee the generalisability of this sample to Indigenous prisoners across Australia. Although this is the largest systematic study of an incarcerated Australian Indigenous population, we only sampled participants from the state of Queensland, which accounted for 28% of Australia's Indigenous prisoner population at the time of the study (35). It would be prudent to replicate our research in other Australian jurisdictions, however the health profile of Indigenous prisoners is strikingly similar across

the country (36), suggesting that our findings are likely to have national and potentially international relevance.

Another potential limitation of our study relates to use of the CIDI to assess substance use disorders before incarceration. Our rationale for selecting this tool is articulated in the methods section, and we consider it unlikely that the CIDI would pose a significant risk of culturally-based measurement bias. Although there is a risk of recall bias associated with applying the CIDI to the twelve months before prison, rather than the past twelve months, we consider it unlikely to have substantially affected the findings given that the majority of participants had been in custody for less than a year (males 59.2%, females 75.1%).

Conclusions

This study has described important, additional clinical information, enhancing the understanding of the treatment needs for substance use problems amongst Indigenous Australians in custody. This information has included; the prevalence of dependence, the limited access to appropriate health services prior to custody, and the significant associations between substance use disorders, mental disorder, suicidality and offending in this cohort. These problems are costly, not only to individuals, but also to communities, public health and criminal justice systems (11, 15, 30, 36, 37). Despite advances in knowledge around treatment approaches (38) and the fact that uptake of health care in prisons by Indigenous Australians is usually better than in the community (36) there has been limited progress in reducing post-release substance-related mortality, morbidity and re-incarceration. However, there have been significant advances in the understanding of what is needed in the delivery of alcohol and other drug services to Aboriginal and Torres Strait Islander peoples (34). This includes cultural capability, continuity of care, the need for Indigenous leadership and holistic and integrated services that are strengths based. The critical next step in this challenge is not further evidence about the size of the problem, but rather delivery of culturally appropriate services that are resourced appropriately, at a scale commensurate with need and rigorously evaluated using culturally informed methodologies.

References – see Appendix V

Chapter 6

Discussion

6.1 Overview

As Australia approaches the tenth anniversary of the Close the Gap campaign, the most recent progress report highlighted the need to “stay the course and keep our attention and resources focused on this task” (29 p2). When it comes to the national commitment toward closing the Indigenous health gap, access to health services and treatments has improved but minimal progress has been seen in the lead item of the campaign; life expectancy. Changing the trajectory of health outcomes in the population takes time and is even more challenging for disadvantaged groups such as the population that is the subject of this thesis. The mental health of Aboriginal and Torres Strait Islander people in custody is a significant public health challenge which requires considered and dedicated attention over the long term. This thesis has contributed evidence to inform this process.

Consistent with the aims of the research, this thesis has presented data outlining the 12 month prevalence of mental disorder from a systematic survey of Aboriginal and Torres Strait Islander people in custody, including clinical correlates of mental disorder such as suicide ideation and attempts, health service utilisation prior to custody, intoxication at the time of arrest and experiences of trauma. The findings in isolation paint a bleak picture, but contextualised within the overarching goal of enhancing the evidence base about the mental health problems of Indigenous Australians in custody, this research provides a solid empirical foundation.

The 12 month prevalence of mental disorder was extremely high for both men (76%, n = 331) and women (86%, n = 65), as was lifetime suicide thoughts (50%) and attempts (34%). The respondents reported significant adversity in terms of trauma, with a high prevalence of childhood sexual abuse and many had PTSD (men 12%, women 32%). Substance dependence was also extremely common (63%), particularly alcohol dependence; more than half of the females (55%) and nearly half of the males (47%) were alcohol dependent. Despite this high prevalence of mental disorders, most individuals had not accessed any form of mental health (77%) or drug and alcohol care (87%) in the 12 months prior to their incarceration. These findings highlight both a need and an opportunity.

The papers presented in this thesis provide an overview of the mental health of Indigenous people in custody from a clinical perspective; each manuscript highlights key issues of clinical concern. **Paper 1** outlined the dearth of information relevant to the topic, but summarises the evidence that was used to support strategic reports and plans compiled over more than two decades (6, 11, 94, 95). **Paper 2** identified the important methodological adaptations required for this type of research, articulated the benefits of culturally informed research methods and provided a practical insight into how to implement these. **Paper 3** provided the results from the first systematic Australian study of mental disorder among Indigenous people in custody. **Paper 4** outlined the significant role of trauma in the mental health problems of the study cohort, highlighting important clinical correlates and implications of the findings. **Paper 5** built on the evidence base identifying substance use as a significant problem for Indigenous people in custody. It provided novel information about substance use diagnosis, the association between these disorders and other mental disorder and offending and outlined the unmet need in terms of access to drug and alcohol services.

6.2 Specific contributions to the literature

6.2.1 A culturally informed research method performed and described

One of the strengths of this research was the focus on a culturally informed research process. Central to this was including Indigenous researchers and clinicians in all aspects of the research process and also ensuring extensive consultation with Indigenous communities across Queensland. Cultural competence relates to knowledge, behaviours, attitudes and policies that come together in a system to ensure individuals and organisations work effectively in cross cultural settings (96). Culturally competent research processes not only lead to better research outcomes, but better outcomes for individuals and communities engaged in the research process (97, 98). While it should be a central focus for health research with Indigenous people (81), there have been challenges in attempting to achieve this (99).

Health research involving Aboriginal and Torres Strait Islander people in the past has been marred by practices considered to be misguided, exploitative and harmful (100-102). While standards for Indigenous health research are now well articulated (101-106), Pat Anderson, the Chair of the Lowitja Institute (Australia's national institute for Aboriginal and Torres Strait Islander research) stated research was "a dirty word" for Aboriginal people and was "something once done 'to' Aboriginal communities, now it is done 'with' us and

'by' us" (107). Central to this evolution has been the establishment of specialised research institutions and the development of guidelines and strategic frameworks to guide Indigenous health research (13, 81, 105, 108-110). However, there has remained a tension between this process and concepts of scientifically rigorous research (111), to the extent that these frameworks are sometimes considered incompatible (105); the rejection of Indigenous knowledge in favour of empirical scientific research versus the rejection of science in favour of Indigenous knowledge (112). Paper 2 of this thesis, **Enhancing research quality through cultural competence: a case study in Queensland prisons** (113) highlighted that culturally informed and scientifically rigorous research methods in Indigenous health research are not only compatible, but complementary. This paper contributed to knowledge about conducting culturally informed research by describing a practical example of the implementation of the theoretical guidelines and frameworks that have emerged over the past decade.

This process was not only important in shaping the research method, but being immersed in culturally informed practices reshaped my thinking about the entire thesis and the responses required to address the thesis findings. Throughout the conduct of this research I undertook numerous cultural awareness, cultural practice and cultural assessment training opportunities and worked closely with Indigenous researchers and clinicians. I also expanded my clinical practice with Indigenous people. I believe through this process my cultural capability as a clinician, researcher and service leader improved substantially. I also consider that enhancing my understanding of Indigenous culture, history and concepts of health assisted me in appreciating the challenges Indigenous people face interacting with non-Indigenous models of service delivery. This was one of the extremely valuable learning experiences I gained from undertaking this thesis.

6.2.2 Contribution to the national mental health agenda

This thesis presented the largest systematic survey of mental disorder amongst Aboriginal and Torres Strait Islander people conducted in Australia to date. Significant clinical implications arise from the findings particularly given the internationally accepted standard that all prisoners have the right to access mental health care appropriate to their needs, irrespective of their legal status (114-116). However the mental health related morbidity and mortality of Indigenous prisoners in the immediate period after their release would suggest the health, justice and correctional systems are failing in this regard (8, 117-119). This study highlighted the mental health needs of Indigenous Australians in custody, it has

helped inform key national reports on mental health and Indigenous health that have raised awareness of this important public health challenge with a goal to mobilise action toward better outcomes.

In the most recent report card from Australia's National Mental Health Commission, the over-representation of Indigenous people in custody and the mental health problems of this group were described as "shocking" (94 p72). The report quoted the findings from paper 3 of this thesis, **Prevalence of mental illness among Aboriginal and Torres Strait Islander people in Queensland custody** (78) to highlight the extent of these problems (94 p73) and the need to address this challenge. Similarly, the 2015 Close the Gap progress and priorities report (28), included in its nine recommendations for future strategies, a recommendation to address mental health and suicide prevention as a new priority focus and a recommendation to develop targets to reduce imprisonment and violence rates. The report also quoted findings from paper 3 of this thesis (28 p40). In addition the Australian Medical Associations 2015 report card specifically addressed the rising incarceration of Indigenous Australians identifying it as a problem intimately associated with health. In doing so the report detailed findings from this thesis to demonstrate the link with mental health problems (120 p8).

6.2.3 Novel findings about mental health challenges and needs

The prevalence of mental illness amongst Indigenous people in custody was found to be much higher than prevalence estimates for the Australian population. One advantage of having prevalence estimates is that it enables comparison with other studies and can therefore help inform relative health needs. Paper 3 in this thesis, **Prevalence of mental illness among Aboriginal and Torres Strait Islander people in Queensland custody** (78) described these estimates for the first time in a systematic sample. This has enabled comparison to the 2007 Australian Survey of Mental Health and Well Being (4), which also provided 12 month prevalence estimates for anxiety, depressive and substance use disorders and the 1997 survey for psychotic disorders (121), which provided a 12 month prevalence estimate for psychotic disorder in the Australian community.

The comparison is stark; there were substantial differences in the 12 month prevalence estimates of mental disorders between men in the Australian community and Indigenous men in prison; anxiety 11.0% vs 20.2%, depression 4.1% vs 11.4%, psychosis 0.47% vs 8.1% and substance use disorders 7.0% vs 65.5%. The comparison was even more

dramatic for women; anxiety 18.0% vs 50.7%, depression 6.6% vs 29.2%, psychosis 0.47% vs 25.0% and substance use disorders 3.3% vs 69.2%. While there are clear limitations with this comparison (e.g. a lack of age standardisation and controlling for important covariates such as socio-economic status) these estimates provide an important empirical foundation for the field. They highlight clearly the substantial burden of mental disorders in this vulnerable population.

Apart from the estimates derived from the general population, another comparison group that warrants consideration is the non-Indigenous custodial population (87, 88). In both Indigenous and non-Indigenous cohorts there is an extremely high prevalence of mental disorder compared to the general population. With the exception of trauma experiences, PTSD, alcohol and cannabis use disorders which appear to be a particular challenge for Indigenous prisoners (discussed below), there is marked similarity in the type of mental disorders suffered by both Indigenous and non-Indigenous prisoners. This is consistent with findings of a 2006 NSW (122) and those of the comprehensive New Zealand (NZ) prisoner survey that found the Indigenous (Maori) inmate population had very similar rates of mental disorder to the non-Indigenous prisoner population (123).

A key finding from the NZ study was that despite very similar rates of mental disorder “Maori and Pacific Island prisoners have fewer prior (psychiatric) admissions, fewer community outpatient appointments and less treatment in prison for the same degree of psychiatric morbidity” (123 p732). The Australian evidence and the findings from this thesis suggest a similar story. Despite prevalence estimates of mental disorder that are remarkably similar when compared to non-Indigenous prisoners, Indigenous prisoners report, in every national prisoner health survey (71), lower levels of diagnosis and treatment for mental disorder in the community. In the sample presented in Chapter 5 of this thesis, fewer than one third (23%) of participants reported accessing mental health care (Psychiatrist, General Practitioner, Community or Inpatient Mental Health Service, Psychologist or Counsellor) in the 12 months prior to custody and only 13% of individuals with a substance use disorder accessed Alcohol or Other Drug services in the 12 months prior to custody. The barriers to accessing health care for Indigenous Australians have been previously described (11, 72, 124) and these findings emphasise the importance of having culturally informed and accessible health services.

Another key finding in this thesis was the disproportionately high prevalence of mental disorder amongst women relative to men. While the finding is not unique, as higher estimates of mental disorder amongst women compared to men are observed generally in custodial populations (87, 125, 126), it serves to highlight women in custody as a particular at risk group from a mental health perspective. One theory based on American prisoner studies (127-129) is that because fewer women are arrested and incarcerated, those that come to the attention of the criminal justice system have complex mental health problems, social disadvantage, and include disproportionate representation of minority population groups.

In Australia, Indigenous women are the fastest growing cohort in the prison population (53). This thesis has presented clear evidence that the vast majority of these women have significant mental health problems including; major mental disorder, co-occurring substance use and a high prevalence of trauma experiences and PTSD. This is supported by findings in NSW where mental health problems, social disadvantage and family challenges for Indigenous women, in custody and transitioning into the community (130-132) are extremely common. The most recent study by Professor Eileen Baldry and colleagues from the University of Sydney (79) highlighted the challenges for Indigenous women relative to other cohorts in custody. The study identified Indigenous women had high levels of “complex needs” (more than one mental disorder). It also demonstrated that the presence of complex need in turn was disproportionately associated with earlier and more frequent contact with the criminal justice system, poverty, unemployment and homelessness.

Another particular at risk group in custody are those with psychotic disorder; in Chapter 3 estimates of psychotic disorder were reported for both men (8%) and women (25%) and were orders of magnitude higher than those reported for the general community (133). The three step method including screening, psychiatrist interview and the use of a diagnostic panel to ratify psychotic disorder diagnosis, outlined in Chapter 2, provides confidence that over estimation of the prevalence is unlikely. The similar estimates of psychotic disorder in both male and female prisoner populations found in other studies (67, 77, 126, 134) support this. People with psychotic disorders experience high rates of illness morbidity such as functional impairment and disability, persistent symptoms, drug and alcohol comorbidity, social adversity and illness relapses (133-135). Similarly, the demands on services are significant, and require responses and partnerships from multiple services

whether this is in custody or in the community. To compound this, assessing psychotic illness amongst Indigenous people is particularly complex (89, 90) as we identified in Chapters 2 and 3.

Another important mental health finding identified in Chapters 4 and 5 was related to suicide; over a quarter of all men (28%) and over half of all women (53%) in the sample had thought about suicide at some stage during their life, and nearly one in five men (18%) and a third of women (31%) had attempted suicide. These figures are likely to be conservative as cross sectional surveys are depleted of those with completed suicides. While suicide is a significant public health problem for Indigenous people irrespective of whether they are in custody or not (136-139), those recently released from custody are a particularly high risk group (119). This emphasises both the importance of mental health transitional support for those leaving custody, and the need for a focus more broadly on the concerning rates of suicide among Indigenous people in the community (140).

6.2.4 The relationship between mental disorder and incarceration

There are complex reasons underpinning the high rates of Indigenous incarceration in Australia and this was discussed in Chapter 1. Australia is not unique in this regard. High rates of incarceration exist for Indigenous persons in other countries, for example New Zealand and Canada (141, 142). While it is beyond the scope of this discussion to explore in detail, it is important to emphasise the link between health inequity, including mental health, and social inequity, including incarceration, for Indigenous peoples world-wide (20, 59). This thesis identified that nearly half the sample (46%) had been incarcerated four or more times and over half of the males (52%) and over a third of the females (38%) had been in youth custody. Given that nearly three quarters (73%) of men and nearly nine out of ten women (86%) had at least one mental disorder there is an association between incarceration and having a mental disorder for this sample. This association is recognised by the Australian Medical Association, who in their 2015 report on Indigenous health, cogently argued an intimate connection between the health gap, particularly mental health, and the incarceration gap for Indigenous people (120).

The evidence outlined in the literature review of this thesis clearly indicates the mental health needs for Indigenous Australians in custody are not being met. Indeed it is difficult to identify what resourcing has been allocated specifically to mental health in custody in Australia (71, 143, 144), or indeed what services are available (145). This is particularly

relevant in Australia as prisoners are excluded from the national health insurance scheme, Medicare (146).

It is known that mentally ill people are over represented in those who are arrested by police and more often than not their first contact with mental health services is preceded by contact with the criminal justice system (147). Pathways into the criminal justice system for Indigenous Australians are intimately associated with mental health needs (79). The reported uptake of health care for Indigenous people in custody is better than in the community, and self-reported mental health at the time of release compared to entry is also better (7, 71). So while incarceration is regrettable there is an opportunity for health intervention. However, the health and social outcomes for those with mental illness once out of the criminal justice system, particularly for Indigenous Australians, are often poor (148). This highlights the need for continuity of health care between custody and the community. Beyond this it highlights the need for greater access to health services for Indigenous people in the community in general. The majority of individuals with mental disorder identified in this thesis did not access health services in the community prior to custody. Ensuring the uptake of health care in the community before contact with the criminal justice system is a clear priority. This again supports the need for accessible and culturally appropriate health services in the community.

6.2.4 Developing an understanding of the relevance of trauma and PTSD

Paper 4 in this thesis, **PTSD among Aboriginal and Torres Strait Islander people in custody in Australia: prevalence and correlates** highlighted trauma as a pervasive experience for Indigenous people in custody and identified that one in nine males and one in three females suffered from PTSD. Not only was PTSD highly prevalent but for those with the condition the onset was early in life (late teens) and was significantly associated with higher rates of other mental disorders, suicide thoughts and acts and limited access to health care prior to custody. While the impact of PTSD on Indigenous communities has become increasingly recognised (46, 149), this thesis, which has built on the work of others in this area (77, 150), has demonstrated that those in custody are a significant and particularly high risk group for trauma experiences and PTSD. While this must be met with proportionate responses a challenge is the limited knowledge about the presentation and treatment of PTSD amongst Indigenous Australians (122) influenced by their unique cultural, spiritual, health-related and historical experiences (19, 149).

Complex PTSD (151, 152) is a condition that includes the impacts of prolonged exposure to trauma experiences in the context of interpersonal relations, for example childhood sexual abuse. The findings in this thesis would suggest this concept is highly relevant to Indigenous people in custody. The well established guidelines for treatment of this condition in non-Indigenous populations (153, 154), are in stark contrast to those for Indigenous Australians, described as “in their infancy” (152 p2). One important approach to supporting individuals with complex PTSD, likely to be relevant to Indigenous Australians is trauma informed care (155). This is an approach to service delivery that can be adopted by organisations working with vulnerable populations and requires an understanding of and responsiveness to, the impacts of trauma. It uses a strengths based approach to care and emphasises physical and emotional safety to support opportunities for the development of empowerment in those who have experienced trauma. Other research conducted by the candidate and colleagues has supported trauma informed care as an important and appropriate response in the mental health management of Indigenous women in custody (156).

6.2.5 Building the evidence about the extent and type of substance use disorders

This thesis has provided for the first time data not only about the diagnostic prevalence of substance use disorders among Indigenous people in custody, but also the association with mental health adversity and intoxication at the time of arrest. Previous evidence supporting the notion that Indigenous Australians in custody appear to have high rates of substance use disorders has been largely based on proxy measures of substance misuse (7, 71). The data about substance use disorders, outlined in paper 5 of this thesis; **Substance use disorders among Aboriginal and Torres Strait Islander people in custody: a public health opportunity**, highlighted just how prevalent substance dependence was in this population. The major contributor to this was alcohol dependence for both men and women, which has important clinical implications not only for challenges such as managing physical withdrawal, but also treatment implications to help prevent relapse.

While harmful and hazardous use of alcohol amongst Indigenous Australians in the community (157) is a health challenge, those in custody are a particular at risk group, even relative to non-Indigenous prisoners (158). There are opportunities to address this problem; the knowledge and practice guidelines to support the treatment of alcohol and other substance use disorders is well developed (124, 159). However, continuity of

treatment into the community to prevent relapse and risks for re-incarceration (64, 124, 158, 160) is a major challenge. Many participants in this study attributed alcohol and drug use to their offending. Relatively few reported accessing alcohol and drug services prior to custody. The provision of culturally appropriate integrated mental health and drug and alcohol services is likely to provide important public health benefits and also better outcomes from a criminal justice perspective (124, 148, 161).

