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## **ADDENDUM**

*p 48: Add at the end of paragraph 2:*

Indeed, recent research has suggested that violent victimisation and violent offending are strongly associated with each another (Silver, Piquero, Jennings, Piquero, & Leiber, 2011) and that they share some common risk factors; however, the evidence base in this area remains very limited.

*p 182: Add at the end of sentence 1:*

It is important to examine the criminal victimisation experiences of this group because of the substantial overlap between violent victimisation and violent offending (Silver et al., 2011). Given that findings from paper one showed that mental illness is common among police cell detainees, and that victimisation is associated both with a wide range of mental health problems (Bebbington et al., 2004) and violence (Rivera & Widom, 1990; Widom, 1989), it was hypothesised that those with a mental disorder would more likely be victims of crime compared to those with no mental disorder. This hypothesis was supported by the findings presented in paper four, and lends support to the notion that victimisation, mental illness and offending are inter-related concepts when considered among a sample of police cell detainees. It would therefore be prudent for healthcare professionals to ask questions about the criminal victimisation experiences of police cell detainees, particularly those experiencing mental illness, as this may comprise an important part of the treatment and intervention package for individuals, and may also comprise an essential referral to victim support agencies for those detainees who are released back into the community.

*p 187: Add as new paragraph from line 7:*

A comment is also required regarding the utility of standardised psychiatric screening tools to identify mental illness among individuals of Indigenous descent. This is a particularly pertinent issue given the high rates of admissions and deaths of Aboriginal people in the criminal justice system, of which mental illness has been highlighted as a complicating factor (Johnston, 1991). Recent evidence suggests that traditional psychiatric screening tools may be inappropriate to use among Indigenous people, due to the different definitions, conceptualisations and manifestations of health and mental health (Dingwall & Cairney, 2010). Thus, the screening tools considered in this thesis may have limited utility among Indigenous people detained in police cells. There remains, therefore, a critical need to evaluate culturally appropriate screening tools that will be able to assist in the detection of psychological vulnerabilities among other ethnic and cultural groups.

*p 191: Add as new paragraph from line 17:*

It has been illustrated in this thesis that there is certainly a strong case for the need to use standardised screening tools in police cells. Such a procedure would be the starting point for the 'here and now' treatment of detainees in this environment, as well as informing the need for enacting referrals to appropriate services in the health, social welfare and justice domains. However, in recommending such a venture there are a number of practical and potentially ethical dilemmas raised. Arguably the primary function of such a

screening tool would be to capture all possible vulnerability and therefore minimise the chances that someone with a mental health problem goes undetected. In order to meet such an objective, the screening tool would need to be overly inclusive in whom it identified as being in need of more in-depth assessments and follow-up (i.e., there would be a number of 'false positives'). This, it could be argued, raises the potential ethical concern that the individual may be subjected to additional (unnecessary) testing when they do not have such needs. Interestingly, and of note here, recent research by Leon and colleagues (1997) counters this concern, finding that a substantial proportion of patients in primary care settings who had false positive results on a standardised screening tool, actually met criteria for other psychiatric disorders, had been in contact with mental health services and also presented with functional impairments that would warrant further clinical attention and/or support.

It should not be forgotten that the role of a police officer in the custodial setting is already a difficult and time-consuming one, so it is with these time constraints in mind that suitable screening procedures ought to be implemented. The most promising option in such a circumstance would arguably be a psychiatric triage procedure that sought to identify the level of urgency for care and treatment of newly admitted police cell detainees (Happell, Summers & Pinikahana, 2002). Ultimately, there remains an unhappy balance between the burden placed on the admitting health, social welfare or justice service and the imposition placed on the individual being processed.

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**The Prevalence of Psychiatric Disorders in Police Cells: Service Provision  
Implications and Associations with Criminal Victimization**

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**This thesis is submitted for the degree of**

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**within the**

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**School of Psychology and Psychiatry**

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To Nicole and Callista

## Abstract

In contrast to the extensive body of literature that has investigated the occurrence of mental illness in jails and prisons, there is limited research that has investigated psychopathology among people detained in police cells. It is critical to extend research at the front end of the criminal justice system as many detainees are released back to the community at this point and do not reach the latter parts of the criminal justice system, such as prisons, where people experiencing mental illness may be identified for further assessment and treatment. The police cell setting, therefore, serves as an ideal opportunity to identify those in need of clinical care at an earlier stage of the criminal justice system. The aims of the current study were to investigate: (1) rates of psychiatric disorders and individual needs in a sample of recently arrested police cell detainees; (2) personal factors (from importation model), situational factors (from deprivation model), and their interactive effect, to account for the occurrence of mental illness in police cells; (3) the accuracy of current police practices in identifying those with a mental illness in custody, and the predictive utility of two standardised screening tools for mental illness in police cells; and (4) the criminal victimisation experiences among police cell detainees.