6.3 Limitations

The rapid flow of individuals in and out of custody makes sampling a unique challenge with this population. This was the case with the study upon which this thesis is based. The sampling strategy, every third male and all females, was intentionally simple and designed to reduce the impact of rapid changes in the prison number. The use of Queensland Corrective Services (QCS) census data prior to data collection helped inform the sampling strategy and the use of QCS census data during the data collection phase enabled an approximation of the sample frame. While it is not possible to be entirely confident about the fidelity of the sampling process across the sites, the pragmatic strategies used in the prevalence survey are likely to have minimised the risk of sampling bias.

The diagnostic tool chosen for this study was the CIDI Auto 2.1. The challenge at the time was that there was no standardised diagnostic interview tool validated for an Australian Indigenous population. The CIDI was considered as it had been used with Indigenous Australians in the largest mental health survey in Australia (4) and largest survey of a general prisoner population (67) and it had been validated in numerous cultures worldwide (80). Nevertheless before using the CIDI advice from Indigenous mental health researchers and clinicians from the expert reference group was sought. It was the expert opinion that anxiety, depression and substance use disorder modules were likely to be appropriate for use with Indigenous people. The twelve Indigenous Mental Health Workers recruited to the research team were trained in the use of the tool. These research staff commented that they thought the risk of cultural bias was low and the CIDI would have meaning and utility with Aboriginal and Torres Strait Islander people. However, as outlined earlier in Chapter 2 of the thesis, a different method was required to establish diagnosis of psychotic illness as it was considered that the risk of cultural bias with this module in the CIDI was significant. A three step method was devised and employed to determine psychotic disorder diagnosis that included screening, psychiatrist review and diagnostic confirmation using a diagnostic panel with a cultural advisor.

The generalisability of a study based on a sample of Queensland Indigenous prisoners relative to Indigenous prisoners in other jurisdictions needs to be considered, particularly given that the study was a cross sectional survey from Queensland only and the sample size was relatively small for a survey. While this is a limitation, this study remains the largest systematic survey of the mental health of Australian Indigenous prisoners; the sample was 25% of all males and nearly two thirds of all females in custody at the time. The generalisability to other jurisdictions in Australia remains a limitation, however while this study focused on a Queensland custodial population, who were 22% of the Indigenous people in custody in Australia at the time (162), the indications from Indigenous prisoner health surveys nationally (7, 70, 77, 163) suggest that there is a substantial similarity in the health of all Indigenous prisoners across Australia.

6.4 Dissemination and translational activities

The findings from the candidates' research have been disseminated at over thirty national and international conferences, five peer reviewed journal articles, numerous community symposiums and have been the subject of media attention through print, radio and television, including the candidate being interviewed for two national television programmes (Living Black, SBS and ABC News 24). The candidate has also been the first author of a book chapter specifically written to assist Aboriginal drug and alcohol workers (164) and also a chapter, Mental health and the criminal justice system (9), in a text book widely used in Australian universities. This text was recently recognised on the Australian Policy Online website as the most viewed Health and Well Being text, the most viewed Indigenous text and the most viewed research text (165). The candidate has also co-authored journal articles in the area of Indigenous mental health in custody, including the first study to validate a screening tool for drug and alcohol risk amongst Indigenous people in custody (86) and a study about medication knowledge amongst a large prisoner cohort that included Indigenous Australians (166).

The candidate and a colleague (Kimina Andersen) have collaborated to provide training in the area of the intersection between Indigenous Australians, mental health problems and involvement in the criminal justice system with members of Queensland Police and Queensland Corrective Services. The candidate has also presented some of the findings of this thesis and provided training on this area to both the Queensland District and Magistrate Court Judges. The candidate has also provided expert testimony about the mental health of Indigenous people to Queensland's Mental Health Court; a supreme court

established under Queensland's Mental Health Act to determine issues of criminal responsibility and fitness for trial where mental disorder may be relevant to an individual's offending.

There have been a number of changes in Queensland's Forensic Mental Health Services response to Indigenous Australians that have been informed by the candidates' area of research. These have included the establishment of an Indigenous leadership position within the service to enhance both clinical and strategic processes. This has included the support and supervision of Indigenous mental health workers, the provision of Indigenous clinician led triage sessions in the largest male and female remand prisons in Queensland. The candidate has also been a member of the expert reference group tasked by the Queensland Indigenous Health Unit with the development of the five year Indigenous Mental Health Plan 2016-2021. In addition the candidate is also part of an expert panel supporting a tender process to conduct a systematic survey of mental disorders amongst Indigenous Australians in the Queensland community. If successfully completed this process would be the first systematic population level survey of Indigenous mental health in Australia. The candidate has also been invited to be a forum facilitator for the Criminal Justice component of the National Aboriginal and Torres Strait Islander Mental Health Forum, to be held in Brisbane 2016. This national forum is tasked with identifying actions to recommend to the Australian Health Ministers Advisory Council.

In addition the candidate and colleague (Kimina Andersen) successfully tended for \$1.6M AUD from National Closing the Gap funding, through Queensland's Indigenous Health Unit, to pilot and evaluate a unique mental health service for Indigenous women in custody. This model (The Indigenous Mental Health Intervention Programme) is Indigenous led and staffed solely by Indigenous clinicians and mental health workers. It focuses on the delivery of culturally informed mental health care through a prison in reach model and partnership with an Indigenous non-government organisation to support transitional care into the community. The pilot commenced in 2015 and prior to the completion in June 2016 the results were such that the project attracted an additional 2 years funding (\$1.6M) and the programme is likely to receive funding in 2017 to be trialled in a male prison.

The findings in this thesis have also been widely cited including in the National Mental Health Commission Report Card (94) and the 2014 and 2015 Closing the Gap National

Progress Reports (27, 28). This work has also attracted competitive research funding (2014-2015, \$255,866AUD) from *Beyondblue* (167) to further examine PTSD amongst Indigenous women in custody. The candidate was Chief Investigator of the study and first author of the technical report that has now been published (156). The candidate has also successfully acquired funding from the Queensland Mental Health Commission (2015-2016, \$155,817 AUD) to support research into the area of mental health and police. This includes a study focused on fitness for interview, and also developing models of service delivery for mental health clinical support to police in mental health crisis situations that include Indigenous Australians. The candidate is also a co-investigator in an NHMRC funded study to examine the mental health of youth (14-18 years old) in detention or on community orders to youth justice in Queensland. Over half of these individuals are Indigenous.

6.5 Future research

There is now strong evidence about the prevalence of mental disorders amongst Indigenous people in custody and research priorities should be focused on mental health interventions. One key area of future research is the need to evaluate the impacts of a culturally capable model of service delivery. The candidate is currently involved in research evaluating an Indigenous led, culturally informed model of service delivery (outlined above). Outcome measures include proportion of individuals engaged with services, pre and post intervention measures of mental health, service access post custody, recidivism and post release morbidity (hospitalisation) and mortality measures. Other important research studies that have been incorporated into this broader project include the development of a medication awareness package and the evaluation of the use of the Stay Strong App (168), a structured mental health and substance misuse intervention using Indigenous specific content and imagery in a computerised (iPAD app) format. This later project will be the first of its kind to be made available in a custodial setting.

Another key area for future research should be mental health interventions for those in contact with the criminal justice system prior to reaching custody; an early intervention approach. Key areas include the interface with police and courts. The candidate is involved in a number of pilot projects with police that offer research opportunities to enhance mental health service delivery to first responders to crisis situations involving those with suspected mental illness or mental health problems. There is an opportunity to

identify Indigenous persons in this cohort and examine the impact of early intervention. The candidate is also leading a collaborative research project with police and forensic medical officers, looking at fitness for police interview and appropriate responses for those suspected to be unfit. In addition a new Mental Health Act is expected to be enacted in Queensland in November 2016 and brings with it a proposal to expand the assessment and diversion opportunities for individuals with mental illness before the magistrate's courts. A key research initiative, will include examining the needs of Indigenous people with mental health problems before the courts and an evaluation of the impact of mental health assessments and mental health management recommendations to magistrates.

6.6 Conclusions

The aims of this thesis were to present data on the prevalence of mental disorder in a representative sample of Indigenous people in Queensland prisons and describe any relevant mental health correlates. Each of the peer reviewed papers that formed part of the examinable material have directly addressed these aims; **paper 1**, identified the gaps in the existing literature, **paper 2**, outlined the unique methodological adaptations that were required to undertake this research in a culturally appropriate manner, **paper 3** outlined the key findings, prevalence estimates of mental disorder and **papers 4 and 5** further explored particularly significant findings including trauma, PTSD, and substance use disorders and the associated mental health correlates.

The findings outlined in this thesis while painting a bleak picture of the mental health of Aboriginal and Torres Strait Islander people in custody provide evidence that can be used in a positive way to support change. Key themes that emerge from the findings in this thesis about the mental health needs for Indigenous people in custody, merge with the themes from other significant work in the area of both general health needs of Indigenous Australians and the health needs of prisoners (29, 79, 124, 148, 169-171). These themes include;

- The importance of access to culturally appropriate services to help support positive social and emotional wellbeing in the Indigenous community, thereby reducing risk factors associated with contact with the criminal justice system.
- Access to culturally capable mental health services that involve Indigenous people in leadership, design and delivery.
- Integrated services that support not only mental health and drug and alcohol needs but also cultural, spiritual, and social needs.

- Continuity of care from custody to the community and partnerships with community organisations.
- Resourcing that is proportionate to need.
- Services that are trauma informed, gender sensitive, strengths based and respectful of the unique historical experiences of Indigenous Australians.

While these items may sound aspirational, they are eminently achievable. The themes are consistent with the National Mental Health Commissions report of expert advice on addressing challenges with Indigenous mental health (172) and the themes drawn from evidence based effective responses in Indigenous mental health service delivery (72). The high prevalence of mental disorder and particularly complex problems such as co-occurring disorders, psychotic illness and suicide thoughts and actions amongst Indigenous people in custody clearly requires a well-resourced mental health service with access to Indigenous mental health expertise and leadership. Resourcing remains a challenge and there is very limited information available about the nature and extent of mental health services provided to Indigenous people in custody. The limited evidence that is accessible suggests a remarkably low availability of psychiatrists, psychologists and Aboriginal Health Workers and overall an apparent shortfall in the resourcing of services for the mentally ill in custody (145, 173). Resources are therefore required to not only meet the clinical needs of this cohort in an equitable manner but also to develop cultural capability within the workforce. This will require dedicated funding to support development of the Indigenous mental health work force and also to enhance the cultural capability of the non-Indigenous mental health workforce, and criminal justice workforce through training activities and capacity exchange.

Mental health services for Indigenous people must be based on an understanding of the unique historical, social, cultural, spiritual and health views of this population (72, 174). A clear example of the challenges in this regard is a finding from a study co-authored by the candidate. This study identified, in a large representative sample of prisoners in Queensland, that nearly half were taking medication, but medication knowledge was extremely poor generally and worst for Indigenous prisoners (166). Mental health services that are meaningful to Indigenous people in custody need to include Indigenous leadership and be culturally informed, there are a number of examples of success in this regard (132, 170, 175, 176). A key to success in the delivery of these services is to ensure that they are

holistic, with a focus not only on the treatment of mental disorder, but also social and cultural needs (22, 61, 176).

Substance use disorders should be considered the norm in this group and therefore any mental health response must include integration between mental health and alcohol and other drug services. Key to success is the capacity for culturally informed community transition planning, continuity of care, diversionary options and social supports. There is now sufficient knowledge, expertise and evidence to inform what should be done and this involves resourcing proportionate to need, service delivery appropriate to culture, and standards, monitoring and evaluation to ensure successful implementation.

The mental health of Indigenous Australians has been increasingly recognised as a significant contributor to the Indigenous health gap. Closing the Indigenous health gap in Australia must incorporate substantial efforts to improve the mental health of Indigenous people. While this thesis has demonstrated that the mental health of Aboriginal and Torres Strait Islander people in custody is exceptionally poor compared to the Australian population, it has also highlighted the opportunities to reduce these disparities. Commitment to do so needs to be considered, culturally informed, integrated and sustained in effort.

Bibliography

1. Australian Bureau of Statistics [Internet]. Canberra: ABS; 2015. About Aboriginal and Torres Strait Islander statistics; [cited 2015 Oct 20]. Available from: www.abs.gov.au/websitedbs/cashome.nsf/4a256353001af3ed4b2562bb00121564/7464946b3f41b282ca25759f00202502!OpenDocument.
2. Gee G, Dudgeon P, Schultz C, et al. Aboriginal and Torres Strait Islander Social and Emotional Wellbeing. In: Dudgeon D, Milroy H, Walker R, editors. Working Together: Aboriginal and Torres Strait Islander Mental Health and Well Being Principles and Practice. Canberra: Australian Government; 2014: 55-68.
3. World Health Organization [Internet]. Geneva: WHO; 2004. Mental health: a state of well-being; [cited 2015 Jul 7]. Available from: http://www.who.int/features/factfiles/mental_health/en/.
4. Slade T, Johnston A, Teeson M, et al. The Mental Health of Australians 2. Report on the 2007 National Survey of Mental Health and Well Being. Canberra: Department of Health and Ageing, 2009.
5. World Health Organization. The ICD-10 Classification of Mental and Behavioural Disorders. Geneva: World Health Organization; 1993.
6. Johnston EC. Royal Commission into Aboriginal Deaths in Custody. National Report Vol 1 to 5. Canberra: AGPS, 1991.
7. Indig D, McEntyre E, Page J, Ross B. 2009 NSW Inmate Health Survey: Aboriginal Health Report. Sydney: Justice Health, 2010.
8. Kinner S, Preen D, Kariminia A, et al. Counting the cost: Estimating the number of deaths among recently released prisoners in Australia. *Med J Aust* 2011; 195: 64-8.
9. Heffernan E, Andersen K, McIntyre E, Kinner S. Mental Health and the Criminal Justice System. In: Purdie N, Dudgeon, P, Walker, R, editors. Working Together: Aboriginal and Torres Strait Islander Mental Health and Wellbeing Principles and Practice. ACT: Australian Government, 2013: 165-78.

10. Baldry E, McDonnell D, Maplestone P, Peeters M. Ex-prisoners, homelessness and the state in Australia. *Aust NZJ Criminol* 2006; 39: 20-33.
11. Swan P, Raphael B. The Ways Forward: National Aboriginal and Torres Strait Islander Mental Health Policy National Consultancy Report. Canberra: Australian Government, 1995.
12. Heffernan E, Anderson K, Dev A. Inside Out – The Mental Health of Aboriginal and Torres Strait Islander People in Custody Report. Brisbane: Queensland Government, 2009.
13. National Health and Medical Research Council. Values and Ethics: Guidelines for Ethical Conduct in Aboriginal and Torres Strait Islander Health Research. Canberra: Commonwealth of Australia, 2003.
14. Australian Bureau of Statistics [Internet]. Canberra: ABS; 2012. 2011 Census Counts – Aboriginal and Torres Strait Islander Peoples; [cited 2015 Aug 10]. Available from: <http://www.abs.gov.au/ausstats/abs@.nsf/lookup/2075.0main+features32011>.
15. Australian Bureau of Statistics. Estimates and Projections, Aboriginal and Torres Strait Islander Australians, 2001 to 2026. Canberra: ABS; 2014.
16. Australian Bureau of Statistics. Life tables for Aboriginal and Torres Strait Islander Australians, 2010-2012. Canberra: ABS; 2013.
17. Dudgeon P, Wright M, Paradies Y, et al. Aboriginal Social, Cultural and Historical Contexts. In: Dudgeon P, Milroy H, Walker R, editors. Working Together: Aboriginal and Torres Strait Islander Mental Health and Wellbeing Principles and Practice. ACT: Australian Government; 2014: 3-24.
18. Bringing them home: National Enquiry into the Separation of Aboriginal and Torres Strait Islander Children from their Families. Canberra: Commonwealth of Australia, 1997.
19. Atkinson J, Nelson J, Brooks R, et al. Addressing Individual and Community Transgenerational Trauma. In: Dudgeon P, Milroy H, Walker R, editors. Working Together: Aboriginal and Torres Strait Islander Mental Health and Wellbeing Principles and Practice. Canberra: Department of Health and Ageing; 2014.

20. Gracey M, King M. Indigenous health part 1: Determinants and disease patterns. *Lancet* 2009; 374: 65-75.
21. Marmot M. Social determinants of health inequalities. *Lancet* 2005; 365: 1099-104.
22. Marmot M. Social determinants and the health of Indigenous Australians. *Med J Aust* 2011; 194: 512-3.
23. Australian Government [Internet]. Canberra: Commonwealth of Australia; 2008. Apology to Australia's Indigenous peoples. Available from: <http://www.australia.gov.au/about-australia/our-country/our-people/apology-to-australias-indigenous-peoples>.
24. Aboriginal and Torres Strait Islander Social Justice Commissioner, editor. Close the Gap: National Indigenous Health Equality Targets. Outcomes from the National Indigenous Health Equality Summit. Canberra: 2008.
25. Aboriginal and Torres Strait Islander Social Justice Commissioner. Social Justice Report, 2005. Sydney: Human Rights and Equal Opportunity Commission, 2005.
26. Council of Australian Governments [Internet]. Canberra: Standing Council on Federal Financial Relations; 2012. National Indigenous Reform Agreement 2012. Available from: http://www.federalfinancialrelations.gov.au/content/npa/health_indigenous/indigenous-reform/national-agreement_sept_12.pdf.
27. Holland C. Close the Gap: Progress and Priorities Report 2014. Canberra: Australian Human Rights Commission, 2014.
28. Holland C. Close the Gap: Progress and priorities report 2015. Canberra: The Close the Gap Campaign Steering Committee, 2015.
29. Holland C. Close the Gap: Progress and Priorities Report 2016. Canberra: Australian Human Rights Commission, 2016.
30. Australian Bureau of Statistics. The national survey of mental health and well-being. Canberra: ABS, 1997.

31. Australian Bureau of Statistics. National survey of mental health and well-being: Summary of results, 2007 (4326.0). Canberra: ABS, 2008.
32. Fazel S, Khosla V, Doll H, Geddes J. The Prevalence of Mental Disorders among the Homeless in Western Countries: Systematic Review and Meta-Regression Analysis. *PLoS Med* 2008; 5: e225.
33. Fazel S, Danesh J. Serious mental disorders in 23,000 prisoners: A systematic review of 62 surveys. *Lancet* 2002; 359: 545-50.
34. Australian Bureau of Statistics [Internet]. Canberra: ABS, 2002. National Aboriginal and Torres Strait Islander Social Survey. Available from: <http://www.abs.gov.au/AUSSTATS/abs@.nsf/allprimarymainfeatures/2575DCC732E7E99CA25765E001589D4?opendocument>.
35. Australian Bureau of Statistics [Internet]. Canberra: ABS; 2008. National Aboriginal and Torres Strait Islander Social Survey. Available from: <http://www.abs.gov.au/AUSSTATS/abs@.nsf/allprimarymainfeatures/357509A09C098E90CA257FA200272E0B?opendocument>.
36. Australian Bureau of Statistics. National Aboriginal and Torres Strait Islander Survey, 1994 (4188.0.55). Canberra: ABS, 1994.
37. Australian Institute of Health and Welfare. The health of Australia's Aboriginal and Torres Strait Islander peoples 2015 (Cat. no. IHW 147). Canberra: AIHW, 2015.
38. Australian Bureau of Statistics. National Aboriginal and Torres Strait Islander Health Survey (4715.0). Canberra: ABS, 2006.
39. Australian Bureau of Statistics. Australian Aboriginal and Torres Strait Islander Health Survey: First Results Australia, 2012-2013 (4727.0.55.001). Canberra: ABS, 2013.
40. Brazier J, Roberts J, Deverill M. The estimation of a preference-based measure of health from the SF-36. *J Health Econ* 2002; 21: 271-92.

41. Kessler RC, Andrews G, Colpe LJ, et al. Short screening scales to monitor population prevalences and trends in non-specific psychological distress. *Psychol Med* 2002; 32: 959-76.
42. Jorm A, Bouchier S, Cvetkovski S, Stewart G. Mental health of Indigenous Australians: A review of findings from community surveys. *Med J Aust* 2012; 196: 118-21.
43. Black E, Ranmuthugala G, Kondalsamy-Chennakesavan S, et al. A systematic review: Identifying the prevalence rates of psychiatric disorder in Australia's Indigenous populations. *Aust NZJ Psychiatry* 2015; 49: 412-29.
44. Hunter E, Gynther B, Anderson C, et al. Psychosis in Indigenous populations of Cape York and the Torres Strait. *Med J Aust* 2012; 196: 133-5.
45. Jablensky A, McGrath J, Herrman H, et al. Psychotic disorders in urban areas: an overview of the Study on Low Prevalence Disorders. *Aust NZJ Psychiatry* 2000; 34: 221-36.
46. Nadew G. Exposure to traumatic events, prevalence of posttraumatic stress disorder and alcohol abuse in Aboriginal communities. *Rural Remote Health* 2012; 12: 1-12.
47. Almeida O, Flicker L, Fenner S, et al. The Kimberley assessment of depression of older Indigenous Australians: Prevalence of depressive disorders, risk factors and validation of the KICA-dep scale. *PLoS One* 2014: 1-7.
48. Si D, Dowden M, Kennedy C, et al. Indigenous community care: Documented depression in patients with diabetes. *Aust Fam Physician* 2011; 40: 331-3.
49. Bohanna I, Clough A. Cannabis use in Cape York Indigenous communities: High prevalence, mental health impacts and the desire to quit. *Drug Alcohol Rev* 2012; 30: 580-4.
50. O'Leary C, Halliday J, Bartu A, et al. Alcohol-use disorders during and within one year of pregnancy: A population-based cohort study 1985–2006. *BJOG* 2012; 120: 744-53.

51. Vos T, Barker B, Stanley L, Lopez A. The Burden of Disease and Injury in Aboriginal and Torres Strait Islander Peoples. Brisbane: School of Population Health, The University of Queensland, 2003.
52. Begg S, Stanley L, Suleman A, et al. The burden of disease and injury in Queensland's Aboriginal and Torres Strait Islander people, 2014. Queensland: Queensland Health, 2014.
53. Australian Bureau of Statistics [Internet]. Canberra: ABS; 2015. Prisoners in Australia 2015. Available from: www.abs.gov.au/ausstats/abs@.nsf/mf/4517.0.
54. Australian Institute of Health and Welfare. Youth Detention Population in Australia 2014. Canberra: AIHW, 2014.
55. Simpson P, Guthrie J, Lovell M, et al. Views on Alternatives to Imprisonment: A Citizens Jury approach. Melbourne: The Lowitja Institute, 2014.
56. Grace J, Krom I, Maling C, et al. Review of Indigenous offender health. *Australian Indigenous Health Bulletin* 2011; 11: 1-17.
57. Siggers S, Gray D. Defining what we mean. In: Carson P, Dunbar T, Chenhall RD, Bailie R, editors. *Social determinants of Indigenous Health*. Crows Nest: Allen and Unwin, 2007: 1-20.
58. Anderson I. Understanding the Process. In: Carson P, Dunbar T, Chenhall RD, Bailie R, editors. *Social determinants of Indigenous Health*. Crows Nest: Allen and Unwin, 2007: 21-37.
59. King M, Smith A, Gracey M. Indigenous health part 2: The underlying causes of the health gap. *Lancet* 2009; 374: 76-85.
60. Weatherburn D, Snowball L, Hunter B. The economic and social factors underpinning Indigenous contact with the justice system: Results from the 2002 NATSISS. In: *Contemporary Issues in Crime and Justice*. Sydney: NSW Bureau of Crime Statistics and Research, 2006.
61. Krieg A. Aboriginal incarceration: Health and social impacts. *Med J Aust* 2006; 184: 534-6.

62. Australian Bureau of Statistics [Internet]. Canberra: ABS; 2009. Prisoners in Australia 2009 (4517.0). Available from: <http://www.abs.gov.au/AUSSTATS/abs@.nsf/allprimarymainfeatures/4BEA22FBC6D7FF0DCA2577F3000F1123?opendocument>.
63. Australian Bureau of Statistics [Internet]. Canberra: ABS; 2010. Prisoners in Australia 2010 (4517.0). Available from: <http://www.abs.gov.au/AUSSTATS/abs@.nsf/allprimarymainfeatures/7552DC26E923A81DCA25795F000DBC94?opendocument>.
64. Putt J, Payne J, Milner L. Indigenous Male Offending and Substance Abuse. *Trends and Issues in Crime and Criminal Justice* [Internet] 2005; 293: 1-6.
65. National Aboriginal and Torres Strait Islander Health Council. Social and Emotional Well Being Framework 2004-2009. Canberra: Australian Health Ministers Advisory Council, 2004.
66. Wundersitz J. Indigenous perpetrators of violence: Prevalence and risk factors for offending. Canberra: 2010; 105.
67. Butler T, Allnut S, Cain D, et al. Mental Disorder in the New South Wales prisoner population. *Aust NZJ Psychiatry* 2005; 39: 407-13.
68. Australian Institute of Health and Welfare. The health of Australia's prisoners 2009. Canberra: AIHW, 2010.
69. Australian Institute of Health and Welfare. The health of Australia's prisoners 2010. Canberra: AIHW, 2011.
70. Australian Institute of Health and Welfare. The health of Australia's prisoners 2012. Canberra: AIHW, 2013.
71. Australian Institute of Health and Welfare. The health of Australia's prisoners 2015. Canberra: AIHW, 2015.

72. Dudgeon P, Walker R, Scrine C, et al. Effective strategies to strengthen the mental health and wellbeing of Aboriginal and Torres Strait Islander people (Issues paper 12). Canberra: Australian Government, AIHW, Australian Institute of Family Studies, 2014.
73. Solonec T. Aboriginal and Torres Strait Islander prisoner health. In: Justice Health in Australia: Equity in Health Care. Canberra: Public Health Association, 2012.
74. Indig D, Topp L, Ross B, et al. 2009 NSW Inmate Health Survey: Key Findings Report. Sydney: Justice Health, 2010.
75. Kinner S. Passports to advantage: Health and capacity building as a basis for social integration [Internet]; 2008: 581-9. Available from: <http://hdl.handle.net/2328/1839>.
76. Fleming J, Gately N, Kraemer S. Creating HoPE: Mental Health in Western Australian Maximum Security Prisons. *Psychiatr Psychol Law* 2012; 19: 60-74.
77. Ogloff J, Patterson J, Cutajar M, et al. Koori Prisoner Mental Health and Cognitive Function Study. Victoria: Centre for Forensic Behavioural Science, Monash University, 2013.
78. Heffernan E, Andersen A, Dev A, Kinner S. Prevalence of mental illness among Aboriginal and Torres Strait Islander people in Queensland prisons. *Med J Aust* 2012; 197: 37-41.
79. Baldry E, McCausland R, Dowse L, McEntyre E. A predictable and preventable path: Aboriginal people with mental and cognitive disabilities in the criminal justice system. Sydney: UNSW, 2015.
80. Andrews G, Peters L. The CIDI-Auto: A Computerised Diagnostic Interview for Psychiatry [Internet]. New York: World Health Organization Collaborating Center for Mental Health and Substance Abuse, 2001. Available from: www.crufad.unsw.edu.au/cidi/discuss.htm.
81. National Health and Medical Research Council. The NHMRC Road Map II: A strategic framework for improving the health of Aboriginal and Torres Strait Islander people through research. Canberra: Commonwealth of Australia; 2010.

82. Queensland Corrective Services [Internet]. Brisbane: Queensland Corrective Services; 2012. Leaders in Corrections: Partners in criminal and social justice. Available from: www.correctiveservices.qld.gov.au.
83. National Health and Medical Research Council, Australian Research Council, Australian Vice-Chancellors' Committee. National Statement on Ethical Conduct in Human Research. Canberra: Commonwealth of Australia, 2007.
84. Roberts L, Indermaur D. Ethics of research with prisoners. *Current Issues in Criminal Justice* 2008; 19: 309-26.
85. Pont J. Ethics in research involving prisoners. *Int J Prison Health* 2008; 4: 184-97.
86. Ober C, Dingle K, Clavarino A, Najman J, Alati R, Heffernan E. Validating a screening tool for mental health and substance use risk in an Indigenous prison population. *Drug Alcohol Rev* 2013; 32: 611-7.
87. Brinded P, Simpson S. Prevalence of Psychiatric Disorders in New Zealand Prisons: A National Study. *Aust NZJ Psychiatry* 2001; 35: 166-73.
88. Butler T, Allnut S, Cain D, Owens DCM. Mental Disorder in the New South Wales prisoner population. *Aust NZJ Psychiatry* 2005; 39: 407-13.
89. Orygen Research Centre. Psychosis: Mental Health First Aid guidelines for Australian Aboriginal and Torres strait Islander peoples. Melbourne: Orygen, 2008.
90. Westerman T. Putting it together – The Aboriginal Mental Health Cultural Assessment Model – The example of Spiritual Visits versus Psychosis. Sydney: Indigenous Psychological Services, 2007.
91. Spitzer M. Psychiatric Diagnosis: Are clinicians still necessary? *Comprehensive Psychiatry* 1983; 24: 399-411.
92. StataCorp. Stata statistical software: Release 12. College Station: StataCorp LP; 2011.
93. StataCorp. Stata statistical software: Release 13. College Station: StataCorp LP; 2013.
94. National Mental Health Commission. A Contributing Life, the 2013 National Report Card on Mental Health and Suicide Prevention. Sydney: NHMC, 2013.

95. Fourth National Mental Health Plan Working Group. Fourth National Mental Health Plan: An agenda for collaborative government in mental health 2009-2014. Melbourne: Commonwealth of Australia, 2009.
96. Cross TBB, Dennis K, Issacs M. Towards a culturally competent system of care. Washington DC: George Town University Child Development Centre, 1989.
97. Thompson SC, Taylor KP. Are we really committed to making a difference? Reflections on Indigenous health research and dissemination. *Aust NZJ Public Health* 2009; 33: 403-4.
98. Hing N, Breen H, Gordon A. Respecting cultural values: conducting a gambling survey in an Australian Indigenous community. *Aust NZJ Public Health* 2010; 34: 547-53.
99. Putt J [Internet]. Indigenous Justice Clearing House; 2013. Conducting research with Indigenous people and communities. Available from: www.indigenousjustice.gov.au/.
100. Laycock A. with Walker D, Harrison N, Brands J. Indigenous Health Research in Context. In: *Researching Indigenous Health: A Practical Guide for Researchers*. Melbourne: The Lowitja Institute, 2011: 3-22.
101. Henry J, Dunbar T, Arnott A, et al. Indigenous Research Agenda: A review of the literature. Melbourne: Cooperative Centre for Aboriginal & Tropical Health, 2004; Links Monograph Series 5.
102. Humphrey K. Dirty questions: Indigenous health and 'Western Research'. *Aust NZJ Public Health* 2001; 25: 197-202.
103. Fielder J, Roberts J, Abdullah J. Research with Indigenous Communities. In: Dudgeon P, Garvey D, Pickett H, editors. *Working with Indigenous Australians: A Handbook for Psychologists*. Perth: Gunada Press; 2000: 349-56.
104. Henry J, Dunbar T, Arnott A, et al. Indigenous Research Reform Agenda: Rethinking research methodologies. Melbourne: Cooperative Centre for Aboriginal & Tropical Health, 2002; Links Monograph Series 2.

105. Laycock A. with Walker D, Harrison N, Brands J. Building capacity through research. In: *Researching Indigenous Health: A Practical Guide for Researchers*. Melbourne: The Lowitja Institute; 2011.
106. Jamieson LM, Paradies YC, Eades S, et al. Ten principles relevant to health research among Indigenous Australian populations. *Med J Aust* 2012; 197: 16-8.
107. Anderson P. Research for a better future. In: Coalition for Research to Improve Aboriginal Health (CRIA) Aboriginal Health Research Conference 5 May 2011; Sydney: Lowitja Institute; 2011.
108. Cooperative Research Centre for Aboriginal Health [Internet]. Lowitja Institute; 2006. Guidelines for Project Leaders and Teams on the CRIAH facilitated research development process. Available from: <http://www.lowitja.org.au/crcah/approach-research>.
109. Arabena K, Moodie D. The Lowitja Institute: building a national strategic research agenda to improve the health of Aboriginal Torres Strait Islander peoples. *Med J Aust* 2011; 194: 532-4.
110. Australian Institute of Aboriginal and Torres Strait Islander Studies. Guidelines for Ethical Research in Indigenous Studies. Canberra: AIATSIS, 2012.
111. Thackrah RD, Thompson SC. Refining the concept of cultural competence: building on decades of progress. *Med J Aust* 2013; 199: 35-8.
112. Durie M. Understanding health and illness: Research at the interface between science and Indigenous knowledge. *Int J Epidemiol* 2004; 33: 1138-43.
113. Heffernan E, Andersen K, Kinner S. Enhancing research quality through cultural competence: a case study in Queensland prisons. *Australas Psychiatry* 2015; 23: 654-7
114. United Nations [Internet]. Convention on the Rights of Persons with Disabilities; 2008. Available from: www.un.org/disabilities/convention/conventionfull.shtml .

115. Office of the High Commissioner for Human Rights [Internet]. Standard Minimum Rules for the Treatment of Prisoners; 1977. Available from: www.ohchr.org/EN/ProfessionalInterest/Pages/TreatmentOfPrisoners.aspx.
116. Standing Council on Health. Mental health statement of rights and responsibilities. Canberra: Australian Government, 2012.
117. Kariminia A, Butler T, Jones J, Law M. Increased mortality among Indigenous persons during and after release from prison in New South Wales. *Aust NZJ Public Health* 2012; 36: 274-80.
118. Alan J, Burmas M, Preen D, Pfaff J. Inpatient hospital use in the first year after release from prison: A Western Australian population-based record linkage study. *Aust NZJ Public Health* 2011; 35: 264-9.
119. Hobbs M, Krazlan K, Ridout S, et al. Mortality and morbidity in prisoners after release from prison in Western Australia 1995-2003 (Contract No: 71). Canberra: Australian Institute of Criminology, 2006.
120. Australian Medical Association. 2015 AMA Report Card on Indigenous Health. Canberra: AMA, 2015.
121. Jablensky A, McGrath J, Herrman H, et al. People Living with Psychotic Illness: An Australian study 1997-1998. Canberra: Department of Health and Aged Care, 1999.
122. Butler T, Allnut S, Kariminia A, Cain D. Mental health status of Aboriginal and non-Aboriginal Australian prisoners. *Aust NZJ Psychiatry* 2007; 41: 429-35.
123. Simpson AI, Brinded PM, Fairley N, et al. Does ethnicity affect need for mental health service among New Zealand prisoners? *Aust NZJ Psychiatry* 2003; 37: 728-34.
124. National Indigenous Drug and Alcohol Committee (NIDAC). Bridges and Barriers: Addressing Indigenous Incarceration and Health (Revised Edition). Canberra: Australian National Council on Drugs, 2014.
125. Butler T, Andrews G, Allnut S, et al. Mental disorders in Australian prisoners: A comparison with a community sample. *Aust NZJ Psychiatry* 2006; 40: 272-6.

126. Tye CS, Mullen PE. Mental Disorders in Female Prisoners. *Aust NZJ Psychiatry* 2006; 40: 266-71.
127. Abram K, Telin L, McClelland G. Comorbidity of Severe Psychiatric Disorders and Substance Use Disorders among Women in Jail. *Am J Psychiatry* 2003; 160: 1007-10.
128. Teplin LA. Prevalence of psychiatric disorders among incarcerated women. *Arch Gen Psychiatry* 1996; 53: 664.
129. Teplin LA. Criminalizing mental disorder: The comparative arrest rate of the mentally ill. *Am Psychol* 1984; 39: 794-803.
130. Baldry E, Ruddock J, Taylor J. Aboriginal women with dependant children leaving prison project: Needs analysis report. Sydney: UNSW, NSW Department of Community Services, NSW Department of Human Services, Homelessness NSW, 2008.
131. Baldry E. Home Safely: Aboriginal Women Post-release and their Children. *Indigenous Law Bulletin* 2009; 7: 14.
132. Baldry E. Women in transition: prison to.... *Current Issues in Criminal Justice* 2010; 22: 253-268.
133. Jablensky A, McGrath J, Herrman H, et al. Psychotic disorders in urban areas: an overview of the Study on Low Prevalence Disorders. *Aust NZJ Psychiatry* 2000; 34: 221-36.
134. White P, Chant D, Whiteford H. A comparison of Australian men with psychotic disorders remanded for criminal offences and a community group of psychotic men who have not offended. *Aust NZJ Psychiatry* 2006; 40: 260-5.
135. Morgan VA, Waterreus A, Jablensky A, et al. People living with psychotic illness 2010. Canberra: Australian Government, 2011.
136. Hunter E, Reser J, Baird M, Reser P. An analysis of suicide in Indigenous communities of North Queensland: The historical, cultural and symbolic landscape. Cairns: University of Queensland, Gurriny Yealamucka Health service and the Yarrabah Community Council, James Cook University, 1999.

137. Hunter E, Harvey D. Indigenous suicide in Australia, New Zealand, Canada and the United States. *Emerg Med (Fremantle)* 2002; 14: 14-23.
138. Hunter E. Aboriginal and Torres Strait Islander Suicide. Auseinet, 2001: 1-3.
139. Zubrick SR, Silburn SR, Lawrence DM et al. The Western Australian Aboriginal Child Health Survey: The Social and Emotional Wellbeing of Aboriginal Children and Young People. Perth: Curtin University of Technology and Telethon Institute for Child Health Research, 2005.
140. Australian Government. National Aboriginal and Torres Strait Islander suicide prevention strategy. Canberra: Department of Health and Ageing, 2013.
141. Statistics New Zealand [Internet]. New Zealand: Statistics New Zealand; 2015. People who live in prisons and penal institutions. Available from: www.stats.govt.nz/Census/2013-census/profile-and-summary-reports/outside-norm/prison.aspx.
142. Statistics Canada [Internet]. Ottawa: Ministry of Industry; 2015. Adult correctional statistics in Canada, 2013/2014. Available from: www.statcan.gc.ca/pub/85-002-x/2015001/article/14163-eng.htm.
143. Australian Institute of Health and Welfare. Mental Health Services in Australia. Canberra: AIHW, 2015.
144. National Mental Health Commission. The National Review of Mental Health Programs and Services. Sydney: NMHC, 2014.
145. Australian Institute of Health and Welfare. Prisoner health services in Australia 2012 (Cat. no. PHE 123). Canberra: AIHW, 2014.
146. Plueckhahn T, Kinner S, Sutherland G, Butler T. Are some more equal than others? Challenging the basis for prisoners' exclusion from Medicare. *Med J Aust* 2015; 203: 359-61.