A cross-sectional descriptive study was conducted, in which 150 detainees were recruited from a series of consecutive admissions to two metropolitan police stations in Melbourne, Australia. Measures included a structured diagnostic clinical interview, standardised screening tools for mental illness, individual needs assessment, measures of the environmental effects of police cells, and a standard coding sheet recording demographic information. Participant records were also extracted from the Victoria Police contacts database and the public mental health database.

The four studies that comprised this thesis demonstrated that rates of psychiatric disorders were disproportionately high among detainees as compared to rates of mental illnesses in the community. Those experiencing mental illness also reported more ongoing difficulties in broad life domains (e.g., money and daytime activities) as compared to those with no diagnosed mental illness. While situational factors were not associated with mental health problems in custody, personal factors, such as prior psychiatric hospitalisation, were associated with psychopathology. Current police practices were variable and found not to be effective at identifying those experiencing mental illness; however, detection rates were improved when standardised screening tools for mental illness were applied. In addition, participants with a diagnosed mental disorder were more likely to be victims of a violent crime; however, sub-groups of people experiencing mental illness, such as those diagnosed with psychotic disorders, were not over-represented among those who had officially reported their victimisation experiences to the police. These findings imply that psychiatric distress might be better detected by standardised screening tools, and could inform healthcare services in the development of novel treatment strategies based on the ongoing difficulties that detainees commonly reported. Limitations and future research directions are discussed. It is hoped that this thesis has made progress in addressing the real-life afflictions that detainees present with in police custody.

### Papers Published During Candidature

Baksheev, G. N., Thomas, S. D. M., & Ogloff, J. R. P. (2010). Psychiatric disorders and unmet needs in Australian police cells. *Australian and New Zealand Journal of Psychiatry*, *44*, 1043-1051. doi: 10.1080/00048674.2010.503650

Baksheev, G.N., Ogloff, J., & Thomas, S. (2011). Identification of mental illness in police cells: a comparison of police processes, the brief jail mental health screen and the jail screening assessment tool. *Psychology Crime & Law*. Advance online publication. doi: 10.1080/1068316X.2010.510118

## **General Declaration**

### **Monash University**

#### **Monash Research Graduate School**

Declaration for thesis partially based on conjointly published and unpublished work.

In accordance with Monash University Doctorate Regulation 17/ Doctor of Philosophy and Master of Philosophy (MPhil) regulations the following declarations are made:

I hereby declare that this thesis contains no material which has been accepted for the award of any other degree or diploma at any university or equivalent institution and that, to the best of my knowledge and belief, this thesis contains no material previously published or written by another person, except where due reference is made in the text of the thesis.

This thesis includes two original papers that have been published in a peer-reviewed journal and two manuscripts that, at the time of submission, were under review in peer-reviewed journals. The core theme of the thesis is the study of psychiatric symptoms and disorders in police cells. The ideas, development and writing up of all the papers in the thesis were the principal responsibility of myself, the candidate, working within the Centre for Forensic Behavioural Science, Monash University, under the supervision of Dr Stuart DM Thomas and Professor James RP Ogloff.

The inclusion of co-authors reflects the fact that the work came from active collaboration between researchers and acknowledges input into team-based research.

My contributions to the work, completed in consultation with my supervisors and co-authors, involved the following:

Design of the study, review of the literature, obtaining approval from relevant ethics committees, recruitment of participants, collection of data from participants and databases, data entry, data analysis, writing of articles, and writing of each of the thesis chapters.

The extent of my contribution to each publication is reported below.

Thesis chapter	Publication title	Publication status	Extent of candidate's contribution
Chapter 3, Paper 1	Psychiatric disorders and unmet needs in Australian police cells	Published	75%
Chapter 4, Paper 2	Psychopathology in police custody: The role of importation, deprivation and interaction models	Submitted	75%
Chapter 5, Paper 3	Identification of mental illness in police cells: a comparison of police processes, the brief jail mental health screen and the jail screening assessment tool	Published	75%
Chapter 6, Paper 4	Correlates of criminal victimisation among police cell detainees in Victoria, Australia	Submitted	65%

**Signed:**.....

**Date:**.....

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This study would never have come to fruition if it was not for the assistance of the police officers who made the interviews possible. I am sincerely grateful for the support of the custodial nurses who guided me through the operational logistics of approaching detainees in police cells. I am also grateful to the many detainees who agreed to take part in this research project at a time when they were under considerable stress and at such a difficult time for them.