147. Morgan V, Morgan F, Valuri G, et al. A whole-of-population study of the prevalence and patterns of criminal offending in people with schizophrenia and other mental illness. *Psychol Med* 2013; 43: 1869-80.
148. Cutcher Z, Degenhardt L, Alati R, Kinner SA. Health and social outcomes for ex-prisoners with a history of mental disorder: A longitudinal study. *Aust NZJ Public Health* 2014; 38: 424-9.
149. Atkinson J, Nelson J, Atkinson C. Trauma, Transgenerational Transfer and Effects on Community Wellbeing. In: Purdie N, Dudgeon P, Walker R, editors. Working Together: Aboriginal and Torres Strait Islander Mental Health and Wellbeing Principles and Practice. Canberra: Department of Health and Ageing; 2010.
150. Butler T, Allnutt S, Kariminia A, Cain D. Mental health status of Aboriginal and non-Aboriginal Australian prisoners. *Aust NZJ Psychiatry* 2007; 41: 429-35.
151. Herman J. Complex PTSD: A syndrome in survivors of prologed and repeated trauma. *J Trauma Stress* 1992; 5: 377-91.
152. Atkinson J. Trauma-informed services and trauma-specific care for Indigenous Australian children (Resource sheet 21) [Internet]. Canberra: Australian Government, AIHW, Australian Institute of Family Studies, 2013. Available from: www.aihw.gov.au/uploadedFiles/ClosingTheGap/Content/Publications/2013/ctg-rs21.pdf .
153. van der Kolk B. The assessment and treatment of Complex PTSD. In: Yehunda R, editor. Traumatic Stress: American Psychiatric Press, 2001.
154. Royal Australian and New Zealand College of Psychiatrists [Internet]. RANZCP General Council; 2015. Post-traumatic stress disorder practice guidelines; [cited 2015 Oct 13]. Available from: www.ranzcp.org/Publications/Guidelines-for-clinical-practice/PTSD-practice-guidelines.aspx.
155. Bateman J, Henderson C, Kezelman C. Trauma-Informed Care and Practice: Towards a cultural shift in policy reform across mental health and human services in Australia, A National Strategic Direction, Position Paper and Recommendations of the

National Trauma-Informed Care and Practice Advisory Working Group. Lilyfield, NSW: Mental Health Coordinating Council, 2013.

156. Heffernan E, Andersen K, Davidson F, Kinner S. The Family Business: Improving the understanding and treatment of Post-traumatic stress disorder among incarcerated Aboriginal and Torres Strait Islander Women. Victoria: Beyondblue, 2014.
157. Australian Indigenous HealthInfoNet [Internet]. Review of the harmful use of alcohol amongst Indigenous Australians 2013. Available from: www.healthinfonet.ecu.edu.au/uploads/docs/alcohol-pl-review.pdf.
158. Kinner S, Dietze PM, Gouilloi M, Alati R. Prevalence and correlates of alcohol dependence in adult prisoners vary according to Indigenous status. *Aust NZJ Public Health* 2012; 36: 329-34.
159. Haber P, Lintzeris N, Proude E, Lopatko O. Guidelines for the treatment of alcohol problems. Sydney: Department of Health and Ageing, 2009.
160. National Indigenous Drug and Alcohol Committee (NIDAC). Bridges and Barriers: Addressing Indigenous incarceration and health. Canberra: Australian National Council on Drugs, 2009.
161. Deloitte Access Economics. An economic analysis for Aboriginal and Torres Strait Islander offenders: Prisons vs residential treatment (ANCD research paper 24). ACT: Australian National Council on Drugs and National Indigenous Drug and Alcohol Committee, 2013.
162. Australian Bureau of Statistics [Internet]. Canberra: ABS; 2008. Prisoners in Australia 2008 (4517.0). Available from: <http://www.abs.gov.au/AUSSTATS/abs@.nsf/allprimarymainfeatures/84262F9C5BFD823FCA257687001D3476?opendocument>.
163. Grace J, Krom I, Maling C, et al. [Internet]. Review of Indigenous offender health (updated). Australian Indigenous HealthInfoNet: 2013. Available from: http://www.healthinfonet.ecu.edu.au/uploads/docs/offender_health_review_2013_2.pdf.

164. Heffernan E, Andersen K, & Whitton G. Prison populations. In: Lee K, Freeburn B, Ella S, et al, editors. Handbook for Aboriginal Alcohol and Drug Work. Sydney: The University of Sydney; 2012: 385-97.
165. Australian Policy Online. 2014 Most Viewed – Indigenous [Internet]. Australian Policy Online; 2014 [cited 2015 20/10]. Available from: <http://apo.org.au/top-content/2014-most-viewed-indigenous>.
166. Carroll M, Kinner S, Heffernan E. Medication use and knowledge in a sample of Indigenous and non-Indigenous prisoners. *Aust NZJ Public Health* 2014; 38: 142-6.
167. Beyondblue. Research Projects [Internet]. Melbourne: Beyondblue; 2015. Available from: <https://www.beyondblue.org.au/about-us/research-projects/research-projects/the-family-business-improving-the-understanding-and-treatment-of-post-traumatic-stress-disorder-among-incarcerated-aboriginal-and-torres-strait-islander-women>.
168. Nagel T, Dingwall K. AIMhi Stay Strong iPad App [Internet] Northern Territory: Menzies School of Health Research; 2014 [cited 2015]. Available from: www.menzies.edu.au/page/Resources/Stay_Strong_iPad_App/.
169. Al-Yaman F, Higgins D. What works to overcome Indigenous disadvantage: Key learnings and gaps in the evidence. Melbourne: Australian Government, AIHW, Australian Institute of Family Studies, 2011.
170. Gilbert R, Wilson A. Staying strong on the outside: Improving the post-release experience of Indigenous young adults. Canberra: Indigenous Justice Clearinghouse, 2009.
171. Halacas C, Adams K. Keeping our mob healthy in and out of prisons: Exploring Prison Health in Victoria to improve Quality, Culturally Appropriate Health Care for Aboriginal People. Collingwood: Victorian Aboriginal Community Controlled Health Organisation, 2015.
172. National Mental Health Commission Secretariat. Expert advice on specific challenges for Aboriginal and Torres Strait Islander peoples' mental health: Final Report. Victoria: NMHC, 2014.

173. White P, Whiteford H. Prisons: Mental health institutions of the 21st century? *Med J Aust* 2006; 185: 302-3.
174. Parker R, Milroy H. Aboriginal and Torres Strait Islander Mental Health: An Overview. In: Dudgeon P, Milroy H, Walker R, editors. Working Together: Aboriginal and Torres Strait Islander Mental Health and Wellbeing Principles and Practice. Canberra: Department of Health and Ageing; 2014. p. 25-38.
175. Hovane V, Dalton T, Smith P. Aboriginal Offender Rehabilitation Programs. In: Dudgeon P, Milroy H, Walker R, editors. Working together: Aboriginal and Torres Strait Islander mental health and well being principles and practice. Canberra: Australian Government; 2014. p. 509-22.
176. Powell T, Ross R, Kickett D, Donnelly J. Red Dust Healing: Acknowledging the past, changing the future. In: Dudgeon P, Milroy H, Walker R, editors. Working Together: Aboriginal and Torres Strait Islander mental health and wellbeing principles and practice. Canberra: Australian Government; 2014.

Appendix I

Heffernan E, Cowburn K, Kinner SA. The Insidious Problem Inside: A systematic review of the mental health problems of Aboriginal and Torres Strait Islander People in custody. *Australas Psychiatry* 2009; 17: S41-6.

References

1. Aboriginal and Torres Strait Islander Social Justice Commissioner. Social Justice Report 2005. Sydney: Human Rights and Equal Opportunity Commission, 2006.
2. Vos T, Barker B, Stanley L, Lopez A. The Burden of Disease and Injury in Aboriginal and Torres Strait Islander Peoples. Brisbane: School of Population Health, The University of Queensland, 2003.
3. Krieg AS. Aboriginal incarceration: health and social impacts. *Med J Aust* 2006; 184: 534-6.
4. Johnston EC. Royal Commission into Aboriginal Deaths in Custody. National Report Vol 1 to 5. Canberra: AGPS, 1991.
5. Australian Bureau of Statistics [Internet]. Canberra: ABS; 2007. Prisoners in Australia 2007 (4517.0). Available from: <http://www.abs.gov.au/AUSSTATS/abs@.nsf/allprimarymainfeatures/2BFBFBFE5657AE83CA25751B00149B86?opendocument>.
6. National Aboriginal and Torres Strait Islander Health Council and National Mental Health Working Group. Social and Emotional Well Being Framework 2004–2009. Canberra: Department of Health and Ageing, Social Health Section, 2004.
7. Australian Bureau of Statistics. The Health and Welfare of Australia's Aboriginal and Torres Strait Islander People. Canberra: Australian Institute of Health and Welfare, 2005.
8. Australian Bureau of Statistics [Internet]. Canberra: ABS, 2002. National Aboriginal and Torres Strait Islander Social Survey. Available from:

<http://www.abs.gov.au/AUSSTATS/abs@.nsf/allprimarymainfeatures/2575DCC732E7E9CCA25765E001589D4?opendocument>.

9. Zubrick SR, Silburn SR, Lawrence DM et al. The West Australian Child Health Survey: The Social and Emotional Well Being of Aboriginal Children and Young People. Perth: Curtin University of Technology and Telethon Institute for Child Research, 2005.
10. NATSIHC. National Strategic Framework for Aboriginal and Torres Strait Islander Health 2003–2013: Framework for Action by Governments. Canberra: Australian Health Ministers Conference, 2003.
11. Swan P, Raphael B. The Ways Forward: National Aboriginal and Torres Strait Islander Mental Health Policy National Consultancy Report. Canberra: Australian Government, 1995.
12. Butler T, Andrews G, Allnut S, et al. Mental disorders in Australian prisoners: a comparison with a community sample. *Aust NZJ Psychiatry* 2006; 40: 272-6.
13. Fazel S, Danesh J. Serious mental disorders in 23,000 prisoners: a systematic review of 62 surveys. *Lancet* 2002; 359: 545-50.
14. Australian Bureau of Statistics [Internet]. Canberra: ABS; 2007. Prisoners in Australia 2007 (4517.0). Available from: <http://www.abs.gov.au/AUSSTATS/abs@.nsf/allprimarymainfeatures/2BFBFBFE5657AE83CA25751B00149B86?opendocument>.
15. Ypinazar VA, Margolis SA, Haswell-Elkins M, Tsey K. Indigenous Australians' understandings regarding mental health and disorders. *Aust NZJ Psychiatry* 2007; 41: 467-78.
16. White P, Chant D, Whiteford H. A comparison of Australian men with psychotic Disorders remanded for criminal offences and a community group of psychotic men who have not offended. *Aust NZJ Psychiatry* 2006; 40:260-5.

17. Herrman H, McGorry P. Hidden severe psychiatric morbidity in sentenced prisoners: An Australian study. *Am J Psychiatry* 1991; 148: 236-9.
18. Tye CS, Mullen PE. Mental disorders in female prisoners. *Aust NZJ Psychiatry* 2006; 40: 266-71.
19. Glaser WF. Admissions to a prison psychiatric unit. *Aust NZJ Psychiatry* 1989; 19: 45-52.
20. Butler T, Allnut S, Cain D, et al. Mental Disorder in the New South Wales prisoner population. *Aust NZJ Psychiatry* 2005; 39: 407-13.
21. Hurley W, Dunne M. Psychological distress and psychiatric morbidity in women prisoners. *Aust NZJ Psychiatry* 1991; 25: 461-70.
22. Hockings BA, Young M, Falconer A, O'Rourke PK. *Queensland Women Prisoners' Health Survey*. Brisbane: Department of Corrective Services, 2002.
23. Butler T, Allnut S, Kariminia A, Cain D. Mental health status of Aboriginal and non-Aboriginal Australian prisoners. *Aust NZJ Psychiatry* 2007; 41: 429-35
24. National Health and Medical Research Council. Values and Ethics: Guidelines for Ethical conduct in Aboriginal and Torres Strait Islander Health Research. Canberra: NHMRC, 2003.
25. Andrews G, Peters L. The CIDI-Auto: A Computerised Diagnostic Interview for Psychiatry [Internet]. New York: World Health Organization Collaborating Center for Mental Health and Substance Abuse, 2001. Available from: www.crufad.unsw.edu.au/cidi/discuss.htm.
26. Lawrie R. Speak Out Speak Strong: Researching the Needs of Aboriginal Women in Custody. Sydney: Aboriginal Justice Advisory Council, 2003.
27. Stathis S, Letters P, Doolan I, et al. Use of the Massachusetts Youth Screening Instrument to assess mental health problems in young people within an Australian

youth detention centre. *J Paediatr Child Health* 2008; 44: 438-43.

28. Day A, Davey L, Wanganeen R, et al. Symptoms of trauma, perceptions of discrimination and anger: a comparison between Australian Indigenous and non-Indigenous prisoners. *J Interpers Violence* 2008; 23: 245-57.
29. Weatherburn D, Snowball L, Hunter B. The economic and social factors underpinning Indigenous contact with the justice system: Results from the 2002 NATSISS. In: *Contemporary Issues in Crime and Justice*. Sydney: NSW Bureau of Crime Statistics and Research, 2006.
30. Putt J, Payne J, Milner L. Indigenous male offending and substance abuse. *Trends and Issues in Crime and Criminal Justice* [Internet] 2005; 293: 1-6.
31. Hobbs M, Krazlan K, Ridout S, et al. Mortality and morbidity in prisoners after release from prison in Western Australia 1995–2003. In: *Research and Public Policy Series 71*. Canberra: Australian Institute of Criminology, 2006; 2-5.
32. Schlesinger CM, Ober C, McCarthy MM, et al. The development and validation of the Indigenous Risk Impact Screen (IRIS): a 13-item screening instrument for alcohol and drug and mental health risk. *Drug Alcohol Rev* 2007; 26:109-17.
33. Belcher J, Al-Yaman F. *Prisoner Health in Australia: Contemporary Information Collection and a Way Forward*. Canberra: Australian Institute of Health and Welfare, 2007.

Appendix II

Heffernan E, Andersen K, Kinner S. Enhancing research quality through cultural competence: A case study in Queensland prisons. *Australas Psychiatry* 2015; 23: 654-7

References

1. Christensen H, Batterham P, Griffiths K, et al. Research priorities in mental health. *Aust NZJ Psychiatry* 2013; 47: 355-62.
2. Laycock A, Walker D. Indigenous Health Research in Context. In: *Researching Indigenous Health: A Practical Guide for Researchers*. Melbourne: The Lowitja Institute, 2011: 3-22.
3. Arabena K, Moodie D. The Lowitja Institute: building a national strategic research agenda to improve the health of Aboriginal Torres Strait Islander peoples. *Med J Aust* 2011; 194: 532-4.
4. Walker R, Schultz C, Sonn C. Cultural Competence - Transforming Policy, Services, Programs and Practice. In: Dudgeon P, Milroy H, Walker R, editors. *Working Together: Aboriginal and Torres Strait Islander Mental Health and Wellbeing Principles and Practice*. Canberra: Australian Government, 2014: 195-220.
5. Thompson S, Taylor K. Are we really committed to making a difference ? Reflections on Indigenous health research and dissemination. *Aust NZJ Public Health* 2009; 33: 403-4.
6. Jamieson L, Paradies YC, Eades S, et al. Ten principles relevant to health research among Indigenous Australian populations. *Med J Aust* 2012; 197: 16-8.
7. Thackrah R. Refining the concept of cultural competence: building on decades of progress. *Med J Aust* 2013; 199: 35-8.
8. Heffernan E, Andersen K, Dev A, Kinner S. Prevalence of mental illness among Aboriginal and Torres Strait Islander people in Queensland prisons. *Med J Aust* 2012; 197: 37-41.
9. Indig D, McEntyre E, Page J, Ross B. 2009 NSW Inmate Health Survey: Aboriginal Health Report. Sydney: Justice Health, 2010.

10. NHMRC. The NHMRC Road Map II: A strategic framework for improving the health of Aboriginal and Torres Strait Islander people through research. Canberra: Australian Government, 2010.
11. Johnston EC. Royal Commission into Aboriginal Deaths in Custody. National Report Vol 1 to 5. Canberra: AGPS, 1991.
12. National Mental Health Commission. A Contributing Life, the 2013 National Report Card on Mental Health and Suicide Prevention. Sydney: NMHC, 2013.
13. Swan P, Raphael B. The Ways Forward: National Aboriginal and Torres Strait Islander Mental Health Policy National Consultancy Report. Canberra: Australian Government, 1995.
14. Vos T, Barker B, Begg S, et al. Burden of disease and injury in Aboriginal and Torres Strait Islander peoples: the Indigenous health gap. *Int J Epidemiol* 2009; 38: 470-7.
15. NHMRC. Values and Ethics: Guidelines for the Ethical Conduct in Aboriginal and Torres Strait Islander Research. Canberra: Australian Government, 2003.
16. Laycock A. with Walker D, Harrison N, Brands J. Relationships in Indigenous health research. In: *Researching Indigenous Health: A Practical Guide for Researchers*. Melbourne: The Lowitja Institute, 2011: 67-102.
17. VDDI. Our Healing Ways: A Culturally Appropriate Supervision Model for Aboriginal Workers. Victoria: Victorian Dual Diagnosis Initiative, 2012.
18. Burchill M, Pyett P, Kelly S, et al. Reflections on Aboriginalising the Research Process: "Hunting and Gathering" as a Focus Group Methodology. *International Journal of Critical Indigenous Studies* 2011; 4: 29-39.
19. Heffernan E, Anderson K, Dev A. Inside Out - The Mental Health of Aboriginal and Torres Strait Islander People in Custody Report. Brisbane: Queensland Government, 2009.
20. Andrews G, Peters L. The CIDI-Auto: A Computerised Diagnostic Interview for Psychiatry [Internet]. New York: World Health Organization Collaborating Center for

Mental Health and Substance Abuse, 2001. Available from:
www.crufad.unsw.edu.au/cidi/discuss.htm.

21. Slade T, Johnston A, Teeson M, et al. The Mental Health of Australians 2. Report on the 2007 National Survey of Mental Health and Well Being. Canberra: Department of Health and Ageing, 2009.
22. Parker R, Millroy H. Schizophrenia and related psychoses in the Aboriginal population of Australia. *Aborig Isl Health Work J* 2003; 27: 17-9.
23. Degenhardt L, Hall W, Korten A, Jablensky A. Use of a brief screening instrument for psychosis: Results of a ROC analysis. Sydney: National Drug and Alcohol Research Centre, 2005.
24. Holland C. Close the Gap: Progress and Priorities Report 2014. Canberra: Australian Human Rights Commission, 2014.
25. Solonec T. Aboriginal and Torres Strait Islander prisoner health. In: Justice Health in Australia: Equity in Health Care. Canberra: Public Health Association, 2012.

Appendix III

Heffernan E, Andersen K, Dev A, Kinner S. Mental illness is highly prevalent among Aboriginal and Torres Strait Islander people in Queensland Custody. *Med J Aust* 2012; 197: 37-41

References

1. Australian Bureau of Statistics [Internet]. Canberra: ABS; 2010. Prisoners in Australia 2010 (4157.0). Available from: <http://www.abs.gov.au/AUSSTATS/abs@.nsf/allprimarymainfeatures/7552DC26E923A81DCA25795F000DBC94?opendocument>.
2. Australian Bureau of Statistics. Population Distribution, Aboriginal and Torres Strait Islander Australians. Canberra: Australian Government, 2007.
3. Krieg AS. Aboriginal incarceration: Health and social impacts. *Med J Aust* 2006; 184: 534-6.
4. Weatherburn D, Snowball L, Hunter B. The economic and social factors underpinning Indigenous contact with the justice system: Results from the 2002 NATSISS. In: Contemporary Issues in Crime and Justice. Sydney: NSW Bureau of Crime Statistics and Research, 2006.
5. Indig D, McEntyre E, Page J, Ross B. 2009 NSW Inmate Health Survey: Aboriginal Health Report. Sydney: Justice Health, 2010.
6. Butler T, Andrews G, Allnut S, et al. Mental disorders in Australian prisoners: a comparison with a community sample. *Aust NZJ Psychiatry* 2006; 40: 272-6.
7. White P, Whiteford H. Prisons: Mental health institutions of the 21st century? *Med J Aust* 2006; 185: 302-3.
8. Heffernan E, Andersen K, Kinner S. The insidious problem inside: Mental health problems of Aboriginal and Torres Strait Islander People in custody. *Australas Psychiatry* 2009; 17: 41-66.
9. Johnston EC. Royal Commission into Aboriginal Deaths in Custody. National Report Vol 1 to 5. Canberra: AGPS, 1991.

10. Stewart LM, Henderson CS, Hobbs MS, et al,. Risk of death in prisoners after release from jail. *Aust NZJ Public Health* 2004; 28: 32-6.
11. Kinner S, Preen D, Kariminia A, et al. Counting the cost: Estimating the number of deaths among recently released prisoners in Australia. *Med J Aust* 2011; 195: 64-8.
12. Alan J, Burmis M, Preen D, et al. Inpatient hospital use in the first year after release from prison: A Western Australian population-based record linkage study. *Aust NZJ Public Health* 2011; 35: 264-9.
13. Andrews G, Peters L. The CIDI-Auto: A Computerised Diagnostic Interview for Psychiatry [Internet]. New York: World Health Organization Collaborating Center for Mental Health and Substance Abuse, 2001. Available from: www.crufad.unsw.edu.au/cidi/discuss.htm.
14. Butler T, Allnut S, Cain D, et al. Mental Disorder in the New South Wales prisoner population. *Aust NZJ Psychiatry* 2005; 39: 407-13.
15. Slade T, Johnston A, Teeson M, et al. The Mental Health of Australians 2. Report on the 2007 National Survey of Mental Health and Well Being. Canberra: Department of Health and Ageing, 2009.
16. Parker R, Milroy H. Schizophrenia and related psychoses in the Aboriginal population of Australia. *Aborig Isl Health Work J* 2003; 27: 17-9.
17. NHMRC. Values and Ethics: Guidelines for the Ethical Conduct in Aboriginal and Torres Strait Islander Research. Canberra: Australian Government, 2003.
18. Australian Bureau of Statistics [Internet]. Canberra: ABS; 2008. Prisoners in Australia 2008 (4157.0.). Available from: <http://www.abs.gov.au/AUSSTATS/abs@.nsf/allprimarymainfeatures/84262F9C5BFD823FCA257687001D3476?opendocument>.
19. Grace JKI, Maling C, Butler T, et al. Review of Indigenous offender health. *Australian Indigenous Health Bulletin* 2011; 11: 1-17.

20. Tye CS, Mullen PE. Mental Disorders in Female Prisoners. *Aust NZJ Psychiatry* 2006; 40: 266-71.
21. Jablensky A, McGrath J, Herrman H, et al. People Living with Psychotic Illness: An Australian study 1997-1998. Canberra: Department of Health and Aged Care, 1999.
22. Fazel S, Rongqin Y. Psychotic Disorders and Repeat Offending: Systematic Review and Meta Analysis. *Schizophr Bull* 2009; 37: 800-10.
23. National Indigenous Drug and Alcohol Committee. Bridges and Barriers: Addressing Indigenous Incarceration and Health. Canberra: Australian National Council on Drugs, 2009.
24. Office of the High Commissioner of Human Rights [Internet]. Standard Minimum Rules for the Treatment of Prisoners. 1977 [Accessed 2011, Oct]. Available from: <http://www2.ohchr.org/english/law/treatmentprisoners.htm>.
25. Mental Health Consumer Outcomes Task Force. Mental Health Statement of Rights and Responsibilities. Canberra: Commonwealth Department of Community Services and Health, 1991.
26. Australian Institute of Health and Welfare. The health of Australia's prisoners 2009 (Cat. no. PHE 123). Canberra: AIHW, 2010.

Appendix IV

Heffernan E, Andersen K, Davidson F, Kinner S. Post-Traumatic Stress Disorder among Aboriginal and Torres Strait Islander people in custody in Australia: Prevalence and correlates. *J Trauma Stress* 2015; [28: 523-30](#)

References

1. Fazel S, Danesh J. Serious mental disorders in 23,000 prisoners: a systematic review of 62 surveys. *Lancet* 2002; 359: 545-50.
2. Andreoli S, Mendes dos Santos M, Quintana M, et al. Prevalence of mental disorders among prisoners in the state of Sao Paulo, Brazil. *PLoS One* 2014; 9: 1-7.
3. Brinded P, Simpson S, Laidlaw M, Fairley M. Prevalence of psychiatric disorders in New Zealand prisons: A National Study. *Aust NZJ Psychiatry* 2001; 35: 166-73.
4. Goff A, Rose E, Rose S, Prurves D. Does PTSD occur in sentenced prison populations? A systematic literature review. *Crim Behav Ment Health* 2007; 17: 152-62.
5. Australian Institute of Health and Welfare. The health of Australia's prisoners 2009 (Cat. no. PHE 123). Canberra: AIHW, 2010.
6. Butler T, Andrews G, Allnutt S, et al. Mental disorders in Australian prisoners: A comparison with a community sample. *Aust NZJ Psychiatry* 2006; 40: 272-6.
7. Atkinson J, Nelson J, Brooks R, et al. Addressing individual and community transgenerational trauma. In: Dudgeon P, Milroy H, Walker, R, editors. Working Together: Aboriginal and Torres Strait Islander Mental Health and Wellbeing Principles and Practice. Canberra: Department of Health and Ageing, 2014.
8. Calma T. Achieving Aboriginal and Torres Strait Islander Equality within a Generation: A human rights based approach. Canberra: Aboriginal and Torres Strait Islander Social Justice Commissioner, 2008.
9. Australian Bureau of Statistics [Internet]. Canberra: ABS; 2014. Prisoners in Australia 2014 (4517.0). Available from: <http://www.abs.gov.au/AUSSTATS/abs@.nsf/allprimarymainfeatures/2338431C6253B96BCA257F1700124A0B?opendocument>.

10. Johnston EC. Royal Commission into Aboriginal Deaths in Custody. National Report Vol 1 to 5. Canberra: AGPS, 1991.
11. Indig D, McEntyre E, Page J, Ross B. 2009 NSW Inmate Health Survey: Aboriginal Health Report. Sydney: Justice Health, 2010.
12. Heffernan E, Anderson K, Dev A. Inside Out – The Mental Health of Aboriginal and Torres Strait Islander People in Custody Report. Brisbane: Queensland Government, 2009.
13. Slade T, Johnston A, Teeson M, et al. The Mental Health of Australians 2. Report on the 2007 National Survey of Mental Health and Well Being. Canberra: Department of Health and Ageing, 2009.
14. Jorm A, Bourchier S, Cvetkovski S, Stewart G. Mental health of Indigenous Australians: a review of findings from community surveys. *Med J Aust* 2012; 196: 118-21.
15. Vos T, Barker B, Begg S, et al. Burden of disease and injury in Aboriginal and Torres Strait Islander peoples: The Indigenous health gap. *Int J Epidemiol* 2009; 38: 470-7.
16. Nadew G. Exposure to traumatic events, prevalence of posttraumatic stress disorder and alcohol abuse in Aboriginal communities. *Rural Remote Health* 2012; 12: 1-12.
17. National Indigenous Drug and Alcohol Committee (NIDAC). Bridges and Barriers: Addressing Indigenous incarceration and health. Canberra: Australian National Council on Drugs, 2009.
18. Parker R, Milroy H. Aboriginal and Torres Strait Islander mental health: An overview. In: Dudgeon P, Milroy H, Walker R, editors. Working Together: Aboriginal and Torres Strait Islander Mental Health and Wellbeing Principles and Practice. Canberra: Department of Health and Ageing, 2014: 25-38.
19. Butler T, Allnut S, Kariminia A, Cain D. Mental health status of Aboriginal and non-Aboriginal Australian prisoners. *Aust NZJ Psychiatry* 2007; 41: 429-35.

20. Heffernan E, Andersen A, Dev A, Kinner S. Prevalence of mental illness among Aboriginal and Torres Strait Islander people in Queensland prisons. *Med J Aust* 2012; 197: 37-41.
21. Heffernan E, Andersen K, McIntyre E, Kinner S. Mental Health and the Criminal Justice System. In: Purdie N, Dudgeon P, Walker R, editors. Working Together: Aboriginal and Torres Strait Islander Mental Health and Wellbeing Principles and Practice. ACT: Australian Government, 2013.
22. National Indigenous Drug and Alcohol Committee (NIDAC). Bridges and Barriers: Addressing Indigenous Incarceration and Health (Revised Edition). Canberra: Australian National Council on Drugs, 2014.
23. Australian Centre for Posttraumatic Mental Health. Australian guidelines for the treatment of adults with Acute Stress Disorder and Posttraumatic Stress Disorder. Melbourne: ACPMH, 2007.
24. Grace J, Krom I, Maling C, et al. Review of Indigenous offender health. *Australian Indigenous Health Bulletin* 2011; 11: 1-17.
25. Krieg A. Aboriginal incarceration: Health and social impacts. *Med J Aust* 2006; 184: 534-6.
26. Swan P, Raphael B. The Ways Forward: National Aboriginal and Torres Strait Islander Mental Health Policy National Consultancy Report. Canberra: Australian Government, 1995.
27. Alan J, Burmas M, Preen D, Pfaff J. Inpatient hospital use in the first year after release from prison: A Western Australian population-based record linkage study. *Aust NZJ Public Health* 2011; 35: 264-9.
28. Forsyth S, Alati R, Ober C, et al. Striking subgroup differences in substance-related mortality after release from prison. *Addiction* 2014; 109: 1676-83.
29. Kinner S, Preen D, Kariminia A, et al. Counting the cost: estimating the number of deaths among recently released prisoners in Australia. *Med J Aust* 2011; 195: 64-8.

30. World Health Organisation. Composite International Diagnostic Interview (CIDI) core version 2.1, 12-month version. Geneva: World Health Organization, 1997
31. Andrews G, Peters L. The CIDI-Auto: A Computerised Diagnostic Interview for Psychiatry [Internet]. New York: World Health Organization Collaborating Center for Mental Health and Substance Abuse, 2001. Available from: www.crufad.unsw.edu.au/cidi/discuss.htm.
32. Australian Bureau of Statistics. National survey of mental health and well-being: Summary of results, 2007 (4326.0). Canberra: ABS, 2008.
33. Wittchen H. Reliability and validity studies of the WHO – Composite International Diagnostic Interview (CIDI): A critical review. *J Psychiatr Res* 1994; 28: 57-84.
34. StataCorp. Stata statistical software: Release 13. College Station: StataCorp LP, 2013.
35. Brady K, Killeen T, Brewerton T, Lucerini S. Comorbidity of psychiatric disorders and posttraumatic stress disorder. *J Clin Psychiatry* 2000; 61: 22-32.
36. Mills K, Teesson M, Ross J, Peters L. Trauma, PTSD, and Substance Use Disorders: Findings from the Australian national survey of mental health and well-being. *Am J Psychiatry* 2006; 163: 651-8.
37. Weatherburn D. The role of drug and alcohol policy in reducing Indigenous over-representation in prison. *Drug Alcohol Rev* 2008; 27: 91-4.
38. Lynch SM, Heath NM, Mathews KC, Cepeda GJ. Seeking Safety: An intervention for trauma-exposed incarcerated women? *J Trauma Dissociation* 2012; 13: 88-101.
39. Butler T, Allnut S, Cain D, et al. Mental disorder in the New South Wales prisoner population. *Aust NZJ Psychiatry* 2005; 39: 407-13.
40. Kinner S, Williams M [Internet]. Post-release experience of prisoners in Queensland: implications for community and policy. Paper presented at: The proceedings of the Social Change in the 21st Century Conference. Brisbane: Queensland, 2006: Available from: <http://eprints.qut.edu.au/6462/1/6462.pdf>.

41. Mills K, McFarlane A, Slade T, et al. Assessing the prevalence of trauma exposure in epidemiological surveys. *Aust NZJ Psychiatry* 2011; 45: 407-15.
42. Marmot M. Social determinants and the health of Indigenous Australians. *Med J Aust* 2011; 194: 512-3.
43. Gracey M, King M. (2009). Indigenous health part 1: Determinants and disease patterns. *Lancet* 2009; 374: 65-75.

Appendix V

Heffernan E, Andersen K, Davidson F, Kinner S. Substance use disorders among Aboriginal and Torres Strait Islander people in custody: a public health opportunity. 2016; (submitted for publication, April 2016).

References

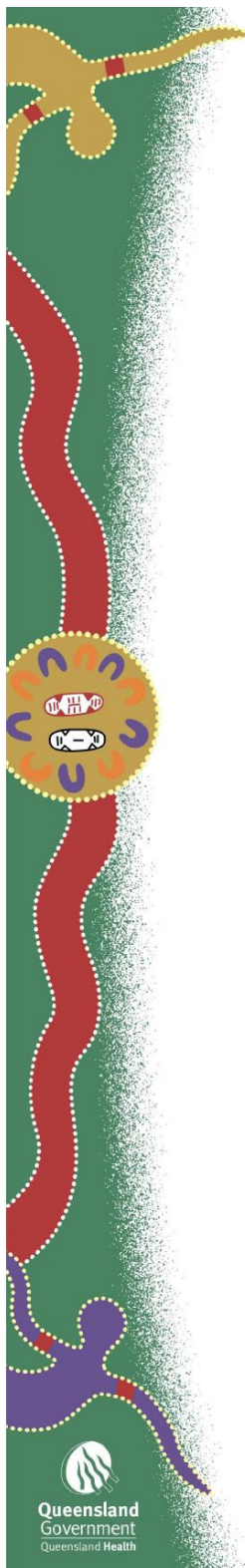
1. Australian Medical Association. 2015 AMA Report Card on Indigenous Health. Canberra: AMA, 2015.
2. Australian Bureau of Statistics [Internet]. Canberra: ABS; 2014. Prisoners in Australia 2014 (4517.0). Available from: <http://www.abs.gov.au/AUSSTATS/abs@.nsf/allprimarymainfeatures/2338431C6253B96BCA257F1700124A0B?opendocument>.
3. Heffernan E, Andersen A, Dev A, Kinner S. Prevalence of mental illness among Aboriginal and Torres Strait Islander people in Queensland prisons. *Med J Aust* 2012; 197: 37-41.
4. Australian Institute of Health and Welfare. The health of Australia's prisoners 2015. (Cat. no. PHE 207). Canberra: AIHW, 2015.
5. Weatherburn DJ. The role of drug and alcohol policy in reducing Indigenous over-representation in prison. *Drug Alcohol Rev* 2008; 27: 91-4.
6. National Indigenous Drug and Alcohol Committee (NIDAC). Bridges and Barriers: Addressing Indigenous incarceration and health. Canberra: Australian National Council on Drugs, 2009.
7. Krieg A. Aboriginal incarceration: Health and social impacts. *Med J Aust* 2006; 184: 534-6.
8. Vos T, Barker B, Begg S, et al. Burden of disease and injury in Aboriginal and Torres Strait Islander peoples: The Indigenous health gap. *Int J Epidemiol* 2009; 38: 470-7.
9. Holland C. Close the Gap: Progress and Priorities Report 2014. Canberra: Australian Human Rights Commission, 2014.

10. Australian Institute of Health and Welfare. Substance use among Aboriginal and Torres Strait Islander people (Cat. no. IHW 40). Canberra: AIHW, 2011.
11. National Indigenous Drug and Alcohol Council. Bridges and Barriers: Addressing Indigenous Incarceration and Health (Revised Edition). Canberra: Australian National Council on Drugs, 2014.
12. National Mental Health Commission. A Contributing Life, the 2013 National Report Card on Mental Health and Suicide Prevention. Sydney: NMHC, 2013.
13. Holland C. Close the Gap: Progress and priorities report 2015. The Close the Gap Campaign Steering Committee, 2015.
14. Kinner S, Preen DB, Kariminia A, et al. Counting the cost: Estimating the number of deaths among recently released prisoners in Australia. *Med J Aust* 2011; 195: 64-8.
15. Alan J, Burmas M, Preen D, Pfaff J. Inpatient hospital use in the first year after release from prison: A Western Australian population-based record linkage study. *Aust NZJ Public Health* 2011; 35: 264-9.
16. Kariminia A, Butler TG, Corben SB, et al. Extreme cause-specific mortality in a cohort of adult prisoners – 1988 to 2002: A data-linkage study. *Int J Epidemiol* 2006; 36: 310-6.
17. Borschmann R, Thomas E, Moran P, et al. Self harm following release from prison: A prospective data linkage study. *Aust NZJ Psychiatry*; in press.
18. Doyle M, Butler T, Shakeshaft A, et al. Alcohol and other drug use among Aboriginal and Torres Strait Islander and non-Aboriginal and Torres Strait Islander men entering prison in New South Wales. *Health Justice* 2015; 3: 1-10.
19. Heffernan E, Anderson K, Dev A. Inside Out - The Mental Health of Aboriginal and Torres Strait Islander People in Custody Report. Brisbane: Queensland Government, 2009.
20. World Health Organization. Composite International Diagnostic Interview (CIDI) core version 2.1, 12-month version. Geneva: World Health Organisation, 1997.

21. World Health Organization. The ICD-10 Classification of Mental and Behavioural Disorders. Geneva: World Health Organisation, 1993.
22. National Health and Medical Research Council. Values and Ethics: Guidelines for the Ethical Conduct in Aboriginal and Torres Strait Islander Research. Canberra: Australian Government, 2003.
23. StataCorp. Stata statistical software: Release 13. College Station: StataCorp LP, 2013.
24. Australian Institute of Health and Welfare. National Drug Strategy Household Survey detailed report 2013 (Cat. no. PHE 183). Canberra: AIHW, 2014.
25. Slade T, Johnston A, Teeson M, et al. The Mental Health of Australians 2. Report on the 2007 National Survey of Mental Health and Well Being. Canberra: Department of Health and Ageing, 2009.
26. Forsyth S, Alati R, Ober C, et al. Striking subgroup differences in substance-related mortality after release from prison. *Addiction* 2014; 109: 1676-83.
27. Winter R, Stoové M, Degenhardt L, et al. Incidence and predictors of non-fatal drug overdose after release from prison among people who inject drugs in Queensland, Australia. *Drug Alcohol Depend* 2015; 153: 43-9.
28. Kinner S, Wang E. The case for improving the health of ex-prisoners. *Am J Public Health* 2014; 104: 1352-5.
29. Kinner S. Continuity of health impairment and substance misuse among adult prisoners in Queensland, Australia. *Int J Prison Health* 2006; 2: 101-13.
30. Thomas E, Degenhardt L, Alati R, Kinner S. Predictive validity of the AUDIT for hazardous alcohol consumption in recently released prisoners. *Drug Alcohol Depend* 2013; 134: 322-9.
31. Rodas A, Bode A, Dolan K. Supply, demand and harm reduction strategies in Australian prisons: An update. Canberra: National Drug and Alcohol Research Centre, University of New South Wales, 2011.