A special mention and gratitude must be made to a number of people who were involved in supporting me through this degree, who include my parents and my parents-in-law. Further thanks are extended to Professor Alex A Sergejew for his encouragement in my academic endeavours. I would like to specifically mention my gratitude to Rev Fr Nick Dalinkiewicz for his support in my undertaking of a PhD degree and for his unceasing guidance and wisdom throughout this time of my life.

The greatest debt I owe, however, is to my wife Nicole and our daughter Callista. Words can't express the amount of patience that the both of you have shown to me over these years, and the amount of sacrifice that you have made for me to complete this work. I will be eternally grateful for your understanding of my desire to undertake a PhD degree, and your gentle pushes on getting me across the line at the very end. Finally, we can now put this work to rest and move on in our lives together. I will happily return the favour.



## **Introduction**

### **0.1. Thesis Outline**

This thesis reports on an investigation of psychiatric disorders and the broader health-related burden amongst police cell detainees. It comprises seven chapters which include two articles that have been published in peer-reviewed journals and two articles currently under review.

Chapter 1 reviews the literature on mental illness in the criminal justice system. The definitions used in the study are operationalised and outlined at the beginning. This is followed by a consideration of the rates of mental illnesses at the back end of the criminal justice system, such as in prisons, to inform the limited research base regarding the rates of mental illnesses at the front end of the criminal justice system. This is followed by a review of the literature regarding the state of knowledge in the police cell context, with reference to the conditions in police cells, deaths and suicides, and rates of psychopathology. The review then discusses the provision of healthcare services in the criminal justice system, and the models that have been employed in prior research to account for mental illness among those incarcerated. This is followed by a review of police interactions with persons experiencing mental illness in the community, and the need for an investigation of the criminal victimisation experiences amongst those detained in police cells, particularly among those experiencing mental illness.

Chapter 2 sets out the methodology that was employed in the study. The chapter describes the research design that was utilised, the eligibility criteria for study participation and background characteristics of the recruited participants. This is followed by a rationale for site identification, the measures that were employed,

the databases consulted, and the procedures for conducting the study. Detailed ethical considerations and an overview of the statistical analyses that were conducted conclude the chapter.

Chapter 3 reports the first study of the thesis. This study examined psychiatric disorders and individual needs amongst a sample of police cell detainees. The chapter opens with a preamble, followed by the article that has been published.

Chapter 4 reports the second study of the thesis. This study investigated the contribution of personal factors, situational factors, and their interactive effects, to account for the high rates of mental health problems in police cells. The chapter begins with a preamble, followed by the article that has been submitted for publication.

Chapter 5 reports the third study of the thesis. This study examined the accuracy of current police practices in identifying those with a mental illness. This study also examined the predictive utility of two standardised screening tools for mental illness in police cells. Similarly, a preamble is first presented, followed by the article that has been published.

Chapter 6 reports the fourth study of the thesis. This study sought to determine the association between mental disorders and criminal victimisation experiences among a sample of police cell detainees. Again, a preamble is presented, followed by the article that has been submitted for publication.

Chapter 7 is an integrated discussion in which the findings from the four articles are considered jointly with respect to the research aims and their broader implications.

The Appendix presents materials that were used to carry out the research project. These include ethics approvals, consent forms, explanatory statements and copies of publicly available tools.

## **0.2. Research Aims**

The objective of the thesis was to determine the nature and extent of mental illness in a sample of people detained in police cells and to characterise their needs and vulnerabilities, thus informing the need for a new service model. This thesis focussed on four key research aims, as described below.

### **0.2.1. Research aim one: To measure health-related burden among detainees.**

The first aim was to investigate the health-related burden amongst a sample of police cell detainees. This included demographic characteristics, formal contact histories with mental health services and the police, rates of psychiatric disorders and individual needs. Knowledge about the characteristics of police cell detainees and the broader health-related burden evident in this population may assist in developing and strengthening linkages across criminal justice, health and social systems to provide a range of integrated and specific services with the aim of reducing further contacts with police.

### **0.2.2. Research aim two: Accounting for mental illness in police cells.**

The second aim sought to determine the importance of personal factors, situational factors, and the interaction of the two in accounting for the occurrence of mental illness in police custody. It was also hoped that these findings might provide insights into the factors that account for mental illness in police custody. Knowledge of such factors may help to improve the provision of healthcare services in police

cells, paying particular attention to those factors that are predictive of high levels of psychopathology.