32. Australian Institute of Health and Welfare. Alcohol and other drug treatment services in Australia 2012–13 (Cat. no. HSE 150). Canberra: AIHW, 2014.
33. Holland C. Close the Gap: Progress and Priorities Report 2016. Canberra: Australian Human Rights Commission, 2016.
34. Gray D, Wilson M, Allsop S, et al. Barriers and enablers to the provision of alcohol treatment among Aboriginal Australians: A thematic review of five research projects. *Drug Alcohol Rev* 2014; 33: 482-90.
35. Australian Bureau of Statistics [Internet]. Canberra: ABS; 2009. Prisoners in Australia 2009 (4517.0). Available from: <http://www.abs.gov.au/AUSSTATS/abs@.nsf/allprimarymainfeatures/4BEA22FBC6D7FF0DCA2577F3000F1123?opendocument>.
36. Australian Institute of Health and Welfare. The health of Australia's prisoners 2012. Canberra: AIHW, 2013.
37. Heffernan E, Andersen K, Kinner S. The insidious problem inside: Mental health problems of Aboriginal and Torres Strait Islander People in custody. *Australas Psychiatry* 2009; 17: 41-6.
38. National Health and Medical Research Council. Australian Guidelines to Reduce Health Risks from Drinking Alcohol. Canberra: NHMRC, 2009.

Appendix VI



INSIDE OUT

**MENTAL HEALTH OF ABORIGINAL AND
TORRES STRAIT ISLANDER PEOPLE IN
CUSTODY**

RESEARCH NUMBER: _____
INTERVIEW DATE: ____/____/____
NAME OF INTERVIEWER: _____
SITE: _____

Section 1: Informed Consent

Explain the nature of the project, the time involved, and that the client will be reimbursed for their time.

EXAMPLE: Little is known about how many Aboriginal and Torres Strait Islander People in custody that may have mental health problems.

Experience suggests that more needs to be done to help Indigenous People in custodial settings.

The project aims to find out how many Indigenous People in custodial settings in Queensland have mental health problems, so that we can work out the best way to help.

You will be paid for your time. \$10 will be deposited into your custodial account in the coming weeks. You will need to complete a reasonable amount of the study to get the \$10.

This interview should take about an hour.

I will be asking some questions and recording your answers in this question booklet, and will also be asking you some questions and recording your answers on this lap top computer.

If the participant indicates that they are interested in knowing more about the study, explain the study by taking them through the Information Sheet.

You will need to read the information sheet to the participant; although if they indicate that they can read and understand the content, the participant may wish to read the document themselves.

(Refer to laminated copy of Information Sheet).

Copy of information sheet should be removed from the booklet and given to the Participant.

If you believe that the Participant does not understand the information presented to them, please inform the Project Director or Research Manager

Research Number: _____
Date: ____/____/_____
Data Collection Initials: _____

INFORMATION FOR PARTICIPANTS MENTAL HEALTH PROBLEMS OF INDIGENOUS PEOPLE IN CUSTODY RESEARCH PROJECT

NAME OF INVESTIGATORS:

Dr Ed Heffernan: Principal Investigating Officer, the Park Centre for Mental Health Ph: 32718729

Ms Kimina Andersen: Project Director, Community Forensic Mental Health Ph: 31397200

Ms Sandra Garner: Research Manager, Community Forensic Mental Health Ph: 31397200

WHAT IS IT ABOUT?

Queensland Health's Prison Mental Health Service provides mental health care for people in custody. We believe we can improve the service for Indigenous people through better understanding of the cultural, social, emotional and mental health problems that may be experienced. This project will ask people to share this information. This project is co-ordinated by Indigenous and non-indigenous people; it has the support of Aboriginal and Torres Strait Islander community Elders.

WHAT DOES IT INVOLVE?

We will ask you to complete a few standard screening questionnaires about your social, emotional and mental health well being. This would take about 20-60 minutes of your time. Depending on the responses you may ask you for more detailed information or for a second interview that may take up to 60 minutes. During the interview you maybe asked questions about your health, your culture, your family and your background. For some people this can be stressful or uncomfortable. If at any time you feel upset or sad, or have problems answering you can choose to skip the question or not continue with the interview.

WHAT'S IN IT FOR ME?

You will be paid \$10.00 for your time. You will have the opportunity to choose to see a mental health clinician if you want to or feel you need help. You will be participating in a project that aims to benefit mental health care for all indigenous people in custody. If you would like to view the outcomes/results from the study, you may request that a copy of the final report be sent to you.

YOUR RIGHTS

Information you provide us will be confidential and will be identified by a number only. No names will be used. Information is not provided to Corrective Services.

The information you provide us will only be accessible to the health care workers involved in the study, or if necessary those involved in your medical treatment.

The information will be stored on a computer protected by a password and in a locked filing cabinet in a Queensland Health Building. Access to both will be limited to the health care workers involved in the study.

You have the right to request that a support person be present during the interview. If you do not have access to a support person we can arrange this for you.

You have the right to choose not to take part in the study and can withdraw any time. Your usual or requested treatment will not be affected by your decision.

If you have any questions, concerns or complaints regarding this study or the research you can ask to speak to the Research Manager at any time during your interview, or ask to be put in contact with them after the interview. All researchers can be contacted on the above numbers.

Research Number: _____
Date: ____/____/_____
Data Collection Initials: _____

If the participant indicates they are interested the issues of consent by taking them through the consent form. Explain any concepts the participant may have difficulty understanding.

FOR EXPAMPLE: If you agree we will be going through some questions with you. Some of the questions may seem kind of personal, and you don't have to answer anything you don't want to. In fact you can stop the interview at any time.

By confidential I mean that the information that they give you today will not be discussed with anyone else. No one will ever be able to trace your answers from here, and the only means of identifying you today will be via this consent form, which will be placed in a sealed envelope in front of you.

Unfortunately I cannot give any advice on legal matters or agree to help you in a personal way, but I am able to you to the support services available in the centre (eg PMHS).

I am also obliged to inform my supervisors if you tell me that you are thinking about hurting yourself or someone else. If this is the case, they will talk to you and ask you some more questions about this.

If you are keen to go on, these are the forms I need you to sign.

One copy is for you to keep.

The other is for me to put into this sealed envelope.

Remove two copies of the Consent form from the package.

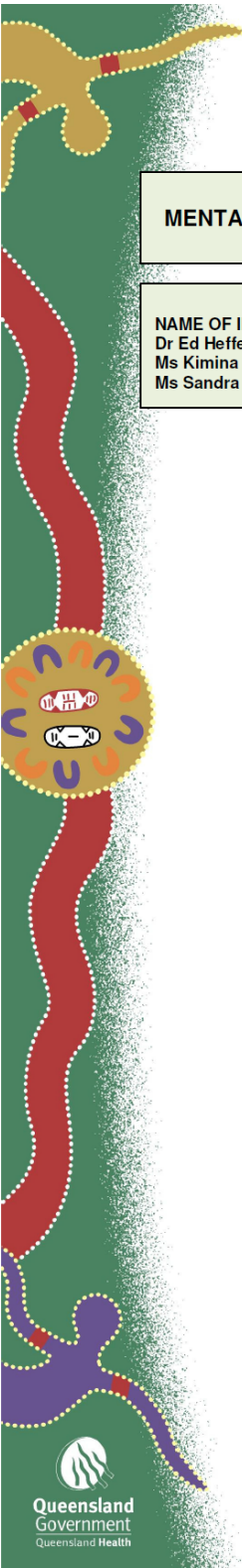
The Participant is to sign one copy and hand it to them.

The other is to be placed in an envelope and sealed in front of the participant.

If you believe that the Participant is unable to give consent to participate, please inform Project Director or Research Manager immediately.

Research Number: _____
Date: ___/___/_____
Data Collection Initials: ____

INSIDE OUT 2008



**CONSENT TO PARTICIPATE
MENTAL HEALTH PROBLEMS OF INDIGENOUS PEOPLE IN CUSTODY
RESEARCH PROJECT**

NAME OF INVESTIGATORS:
Dr Ed Heffernan: Principal Investigating Officer, the Park Centre for Mental Health Ph: 32718729
Ms Kimina Andersen: Project Director, Community Forensic Mental Health Ph: 31397200
Ms Sandra Garner: Research Manager, Community Forensic Mental Health Ph: 31397200

I, _____ consent to participate in the above project

I understand that my participation in this project involves:

- Participation in interviews and this has been explained to me
- I authorise the investigator(s) or their assistants to conduct the interviews and collect information referred to above
- I will have \$10 credited to my trust account for my participation in this project

As a participant in the project I acknowledge that:

- I have been recognized as a potential participants as I have identified as being Aboriginal or Torres Strait Islander on reception into custody
- The project is related to the study of the Mental Health needs of Indigenous people in custodial settings;
- The risks, inconvenience and discomfort of participating in the study have been explained to me;
- I understand the attached explanatory statement and the general purposes, methods and demands of the study;
- I understand the project will benefit Indigenous people in custodial settings;
- I have been informed that I am free to withdraw from the project at any time and to withdraw any information supplied;
- I am satisfied with the explanation given in relation to the project in so far as it affects me and my consent is freely given;
- I am aware that I can obtain overall results of the study;
- I have been informed that the research information obtained from me will be confidential, but that intentions or threats to harm myself or others may be subject to reporting to the Research Manager
- I have been informed that, according to law, any information that I reveal concerning the protective safety of children is subject to reporting to relevant authorities;
- I agree that the data gathered during the course of this project maybe published providing that identifying information is not used,
- I can request that a support person be present at any time during the interviews
- This project has been approved by West Morton South Burnett Health Service District Human Research Ethics Committee: West Morton Health Service District: Ethics Officer, Dawson House, The Park, Centre for Mental Health WACOL QLD 4076

Participant Signature: _____

Witness signature: _____

Date: ____/____/____

Research Number: _____ Date: ____/____/____ Data Collection Initials: _____

1008



**CONSENT TO PARTICIPATE
MENTAL HEALTH PROBLEMS OF INDIGENOUS PEOPLE IN CUSTODY
RESEARCH PROJECT**

NAME OF INVESTIGATORS:
Dr Ed Heffernan: Principal Investigating Officer, the Park Centre for Mental Health Ph: 32718729
Ms Kimina Andersen: Project Director, Community Forensic Mental Health Ph: 31397200
Ms Sandra Garner: Research Manager, Community Forensic Mental Health Ph: 31397200

I, _____ consent to participate in the above project

I understand that my participation in this project involves:

- Participation in interviews and this has been explained to me
- I authorise the investigator(s) or their assistants to conduct the interviews and collect information referred to above
- I will have \$10 credited to my trust account for my participation in this project

As a participant in the project I acknowledge that:

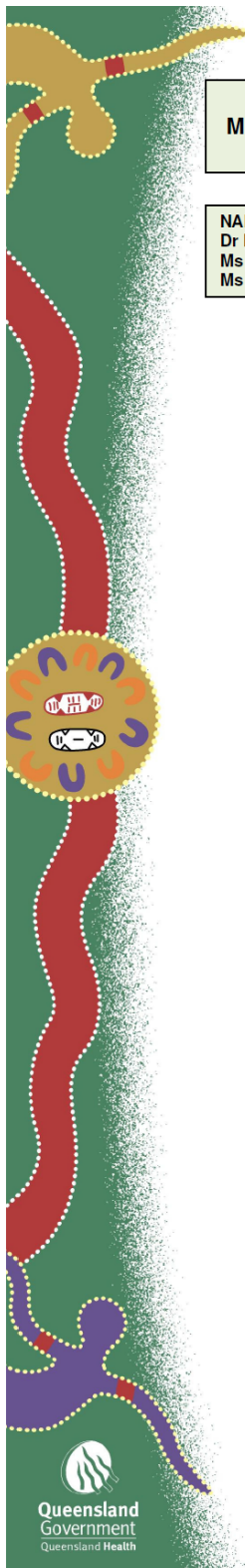
- I have been recognized as a potential participants as I have identified as being Aboriginal or Torres Strait Islander on reception into custody
- The project is related to the study of the Mental Health needs of Indigenous people in custodial settings;
- The risks, inconvenience and discomfort of participating in the study have been explained to me;
- I understand the attached explanatory statement and the general purposes, methods and demands of the study;
- I understand the project will benefit Indigenous people in custodial settings;
- I have been informed that I am free to withdraw from the project at any time and to withdraw any information supplied;
- I am satisfied with the explanation given in relation to the project in so far as it affects me and my consent is freely given;
- I am aware that I can obtain overall results of the study;
- I have been informed that the research information obtained from me will be confidential, but that intentions or threats to harm myself or others may be subject to reporting to the Research Manager
- I have been informed that, according to law, any information that I reveal concerning the protective safety of children is subject to reporting to relevant authorities;
- I agree that the data gathered during the course of this project maybe published providing that identifying information is not used,
- I can request that a support person be present at any time during the interviews
- This project has been approved by West Morton South Burnett Health Service District Human Research Ethics Committee: West Morton Health Service District: Ethics Officer, Dawson House, The Park, Centre for Mental Health WACOL QLD 4076

Participant Signature: _____

Witness signature: _____

Date: __/__/____

Research Number: _____
Date: __/__/____
Data Collection Initials: _____



Section 2: Participant Details

2.1 This section looks at the Demographic details of the Participants.

		COMMENTS/NOTES
2.1a GENDER	<input type="checkbox"/> 1. MALE <input type="checkbox"/> 2. FEMALE	
2.1b AGE (IN YEARS)	
2.1c INDIGENOUS STATUS	<input type="checkbox"/> 1. ABORIGINAL BUT NOT TORRES STRAIT ISLANDER <input type="checkbox"/> 2. TORRES STRAIT ISLANDER BUT NOT ABORIGINAL <input type="checkbox"/> 3. ABORIGINAL AND TORRES STRAIT ISLANDER <input type="checkbox"/> 4. NOT STATED/UNKNOWN <input type="checkbox"/> 5. OTHER	
2.1d FIRST LANGUAGE	<input type="checkbox"/> 1. ENGLISH <input type="checkbox"/> 2. ABORIGINAL ENGLISH <input type="checkbox"/> 3. TORRES STRAIT ISLANDER <input type="checkbox"/> 4. OTHER <input type="checkbox"/>	
2.1e OTHER LANGUAGES SPOKEN	FREE TEXT	

Research Number: _____ Date: ____/____/____ Data Collection Initials: ____
--

2.1f EDUCATION LEVEL	<input type="checkbox"/> 1. DID NOT COMPLETE YEAR 8 <input type="checkbox"/> 2. COMPLETED YEAR 8 <input type="checkbox"/> 3. COMPLETED YEAR 9 <input type="checkbox"/> 4. COMPLETED YEAR 10 <input type="checkbox"/> 5. COMPLETED YEAR 11 <input type="checkbox"/> 6. COMPLETED YEAR 12 <input type="checkbox"/> 7. COMPLETED TERTIARY EDUCATION (IE UNIVERSITY TRAINING) <input type="checkbox"/> 8. COMPLETED TECHNICAL TRADE SKILLS <input type="checkbox"/> 9. NOT STATED/UNKNOWN <input type="checkbox"/> 10. OTHER	
2.1g CUSTODY STATUS	<input type="checkbox"/> 1. FULLY REMANDED <input type="checkbox"/> 2. FULLY SENTENCED <input type="checkbox"/> 3. REMANDED AND SENTENCED <input type="checkbox"/> 4. NOT STATED/UNKNOWN <input type="checkbox"/> 5. OTHER	
2.1h CORRECTIONAL CENTRE SECURITY STATUS	<input type="checkbox"/> 1. MAINSTREAM <input type="checkbox"/> 1a. HIGH <input type="checkbox"/> 1b. LOW <input type="checkbox"/> 2. PROTECTION <input type="checkbox"/> 1a. HIGH <input type="checkbox"/> 1b. LOW <input type="checkbox"/> 3. NOT STATED/UNKNOWN <input type="checkbox"/> 4. OTHER	

INSIDE OUT 2008

Research Number: _____ Date: ____/____/____ Data Collection Initials: ____
--

<p>2.1i HOW MUCH TIME DID YOU SPEND IN CUSTODY AS A YOUTH (>17 YEARS OLD)</p>	<p>..... months/years</p>	
<p>2.1j HOW LONG HAVE YOU BEEN IN CUSTODY ON THIS OCCASION</p>	<p>..... months/years</p>	
<p>2.1k HOW MANY TIMES HAVE YOU BEEN IN ADULT PRISON</p>	<p>..... number of times</p>	
<p>2.1l IN TOTAL HOW MUCH TIME HAVE YOU SPENT IN CUSTODY AS AN ADULT (>17 YEARS OLD)</p>	<p>..... months/years</p>	

INSIDE OUT 2008

<p>Research Number: _____ Date: ___/___/___ Data Collection Initials: _____</p>

2.2 This section looks at the social circumstances of the Participant before coming into custody on this occasion.

I would now like to ask you some questions about your social circumstances. Please think about the following questions which best describes you and your circumstances in the **TWO MONTHS BEFORE** you were arrested.
(The arrest related to this custodial sentence.)

<p>2.2a RELATIONSHIP STATUS (Tick most applicable)</p>	<p><input type="checkbox"/> 1. NEVER MARRIED <input type="checkbox"/> 2. GIRLFRIEND/BOYFRIEND <input type="checkbox"/> 3. MARRIED/DEFACTO <input type="checkbox"/> 4. DIVORCED/SEPARATED <input type="checkbox"/> 5. WIDOWED <input type="checkbox"/> 6. OTHER</p>	
<p>2.2b WHERE WERE YOU LIVING BEFORE YOU CAME INTO CUSTODY ON THIS OCCASION?</p>	<p>FREE TEXT (Town, Suburb and/or City)</p>	<p><input type="checkbox"/> 1. CITY <input type="checkbox"/> 2. TOWN <input type="checkbox"/> 3. REMOTE COMMUNITY <input type="checkbox"/> 4. ABORIGINAL or TORRES STRAIT ISLANDER COMMUNITY (DOGIT) <input type="checkbox"/> 5. NOT STATED <input type="checkbox"/> 6. UNKNOWN</p>

INSIDE OUT 2008

Research Number: _____
 Date: ____/____/_____
 Data Collection Initials: ____

<p>2.2c LIVING SITUATION (Tick all that apply)</p>	<p><input type="checkbox"/> 1. ALONE</p> <p><input type="checkbox"/> 2. WITH NON-FAMILY MEMBERS</p> <p><input type="checkbox"/> 3. WITH PARTNER/SPOUSE</p> <p><input type="checkbox"/> 4. WITH PARTNER/SPOUSE AND DEPENDENT CHILDREN</p> <p><input type="checkbox"/> 5. WITH FAMILY MEMBERS</p> <p><input type="checkbox"/> 6. OTHER</p>	
<p>2.2d TYPE OF ACCOMMODATION (Tick all applicable)</p>	<p><input type="checkbox"/> 1. HOSTEL/MOTEL/BOARDING HOUSE</p> <p><input type="checkbox"/> 2. SUPPORTED ACCOMMODATION</p> <p><input type="checkbox"/> 3. SLEEPING ROUGH/HOMELESS/NO FIXED PERMANENT ADDRESS</p> <p><input type="checkbox"/> 4. OWN HOME</p> <p><input type="checkbox"/> 5. PRIVATE RENTAL ACCOMMODATION</p> <p><input type="checkbox"/> 6. COMMUNITY HOUSING</p> <p><input type="checkbox"/> 7. OTHER</p>	
<p>2.2e MAIN INCOME SOURCE (Tick all that apply)</p>	<p><input type="checkbox"/> 1. SOCIAL SECURITY/PENSION</p> <p><input type="checkbox"/> 2. FULL TIME WORK</p> <p><input type="checkbox"/> 3. PART TIME WORK</p> <p><input type="checkbox"/> 4. FROM FRIENDS AND FAMILY</p> <p><input type="checkbox"/> 5. CRIMINAL ACTIVITY</p> <p><input type="checkbox"/> 6. CDEP</p> <p><input type="checkbox"/> 7. OTHER</p>	

<p>Research Number: _____ Date: ____/____/____ Data Collection Initials: ____</p>

2.3 This section looks at the Participants health care in the TWO MONTHS prior to coming into custody.

I would now like to ask you some questions about your health care.
Thinking about obtaining health care for yourself before coming into custody

<p>2.3a DID YOU ATTEND A PROFESSIONAL FOR MENTAL HEALTH NEEDS IN THE 12 MONTHS PRIOR TO CUSTODY? (Tick all that apply)</p>	<ul style="list-style-type: none"> <input type="checkbox"/> 1. PSYCHIATRIST <input type="checkbox"/> 2. GP <input type="checkbox"/> 3. COMMUNITY MENTAL HEALTH SERVICES <input type="checkbox"/> 4. INPATIENT MENTAL HEALTH SERVICES <input type="checkbox"/> 5. COUNSELLOR <input type="checkbox"/> 6. SUPPORT GROUP <input type="checkbox"/> 7. TRADITIONAL HEALER/MEDICINE <input type="checkbox"/> 8. OTHER <input type="checkbox"/> 9. NONE OF THE ABOVE <input type="checkbox"/> 10. HAVE NEVER ACCESSED MENTAL HEALTH CARE 	
<p>2.3b DID YOU ATTEND HEALTH PROFESSIONAL/S FOR ANY HEALTH NEEDS IN THE 12 MONTHS PRIOR TO CUSTODY? (Tick all that apply)</p>	<ul style="list-style-type: none"> <input type="checkbox"/> 1. GP/LOCAL DOCTOR <input type="checkbox"/> 2. LOCAL COMMUNITY HEALTH CENTRE/CLINIC <input type="checkbox"/> 3. DRUG AND ALCOHOL SERVICES <input type="checkbox"/> 4. TRADITIONAL HEALER/MEDICINE <input type="checkbox"/> 5. OTHER <input type="checkbox"/> 6. NONE OF THE ABOVE <input type="checkbox"/> 7. HAVE NEVER ACCESSED HEALTH CARE 	

Research Number: -----
Date: ___/___/___
Data Collection Initials: -----

<p>2.3c DID YOU KNOW HOW TO ACCESS HEALTH CARE BEFORE COMING TO CUSTODY</p>	<p><input type="checkbox"/> 1. YES.....GO TO 3.1a <input type="checkbox"/> 2. NO <input type="checkbox"/> 3. SOME OF THE TIME <input type="checkbox"/> 4. NOT STATED/UNKNOWN <input type="checkbox"/> 5. OTHER _____</p>	
<p>2.3d WHY DIDN'T YOU ACCESS HEALTH SERVICES IN THE 12 MONTHS PRIOR TO CUSTODY</p>	<p>FREE TEXT</p>	

INSIDE OUT 2008

<p>Research Number: _____ Date: ____/____/_____ Data Collection Initials: ____</p>
--

Section 3: Post Release Planning

For those who anticipate release from custody in the next 2 years

3.1 This section looks at the social circumstances people anticipate they might experience when they are released from custody.

I would now like you to think about yourself in the two months after your release from this centre

Where do you think you might live in the 2 month period after you leave this centre.

3.1a WHEN DO YOU EXPECT TO GET RELEASED months/years If response is 2years GO TO SECTION 4	
3.1b DO YOU PLAN TO RETURN TO WHERE YOU USUALLY LIVE	<input type="checkbox"/> 1. YES <input type="checkbox"/> 2. NO <input type="checkbox"/> 3. DON'T KNOW	
3.1c ARE YOU WORRIED ABOUT RETURNING THERE (Tick all that apply)	<input type="checkbox"/> . YES <input type="checkbox"/> 2. NO..... GO TO 3.1e <input type="checkbox"/> 3. DON'T KNOW	
3.1d WHAT ARE YOUR WORRIES ABOUT RETURNING THERE	FREE TEXT	

Research Number: _____
 Date: ____/____/____
 Data Collection Initials: _____

<p>3.1e WHAT TYPE OF ACCOMMODATION WILL YOU LIVE IN (Tick most applicable)</p>	<p><input type="checkbox"/> 1. WILL RETURN HOME TO USUAL PLACE OF RESIDENCE</p> <p><input type="checkbox"/> 2. WILL RETURN HOME TO A RELATIVE</p> <p><input type="checkbox"/> 3. WILL RETURN TO THE HOME OF A FRIEND</p> <p><input type="checkbox"/> 4. WILL RETURN TO HOSTEL/MOTEL</p> <p><input type="checkbox"/> 5. HAVE NO WHERE TO GO</p> <p><input type="checkbox"/> 6. OTHER</p> <p><input type="checkbox"/> 7. UNKNOWN/ DON'T KNOW</p>	
--	--	--

3.2 This section looks at what the Participant will do for income post release

Thinking about what you might do for income in the first two months after you leave this centre

<p>3.2a DO YOU PLAN TO SEEK EMPLOYMENT</p>	<p><input type="checkbox"/> 1. YES</p> <p><input type="checkbox"/> 2. NO</p> <p><input type="checkbox"/> 3. DON'T KNOW</p>	
<p>3.2b WHAT WILL YOU DO FOR MONEY? (Tick all that apply)</p>	<p><input type="checkbox"/> 1. SOCIAL SECURITY/PENSION</p> <p><input type="checkbox"/> 2. FULL TIME WORK</p> <p><input type="checkbox"/> 3. PART TIME WORK</p> <p><input type="checkbox"/> 4. FRIENDS OR FAMILY</p> <p><input type="checkbox"/> 5. CRIMINAL ACTIVITY</p> <p><input type="checkbox"/> 6. DON'T KNOW</p> <p><input type="checkbox"/> 7. OTHER</p>	

Research Number: _____
 Date: ___/___/___
 Data Collection Initials: _____

3.3 This section looks at the Participants ideas about substance use post release

Again, thinking about the first two months after you are released from this centre do you think you?

<p>3.3a MIGHT YOU BE USING SUBSTANCES</p>	<p><input type="checkbox"/> 1. YES</p> <p><input type="checkbox"/> 2. NO.....GO TO Q 3.4a</p> <p><input type="checkbox"/> 3. DON'T KNOW</p>	
<p>3.3b ARE YOU LIKELY TO USE ANY OF THE FOLLOWING AFTER RELEASE? (Tick all that apply)</p>	<p><input type="checkbox"/> 1. ALCOHOL</p> <p><input type="checkbox"/> 2. CANNABIS</p> <p><input type="checkbox"/> 3. SPEED</p> <p><input type="checkbox"/> 4. OPIATES</p> <p><input type="checkbox"/> 5. PILLS (BENZOS)</p> <p><input type="checkbox"/> 6. INHALANTS (eg petrol, paint)</p> <p><input type="checkbox"/> 7. ANY ILLICIT DRUG USE</p> <p><input type="checkbox"/> 8. OTHER</p>	

3.4 This section looks at the Participants health care plans post release

Thinking about what you might do to look after your health in the first two months after you leave this centre

<p>3.4a DO YOU PLAN TO ACCESS MENTAL HEALTH SERVICES? (Tick all that apply)</p>	<p><input type="checkbox"/> 1. PSYCHIATRIST</p> <p><input type="checkbox"/> 2. GP</p> <p><input type="checkbox"/> 3. COMMUNITY MENTAL HEALTH SERVICES</p> <p><input type="checkbox"/> 4. INPATIENT MENTAL HEALTH SERVICES</p> <p><input type="checkbox"/> 5. COUNSELLOR</p> <p><input type="checkbox"/> 6. SUPPORT GROUP</p> <p><input type="checkbox"/> 7. CULTURAL HEALER</p> <p><input type="checkbox"/> 8. OTHER</p> <p><input type="checkbox"/> 9. UNKNOWN</p>	
---	---	--

Research Number: _____
 Date: ____/____/____
 Data Collection Initials: ____

<p>3.4b DO YOU PLAN TO ACCESS <u>ANY HEALTH SERVICES?</u> (Tick all that apply)</p>	<p><input type="checkbox"/> 1. GP/LOCAL DOCTOR</p> <p><input type="checkbox"/> 2. LOCAL COMMUNITY HEALTH CENTRE</p> <p><input type="checkbox"/> 3. LOCAL COMMUNITY CLINIC</p> <p><input type="checkbox"/> 4. DRUG AND ALCOHOL SERVICES</p> <p><input type="checkbox"/> 5. CULTURAL HEALER</p> <p><input type="checkbox"/> 6. OTHER</p> <p><input type="checkbox"/> 7. UNKNOWN</p>	
--	---	--

INSIDE OUT 2008

<p>Research Number: _____</p> <p>Date: ____/____/____</p> <p>Data Collection Initials: _____</p>
--

Section 4: Indigenous Risk Impact Scale (IRIS)

4.1 IRIS risk screening instrument will enable early identification of (i) alcohol and drug misuse, (ii) environmental risk, and (iii) mental health risk

Now I am going to ask you some questions about your drug and alcohol use, answer as accurately as you can

1. In the last six months have you needed to drink or use more to get the effects you want?	<input type="checkbox"/> No = 1 <input type="checkbox"/> Yes, a bit more = 2 <input type="checkbox"/> Yes, a lot more = 3
2. When you have cut down or stopped drinking or using drugs in the past, have you experienced any symptoms such as sweating, shaking, feeling sick in the tummy/vomiting, diarrhoea, feeling really down or worried, problems sleeping, aches and pains?	<input type="checkbox"/> Never = 1 <input type="checkbox"/> Sometimes when I stop = 2 <input type="checkbox"/> Yes, every time = 3
3. How often do you feel that you end up drinking or using drugs much more than you expected?	<input type="checkbox"/> Never/hardly ever = 1 <input type="checkbox"/> Once a month = 2 <input type="checkbox"/> Once a fortnight = 3 <input type="checkbox"/> Once a week = 4 <input type="checkbox"/> More than once a week = 5 <input type="checkbox"/> Most days/every day = 6
4. Do you ever feel out of control with your drinking or drug use?	<input type="checkbox"/> Never/hardly ever = 1 <input type="checkbox"/> Sometimes = 2 <input type="checkbox"/> Often = 3 <input type="checkbox"/> Most days/every day = 4
5. How difficult would it have been for you to stop or cut down on your drinking and drug use?	<input type="checkbox"/> Not difficult at all = 1 <input type="checkbox"/> Fairly easy = 2 <input type="checkbox"/> Difficult = 3 <input type="checkbox"/> Couldn't stop/cut down = 4
6. What time of day do you usually start drinking or using drugs?	<input type="checkbox"/> At night = 1 <input type="checkbox"/> In the afternoon = 2 <input type="checkbox"/> Sometimes morning = 3 <input type="checkbox"/> As I wake up = 4
7. How often do you find that your whole day has involved drinking or using drugs?	<input type="checkbox"/> Never/hardly ever = 1 <input type="checkbox"/> Sometimes = 2 <input type="checkbox"/> Often = 3 <input type="checkbox"/> Most days/every day = 4

Research Number: _____
 Date: ___/___/___
 Data Collection Initials: ___

INSIDE OUT 2008

Now I would like to ask you some questions about how you feel, and some of the emotions you might experience, you can answer these questions by saying never/hardly ever; sometimes; or most/every day.

8. How often do you feel down in the dumps, sad or slack?	<input type="checkbox"/> Never/hardly ever = 1 <input type="checkbox"/> Sometimes =2 <input type="checkbox"/> Most days/every day = 3
9. How often have you felt that life is hopeless?	<input type="checkbox"/> Never/hardly ever = 1 <input type="checkbox"/> Sometimes =2 <input type="checkbox"/> Most days/every day = 3
10. How often do you feel nervous or scared?	<input type="checkbox"/> Never/hardly ever = 1 <input type="checkbox"/> Sometimes =2 <input type="checkbox"/> Most days/every day = 3
11. Do you worry much?	<input type="checkbox"/> Never/hardly ever = 1 <input type="checkbox"/> Sometimes =2 <input type="checkbox"/> Most days/every day = 3
12. How often do you feel restless and that you can't sit still?	<input type="checkbox"/> Never/hardly ever = 1 <input type="checkbox"/> Sometimes =2 <input type="checkbox"/> Most days/every day = 3
13. Do past events in your family, still affect your well-being today (such as being taken away from family)?	<input type="checkbox"/> Never/hardly ever = 1 <input type="checkbox"/> Sometimes =2 <input type="checkbox"/> Most days/every day = 3

INSIDE OUT 2008

Research Number: _____
 Date: ____/____/____
 Data Collection Initials: _____

4.2 This section looks at the Participants drug and alcohol use, and how this may have contributed to their offending

Now I want to ask you about alcohol and drug use, in relation to your offending. Thinking about coming into custody on this occasion

Alcohol and Offending		
4.2a WERE YOU UNDER THE INFLUENCE OF ALCOHOL AT THE TIME OF YOUR OFFENCE/S	<input type="checkbox"/> 1. YES <input type="checkbox"/> 2. A LITTLE BIT <input type="checkbox"/> 3. NO.....GO TO 4.2e <input type="checkbox"/> 4. DON'T KNOW <input type="checkbox"/> 5. NOT ANSWERED	
4.2b DO YOU FEEL THAT BEING UNDER THE INFLUENCE OF ALCOHOL CONTRIBUTED TO YOUR OFFENCE/S ON THIS OCCASION	<input type="checkbox"/> 1. YES <input type="checkbox"/> 2. A LITTLE BIT <input type="checkbox"/> 3.NO <input type="checkbox"/> 4.DON'T KNOW <input type="checkbox"/> 5. NOT ANSWERED	
4.2c WAS YOUR CURRENT OFFENCE/S COMMITTED TO SUPPORT YOUR ALCOHOL USE	<input type="checkbox"/> 1. YES <input type="checkbox"/> 2. A LITTLE BIT <input type="checkbox"/> 3.NO <input type="checkbox"/> 4.DON'T KNOW <input type="checkbox"/> 5. NOT ANSWERED	
4.2d HAVE YOU EVER OFFENDED IN THE PAST TO SUPPORT YOUR ALCOHOL USE	<input type="checkbox"/> 1. YES <input type="checkbox"/> 2. A LITTLE BIT <input type="checkbox"/> 3. NO <input type="checkbox"/> 4. DON'T KNOW <input type="checkbox"/> 5. NOT ANSWERED	

INSIDE OUT 2008

Research Number: _____
 Date: ___/___/___
 Data Collection Initials: ___

Drug use and Offending		
4.2e WERE YOU UNDER THE INFLUENCE OF DRUGS AT THE TIME OF YOUR OFFENCE/S	<input type="checkbox"/> 1. YES <input type="checkbox"/> 2. A LITTLE BIT <input type="checkbox"/> 3.NO.....GO TO 5.1a <input type="checkbox"/> 4.DON'T KNOW <input type="checkbox"/> 5. NOT ANSWERED	
4.2f WHICH DRUGS WERE YOU UNDER THE INFLUENCE OF (Tick all that apply)	<input type="checkbox"/> 1. CANNABIS <input type="checkbox"/> 2. SPEED <input type="checkbox"/> 3. OPIATES <input type="checkbox"/> 4. PILLS (BENZOS) <input type="checkbox"/> 5. INHALANTS <input type="checkbox"/> 6. OTHER	
4.2g DO YOU FEEL THAT BEING UNDER THE INFLUENCE OF DRUGS CONTRIBUTED TO YOUR OFFENCE/S ON THIS OCCASION	<input type="checkbox"/> 1. YES <input type="checkbox"/> 2. A LITTLE BIT <input type="checkbox"/> 3.NO <input type="checkbox"/> 4.DON'T KNOW <input type="checkbox"/> 5. NOT ANSWERED	
4.2h WAS YOUR CURRENT OFFENCE/S COMMITTED TO SUPPORT YOUR DRUG USE?	<input type="checkbox"/> 1. YES <input type="checkbox"/> 2. A LITTLE BIT <input type="checkbox"/> 3. NO <input type="checkbox"/> 4. DON'T KNOW <input type="checkbox"/> 5. NOT ANSWERED	
4.2i HAVE YOU EVER OFFENDED IN THE PAST TO SUPPORT YOUR DRUG USE	<input type="checkbox"/> 1. YES <input type="checkbox"/> 2. A LITTLE BIT <input type="checkbox"/> 3. NO <input type="checkbox"/> 4. DON'T KNOW <input type="checkbox"/> 5. NOT ANSWERED	
4.2j HOW WELL DO YOU REMEMBER THE EVENTS THAT LED TO YOUR OFFENDING ON THIS OCCASION	<input type="checkbox"/> 1. A LOT <input type="checkbox"/> 2. A LITTLE <input type="checkbox"/> 3. NOTHING AT ALL <input type="checkbox"/> 4. OTHER	

Research Number: _____ Date: ____/____/____ Data Collection Initials: ____
--

INSIDE OUT 2008

Section 5: Suicide and Trauma

5.1 This section looks at the Participants experience of suicide and thoughts of suicide they may have experienced themselves

I am now going to ask you some questions that can be hard to talk about. The questions are about suicide and upsetting things that may have happened in the past. Please tell me if you do not wish to talk about these things or if you feel like a break at any stage after we begin.

Sometimes people feel so down or stressed that they think about suicide;

<p>5.1a HAVE YOU EVER HAD A FRIEND OR CLOSE RELATIVE SUICIDE?</p>	<p><input type="checkbox"/> 1. YES <input type="checkbox"/> 2. NO (Go to Question 2) <input type="checkbox"/> 3. NO ANSWER</p>	
<p>5.1b HAVE YOU EVER HAD THOUGHTS ABOUT SUICIDE OR ENDING YOUR OWN LIFE</p>	<p><input type="checkbox"/> 1. YES <input type="checkbox"/> 2. NO (Go to Question 2) <input type="checkbox"/> 3. NO ANSWER</p>	
<p>5.1c WHERE HAVE THOUGHTS OF SUICIDE BEEN THE WORST?</p>	<p><input type="checkbox"/> 1. IN CUSTODY <input type="checkbox"/> 2. IN THE COMMUNITY <input type="checkbox"/> 3. NO ANSWER</p>	
<p>5.1d HAVE YOU HAD SUICIDE THOUGHTS IN THE LAST 12 MONTHS</p>	<p><input type="checkbox"/> 1. YES <input type="checkbox"/> 2. NO <input type="checkbox"/> 3. NO ANSWER</p>	
<p>5.1e HAVE YOU EVER ATEMPTED SUICIDE</p>	<p><input type="checkbox"/> 1. YES <input type="checkbox"/> 2. NOGO TO Q 6.1 <input type="checkbox"/> 3. NO ANSWER</p>	
<p>5.1f WHERE DID YOU ATEMPT SUICIDE</p>	<p><input type="checkbox"/> 1. IN CUSTODY <input type="checkbox"/> 2. OUT OF CUSTODY <input type="checkbox"/> 3. NO ANSWER</p>	

Research Number: _____
 Date: ___/___/___
 Data Collection Initials: _____

<p>5.1g DO YOU HAVE ANY CURRENT SERIOUS THOUGHTS ABOUT SUICIDE OR ENDING YOUR LIFE?</p>	<p><input type="checkbox"/> 1. YES <input type="checkbox"/> 2. NO <input type="checkbox"/> 3. NO ANSWER</p>	
<p>5.1h DO YOU WANT TO, OR NEED TO TALK TO ANYBODY FURTHER ABOUT THESE THOUGHTS OF SUICIDE</p>	<p><input type="checkbox"/> 1. YES <input type="checkbox"/> 2. NO <input type="checkbox"/> 3. NO ANSWER</p>	

If the Participant reports yes or does not answer the last two questions (5.1g and 5.1h,) please inform the Project Director or Research Manager immediately.