**0.2.3. Research aim three: Identification of people experiencing mental illness in police cells.**

The third aim sought to examine current police practices in identifying those with a mental illness, and to examine the predictive utility of two standardised screening tools for mental illness in police cells. These findings may have implications for operational police officers and medical services in police custody by understanding the accuracy with which persons experiencing mental illness are identified in these settings according to current police practices, and whether these practices may be improved with the adoption of a standardised screening tool for mental illness.

**0.2.4. Research aim four: Correlates of victimisation in police cells.**

The final aim was to examine the criminal victimisation experiences among a sample of police cell detainees using official police records, and to identify socio-demographic and clinical correlates of criminal victimisation experiences. This will assist to ascertain whether people experiencing mental illness seek protection from the law during the time in which they are a victim of crime and help inform the need for future research on this neglected aspect of the criminal victimisation literature.

## **1. Chapter One: Mental Illness in the Criminal Justice System**

This thesis is unique as it is positioned at the interface between the community, including the various health and social services that exist there, and the criminal justice system. When a person makes contact with the criminal justice system through their criminal offending, their initial contact is almost always with police services, whose role is pivotal in determining an appropriate course of action, such as resolving the matter informally, taking the person to a psychiatric hospital, or deciding to make an arrest (Watson, Corrigan, & Ottati, 2004). The decision to arrest an individual is typically considered as a last resort, and more commonly used in the event that an individual is exhibiting violent and disruptive behaviour, or has a known criminal history (Green, 1997). Nonetheless, police officers resort to making an arrest in certain cases, and detain individuals in police custody until the matter is heard in a court of law. However, individuals detained in police cells do not always proceed further down the criminal justice system to prison, and are often released back to the community at this point. Little is known about this group, but arguably they represent a group who are vulnerable and lack the additional opportunities of accessing healthcare and support services than those who continue further down the criminal justice system. The focus of this study is on the mental health statuses of those detained at the front end of the criminal justice system, with a view to characterise a sample of recently admitted detainees into police cells. A further focus of this study was to identify those in need of further assessment and treatment at an earlier stage of the criminal justice system.

This chapter will review the literature regarding mental illness in the criminal justice system. The chapter begins with a consideration of the rates of mental illness

in jails and prisons, followed by a review of the current state of the literature regarding the police cell context, paying particular attention to the conditions in police cells, deaths and suicides, and rates of psychopathology. This is followed by a consideration of the state of the healthcare services in the criminal justice system, and the models employed by prior research in accounting for mental illness among those incarcerated. This chapter concludes with a review of the frequency of police interactions with persons experiencing mental illness in the community, and the need to investigate the criminal victimisation experiences among individuals detained in police cells, particularly among people experiencing mental illness.

Prior to commencing the literature review, however, a number of definitions will be presented to operationalise the parameters of this study.

### **1.1. Definitions**

The following terms will be used as defined below.

Police gaol: This term has been defined as follows: 'Police cells or 'lockups' are usually part of the watch-house in a police station complex. They are intended to serve a fundamentally different purpose from prisons, and were originally designed as temporary holding or transit detention facilities at the 'front end' of the criminal justice system for persons who had been arrested and/or are detained before and after court appearances or waiting to be transferred to prison. The 78 watch-houses in Victoria are gazetted, strictly limiting the legal holding period which for most is seven days or fourteen days' (Ombudsman Victoria and Office of Police Integrity, 2006, p. 11). The term police gaol is used interchangeably with police cell and police custody in this literature review.

Officer in charge: this term refers to a member of the police force who is in charge of a police gaol ("Corrections Act 1986," 2009). This term is sometimes used

interchangeably with Custody Sergeant. The role of a Custody Sergeant is to ensure the welfare of detainees in police cells.

Police officer: this term refers to a member of the police force ("Corrections Act 1986," 2009).

Police cell detainee: someone who has been charged with an offence and is detained in a police gaol, or a person who has been detained in a police gaol by a court order ("Corrections Act 1986," 2009).

Psychiatric symptom: This term has been defined as symptom ratings that cut across multiple diagnoses and provide an indication of overall psychopathology or symptomatology (Crits-Christoph & Gladis, 2004).