Additionally, if you feel that the Participant is distressed or upset by these questions, please inform the Project Director or Research Manager immediately.

Asking these questions can also be difficult for you. If you need to take a break for a minute after these questions, please inform the Project Director or Research Manager immediately.

Research Number: _____
Date: ____/____/_____
Data Collection Initials: _____

INSIDE OUT 2008

Section 6: Psychosis Screening

6. This section is a screening for Psychosis; it asks the Participants to answer questions about their thinking and thoughts.

I am now going to ask you some questions about the way you might think, and what you might think about. Some of these questions might seem unusual; just answer the questions as accurately as possible.

				✓	
6.1.	Have you ever felt that your thoughts were being directly interfered with or controlled by another person?		1. YES		
			5. NO		GO TO Q 6.2
			8. DON'T KNOW		GO TO Q 6.2
			9. REFUSED		GO TO Q 6.2
6.1a		Did it come about in a way that many people would find hard to believe, for instance, through telepathy?	1. YES		
			5. NO		GO TO Q 6.2
			8. DON'T KNOW		GO TO Q 6.2
			9. RUFUSED		GO TO Q 6.2
6.1b		Has this occurred in the past 12 months?	1. YES		
			5. NO		
			8. DON'T KNOW		
			9. RUFUSED		
6.2	Have you ever had a feeling that people were too interested in you?		1. YES		
			5. NO		GO TO Q 6.3
			8. DON'T KNOW		GO TO Q 6.3
			9. RUFUSED		GO TO Q 6.3
6.2a		Have you ever had a feeling that things were arranged so as to have a special meaning for you, or even that harm might come to you?	1. YES		
			5. NO		GO TO Q 6.3
			8. DON'T KNOW		GO TO Q 6.3
			9. RUFUSED		GO TO Q 6.3
6.2b		Have you had these feelings in the past 12 months?	1. YES		
			5. NO		
			8. DON'T KNOW		
			9. RUFUSED		

Research Number: _____
 Date: ___/___/___
 Data Collection Initials: ___

INSIDE OUT 2008

6.3	Have you ever had any special powers that most people lack?		1. YES		
			5. NO		GO TO Q 4
			8. DON'T KNOW		GO TO Q 4
			9. RUFUSED		GO TO Q 4
6.3a		Do you belong to a group of people who also have these powers?	1. YES		GO TO Q 4
			5. NO		
			8. DON'T KNOW		GO TO Q 4
			9. RUFUSED		GO TO Q 4
6.3b		Have you had these special powers in the past 12 months?	1. YES		
			5. NO		
			8. DON'T KNOW		
			9. RUFUSED		

6.4	Has a doctor ever told you that you may have schizophrenia?		1. YES		
			5. NO		
			8. DON'T KNOW		
			9. RUFUSED		

SEE	✓ ANSWER YES	
6.1b		POSITIVE SCREEN → SEE RESEARCH MANAGER
6.2b		POSITIVE SCREEN → SEE RESEARCH MANAGER
6.3b		POSITIVE SCREEN → SEE RESEARCH MANAGER
6.4		POSITIVE SCREEN → SEE RESEARCH MANAGER

Research Number: _____ Date: ____/____/____ Data Collection Initials: ____
--

INSIDE OUT 2008

Section 7: CIDI

7. Involves the CIDI (Comprehensive International Diagnostic Inventory.)

Please collect your lap top computer.

INSIDE OUT 2008

Research Number: _____
Date: ____/____/____
Data Collection Initials: ____

Section 8: Social and Emotional Well Being

8. 1. This section looks at the social and emotional well being of the Participants.

I would now like to ask you some questions about your social and emotional well being, or some of the good and not so good things in your life.

Thinking about yourself

<p>8.1a IN THE LAST 12 MONTHS HAVE YOU EXPERIENCED SOMETHING UPSETTING LIKE</p>	<p><input type="checkbox"/> 1. DEATH OF A CLOSE FRIEND OR RELATIVE</p> <p><input type="checkbox"/> 2. LOSS OF SIGNIFICANT RELATIONSHIP</p> <p><input type="checkbox"/> 3. BEING THE VICTIM OF A CRIME</p> <p><input type="checkbox"/> 4. RACISM</p>	
<p>8.1b WHAT IS THE WORST THING ABOUT BEING IN CUSTODY</p>	<p>FREE TEXT</p>	
<p>8.1c IS THERE ANYTHING YOU LIKE ABOUT BEING IN CUSTODY</p>	<p>FREE TEXT</p>	

Research Number: _____
 Date: ___/___/___
 Data Collection Initials: _____

<p>8.1d WHAT SKILLS DO YOU THINK YOU HAVE GAINED SINCE BEING IN CUSTODY (eg cooking, vocational skills, anger management, information about culture, art, criminal activities)</p>	<p>FREE TEXT</p>		
<p>8.1e DO YOU THINK YOU WILL EVER RETURN TO CUSTODY</p>	<p><input type="checkbox"/> 1. YES <input type="checkbox"/> 2. NO <input type="checkbox"/> 3. DON'T KNOW <input type="checkbox"/> 4. OTHER</p>		
<p>8.1f DO YOU CURRENTLY HAVE ANY FAMILY IN CUSTODY</p>	<p><input type="checkbox"/> 1. YES <input type="checkbox"/> 2. NO</p>	<p><input type="checkbox"/> FATHER <input type="checkbox"/> MOTHER <input type="checkbox"/> BROTHER <input type="checkbox"/> SISTER <input type="checkbox"/> COUSIN <input type="checkbox"/> AUNT <input type="checkbox"/> UNCLE <input type="checkbox"/> SON <input type="checkbox"/> DAUGHTER <input type="checkbox"/> OTHER </p>	

INSIDE OUT 2008

<p>Research Number: _____ Date: ____/____/____ Data Collection Initials: _____</p>
--

8.2 This section looks at some different aspects of social and emotional well being, with particular reference to the Participants identification and understanding of their Aboriginal and/or Torres Strait Islander culture

Now I would like to ask you some questions about yourself and your culture, as an Aboriginal and/or Torres Strait Islander Person

Please answer these questions on a scale of NEVER (being: does not ever happen) to ALWAYS (being: happens at all times)

	NEVER	RARELY	SOMETIMES	REGULARLY	ALWAYS
8.2a I DESCRIBE MYSELF TO OTHERS AS AN ABORIGINAL AND/OR TORRES STRAIT ISLANDER PERSON					
8.2b I AM PROUD TO BE AN ABORIGINAL AND/OR TORRES STRAIT ISLANDER PERSON					
8.2c I PARTICIPATE IN ABORIGINAL AND/OR TORRES STRAIT ISLANDER ACTIVITIES					
8.2d I ENJOY PARTICIPATING IN ABORIGINAL AND/OR TORRES STRAIT ISLANDER ACTIVITIES					
8.2e I AM THE VICTIM OF RACISM/DISCRIMINATION BECAUSE OF MY ABORIGINAL AND/OR TORRES STRAIT ISLANDER STATUS					
8.2f I HANG OUT WITH ABORIGINAL AND/OR TORRES STRAIT ISLANDER FRIENDS					
8.2g I HANG OUT WITH NON-ABORIGINAL AND/OR TORRES STRAIT ISLANDER FRIENDS					
8.2h I FEEL UNCOMFORTABLE AROUND NON ABORIGINAL TORRES STRAIT ISLANDER PEOPLE					

Research Number: _____
Date: ___/___/___
Data Collection Initials: ___

INSIDE OUT 2008

8.3 This section asks Participants to look at themselves and their behaviour both in and out of the custodial setting.

Thinking about yourself both in custody and in the community, please consider the following

Again, please answer these questions on a scale of NEVER (being: does not ever happen) to ALWAYS (being: happens at all times)

	NEVER	RARELY	SOMETIMES	REGULARLY	ALWAYS
8.3a WHEN I AM ANGRY I SPEAK TO SOMEONE ABOUT IT					
8.3b WHEN I AM SAD I SPEAK TO SOMEONE ABOUT IT					
8.3c WHEN I AM ANGRY OR SAD I DON'T KNOW WHAT TO DO					
8.3d WHEN I HAVE A PROBLEM WITH MY WELL-BEING I WOULD RATHER TALK WITH SOMEONE FROM MY OWN CULTURE					

INSIDE OUT 2008

Research Number: _____
 Date: ____/____/____
 Data Collection Initials: ____

8.4 This section looks again at social and emotional well being and asks different questions about the Participants understanding of their culture and themselves.

Now I would like to ask you some different questions about yourself and your culture, as an Aboriginal and/or Torres Strait Islander Person

This time, please answer these questions on a scale of **STRONGLY DISAGREE** (being: no experience/knowledge at all) to **STRONGLY AGREE** (being: extensive experience/knowledge)

	STRONGLY DISAGREE	DISAGREE	NEITHER	AGREE	STRONLY AGREE
8.4a I HAVE THE KNOWLEDGE TO TEACH YOUNGER MEMBERS OF MY FAMILY ABOUT ABORIGINAL AND/OR TORRES CULTURE					
8.4b I HAVE LEARNED ABOUT MY ABORIGINAL &/OR TORRES STRAIT ISLANDER CULTURE FROM MY FAMILY/COMMUNITY					
8.4c I UNDERSTAND WHAT RECONCILIATION IS					
8.4d I KNOW WHAT THE STOLEN GENERATION IS					
8.4e WHEN YOU RETURN TO THE COMMUNITY DO YOU THINK THINGS WOULD HAVE CHANGED FOR YOU IN A GOOD WAY					

Research Number: _____
 Date: ___/___/_____
 Data Collection Initials: ___

Section 9: It Is Over To You

9. This section allows the Participant to speak freely about themselves and the Prison Mental Health Service. As the aim of the project is to create Prison Mental Health Services for Aboriginal and Torres Strait Islander people in custody, valuable input can be gained by giving the Participants an opportunity to discuss their own thoughts.

Thinking yourself and other Aboriginal and Torres Strait Islander People in custody and keeping in mind that this project is looking at improving Mental Health Services in Custodial Settings.....

What sorts of things do you think would be helpful for Aboriginal and Torres Strait Islander people in custody, when they feel bad?

Research Number: _____
 Date: __/__/____
 Data Collection Initials: ____

Section 10: Closure

10. This is the conclusion of the interview.

Thank the Participant for their time and contribution to the Project.

You might like to again explain that \$10 will be deposited into their custodial account in the coming weeks.

The Participant should be given an opportunity to ask any questions they may have. If you are unable to answer any of the questions the Participants may bring up, please call the Project Director or Research Manager.

You can also invite the Participant to have a further discussion with the Project Director or Research Manager if they request.

EXAMPLE: We have now asked all the questions we need to for our project. \$10 will be deposited into your custodial account in the coming weeks.

Are there any questions you would to ask me about the project?

Is there anything else you would like to discuss about the topics we have discussed today?

Additionally, if you believe that the Participant may have ongoing Health, or Mental Health needs, please inform the Project Director or Research Manager, so that appropriate referrals can be made.

It is important that the participants acknowledge our gratitude for their participation.

EXAMPLE: Once again, thank you very much for your contribution to this project. Your input has been very valuable. If you would like any further information regarding this project you can contact the local Prison Mental Health Service.

Research Number: _____
Date: ____/____/____
Data Collection Initials: _____

Appendix VII



**Queensland
Government**
Queensland Health

WEST MORETON HEALTH SERVICE DISTRICT HUMAN RESEARCH ETHICS COMMITTEE

To: A/Prof Dr. Bryan Mowry
Director of the Genetics Program
Queensland Centre for Mental Health Research (QCMHR),
The Park, Wacol, Qld, 4076

From: Jacquie Robinson
Ethics Officer WMHSD
Human Research Ethics Committee email: [Jacqueline Robinson@health.qld.gov.au](mailto:Jacqueline_Robinson@health.qld.gov.au)
The Park – Centre for Mental Health
WACOL 4076

Contact No: (07) 3271 8656
Facsimile No: (07) 3271 8634

Subject Mental Health Problems of Indigenous Australians in Custody, (14-08) Dr. Ed Heffernan)WMSBHS

Approval number: (14 -08)

The Executive Director of Medical Services, Ipswich Hospital has now given formal approval for your study to commence.

IMMEDIATE NOTIFICATION

As a condition of approval, the Committee requires investigators to promptly report to the Ethics Officer anything which might affect ethical acceptance of the study, including:

- proposed changes in the protocol.
- unforeseen events that might affect continued ethical acceptability of the study eg adverse effects on participants.
- any complaints or expressions of concern made in relation to the study.

You are also required to notify the Committee on completion or cessation of the study.

DATA COLLECTION

When conducting research within District facilities:

- you are required to have this letter in your possession, as it is validation of research approval.
- an ID needs to be worn;
- the first point of contact on commencing research is the senior clinical staff person in the facility area.

Jacqueline Robinson
Ethics Officer

- 1 -

19/02/2008

MONITORING and REVIEW

An NHMRC requirement¹ is that ethics committees monitor approved research:

- Every 12 months after initial approval you are required to complete and return an annual report form to maintain your approval status. The form may be found at the following URL address:
http://www.health.qld.gov.au/cpic/documents/ethics/annual_report_form.pdf
- A report is required on completion of your research, this may take the form of a brief summary of findings or a paper submitted for publication. The form may be found at the following URL address:
http://www.health.qld.gov.au/cpic/documents/ethics/final_report_form.pdf
- The ethics committee may choose to conduct an interim audit of your research.
- If the results of your project are to be published, please ensure that a copy of any publication or thesis is forwarded to the West Moreton Health Library for future reference.
- You are required to sign and return this approval document (keep a copy for your files) to denote that you will follow all the conditions listed.
- Please return the form to the Ethics Officer WMSBHSD Human Research Ethics Committee, The Park – Centre for Mental Health.

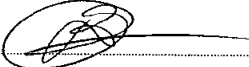
We wish you every success in your work.

Jacquie Robinson, RN, BAA LLM

Jacquie Robinson, RN BAA LLM
Ethics Officer WMSBHSD
Human Research Ethics Committee
February 19, 2008

Acceptance of Conditions of Approval

I Ed. Heffernan acknowledge receipt of approval to undertake the above-mentioned study and agree to meet all of the above conditions.

<u>Dr</u> Title	<u>EDWARD</u> First name	<u>HEFFERNAN</u> Surname
<u>Director Prison Mental Health Service</u> Position		<u>Queensland Health</u> Organisation name
 SIGNATURE		<u>19/2/08</u> DATE

¹ Please refer to your NEAF form section 9.3 Signatures and Undertakings

Appendix VIII



Queensland
Corrective Services

14 April 2008

Dr Edward Heffernan
CFMHS
56 Little Edward St
Spring Hill QLD 4000

Dear Dr Heffernan

Thank you for your application to undertake your research project entitled *Mental Health Problems of Indigenous People in Custody*.

The Queensland Corrective Services Research Committee is committed to endorsing ethically sound research initiatives that strive to further the Agency's commitment to community safety and crime prevention.

After detailed consideration the committee has decided to endorse your research application. This approval is subject to the following:

- Acknowledgement and agreement to the *Researcher's Deed of Agreement*.
- Mutually agreeable access to correctional centres arrangements being made with relevant General Manager's. A memorandum has been forwarded to the applicable centre(s) informing them of the decision of the committee.
- Compliance with the standards and procedures set in place for bringing laptop computers into correctional centres.

The laptop computers utilised for this project must be non-networked and have no capability for external networking, Wi-Fi, Bluetooth, radio or other wireless transmission devices fitted. Researchers will be held personally responsible for the laptop computers in their possession while in custodial facilities. The laptop computers will need to be registered in and out of centres each day.

Please make direct contact with relevant General Managers to initiate access to correctional centres. The General Manager may request researchers to deliver an information session to relevant custodial staff, at least one week prior to entry to correctional centres. This session will provide an overview of the research and outline how the research will affect custodial operations.

Leaders in corrections:
Partners in criminal and social justice

State Law Building
50 Ann Street Brisbane
GPO Box 1054 Brisbane
Queensland 4001 Australia
Telephone +61 7 3227 7111
Facsimile +61 7 3227 6668
ABN 19 823 962 345

I have forward you an electronic version of the Deed of Agreement for you to complete. Please sign and return two copies of the *Researcher's Deed of Agreement* to the committee via the Research Services Unit. Only after the *Researcher's Deed of Agreement* and security checks have been completed may you commence your project.

I take this opportunity to wish you well in your research project. If you have further queries, please contact Brooke Sanders on phone (07) 3227 7235 or e-mail ResearchServicesUnit@correctiveservices.qld.gov.au.

Yours sincerely



Dimitris Petinakis
Chair, Queensland Research Committee
Director, Research and Analysis
Strategic Policy and Services

Appendix IX

Psychosis Interview Proforma

**THE MENTAL HEALTH PROBLEMS OF ABORIGINAL AND TORRES STRAIT
ISLANDER PEOPLE IN CUSTODY**

Psychosis Clinical Interview Proforma

This proforma is designed to summarise the relevant clinical information with respect to psychotic illness only and is designed to assist the research panel to reach a diagnostic consensus for those who screen positive on the CIDI psychosis screener.

ID CODE: _____ CUSTODIAL CENTRE: _____

POSITIVE SYMPTOMS:

Hallucinations

Delusions

Thought Disorder

NEGATIVE SYMPTOMS:

DURATION OF ILLNESS:

MOOD SYMPTOMS:

SUBSTANCE USE HISTORY:

RELEVANT CLINICAL HISTORY:

TREATMENT:

INVESTIGATORS DIAGNOSIS (12mth prevalence):

If the patient requires clinical attention, please contact Dr Ed Heffernan on telephone 3271-8729.

Appendix X

**Hyperlinks, Impact Factor and Citations to date of peer reviewed
publications included in this thesis.**

Heffernan E, Cowburn K, Kinner SA. The Insidious Problem Inside: A systematic review of the mental health problems of Aboriginal and Torres Strait Islander People in custody. *Australas Psychiatry* 2009; 17: S41-6.

Australasian Psychiatry: Impact Factor 0.728

Citations to date (July 2016): 21

<http://www.ncbi.nlm.nih.gov/pubmed/19579105>

Heffernan E, Andersen K, Kinner S. Enhancing research quality through cultural competence: A case study in Queensland prisons. *Australas Psychiatry* 2015; 23: 654-7

Australasian Psychiatry: Impact Factor 0.728

Citations to date (July 2016): 1

<http://www.ncbi.nlm.nih.gov/pubmed/26460333>

Heffernan E, Andersen K, Dev A, Kinner S. Prevalence of mental illness among Aboriginal and Torres Strait Islander people in Queensland Prisons. *Med J Aust* 2012; 197: 37-41

Medical Journal of Australia: Impact Factor 4.089

Citations to date (July 2016): 34

<https://www.mja.com.au/journal/2012/197/1/prevalence-mental-illness-among-aboriginal-and-torres-strait-islander-people>

Heffernan E, Andersen K, Davidson F, Kinner S. PTSD among Aboriginal and Torres Strait Islander people in custody in Australia: prevalence and correlates. *J Trauma Stress* 2015; 28: 523-30.

Journal of Traumatic Stress: Impact Factor 2.624

Citations to date (July 2016): 2

<http://www.ncbi.nlm.nih.gov/pubmed/26584243>