Mental disorder: the definition for this term has been taken from the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision (DSM-IV-TR) (American Psychiatric Association, 2000a). Although long, it is quoted in full:

In DSM-IV, each of the mental disorders is conceptualized as a clinically significant behavioural or psychological syndrome or pattern that occurs in a person and that is associated with present distress (e.g., a painful symptom) or disability (i.e., impairment in one or more important areas of functioning), or a significantly increased risk of suffering death, pain, disability, or an important loss of freedom. In addition, this syndrome or pattern must not be merely an expectable response to a particular event, e.g., the death of a loved one. Whatever its original cause, it must currently be considered a manifestation of a behavioural, psychological, or biological dysfunction in the person. Neither deviant behaviour, (e.g., political, religious, or sexual), nor conflicts that are primarily between the individual and society are mental

disorders unless the deviance or conflict is a symptom of a dysfunction in the person, as described above. (p. xxxi)

This literature review uses the term ‘mental illness.’

Individual needs: these are patient assessed needs measured across broad life domains, such as psychological distress and alcohol, considering both needs that are met by current interventions and those that remain unmet and ongoing problems despite any help being received (Thomas et al., 2003).

Mentally disordered offender: these are persons who are believed to be both mentally ill and also to have committed criminal behaviour (Steadman, Monahan, Hartstone, Davis, & Robbins, 1982).

Jail: inmates held in a jail are generally detained for a short period of time prior to arraignment and trial, or, are sentenced to jail if found guilty of a summary offence (Ogloff, 2002).

Prison: a prison typically houses ‘inmates who have been convicted and sentenced to serve one or more years in a correctional facility’ (Ogloff, 2002, p. 2).

## **1.2. Prevalence of Mental Illness in Jails and Prisons**

This section will consider the rates of mental illnesses in the latter parts of the criminal justice system, that is, in jails and prisons. It is necessary to review this literature as the evidence base regarding mental illness is limited in the police cell context. The literature base from the latter parts of the criminal justice system may therefore be extrapolated to inform expected findings in future research in the police cell context.

It has long been known that psychiatric disorders are highly prevalent among prisoners (Lamb & Weinberger, 1998), with reports of large numbers of people with mental illness in prisons and jails dating back to the 1970’s (Stelovich, 1979 ; Swank



& Winer, 1976). Swank and Winer, for example, gathered data on psychiatric histories and diagnoses detained in a Denver County jail, USA. Of 445 inmates, almost half reported a history of psychiatric hospitalisation and more than 1 in 4 (26.3%) exhibited symptoms of psychosis. However, such high rates may have been observed as these individuals were referred specifically for a psychiatric evaluation or by way of self-referral. A further random sample of 100 newly-admitted jail inmates yielded a prevalence rate of 5% for psychosis (Swank & Winer, 1976).

Following these early studies, the last three decades has seen a body of literature emerge that has investigated the prevalence of mental disorders in jails and prisons across a range of countries (Birmingham, Mason, & Grubin, 1996; Brinded et al., 1999; Butler, Allnutt, Cain, Owens, & Muller, 2005; Coid, 1984; Teplin, 1990b). Summarising this extensive literature, a systematic review by Fazel and Danesh reported that rates of psychotic illnesses were found in 4% of men and women in the previous 6 months, while rates of major depression, however, were slightly higher in females (12%) than males (10%) in the past 6 months (Fazel & Danesh, 2002). Mullen and colleagues also conducted a review of the available epidemiological data in Australia, finding that “up to 8% of male and 14% of females in our (Australian) prisons have a major mental disorder with psychotic features” (Mullen, Holmquist, & Ogloff, 2004, p. 17).

With regard to the prevalence of specific mental illnesses, a brief overview of the extensive body of literature will be presented here (for further details see above-mentioned reviews).

In the United Kingdom, Gunn and colleagues (1991) surveyed young and adult male offenders across 16 prisons to arrive at estimated rates of psychiatric disorders based on a clinical interview with a psychiatrist. Of 1769 prisoners who

took part in the study, 34 (2%) were diagnosed with a psychotic illnesses, predominantly schizophrenia. This finding is consistent with those from a study that utilised a structured clinical interview among a sample of sentenced prisoners in Melbourne, Australia (Herrman, McGorry, Mills, & Singh, 1991), with 2% of the sample being diagnosed with schizophrenia. While there has been some variability in rates (from 1% to 6%) of schizophrenia across studies, this may partly be explained by research that has used validated diagnostic interviews or a clinical interview. Studies from the United States of America also show higher prevalence rates of schizophrenia (Fazel & Danesh, 2002).

A study by Brinded and colleagues (2001) among prisoners in New Zealand found that of 592 sentenced men that were interviewed, the most common disorders were post-traumatic stress disorder (8.5%), major depression (5.9%) and obsessive-compulsive disorder (4.8%). Higher prevalence rates were reported by Powell and colleagues (1997), who also noted that in addition to major depression (11.9%) and post-traumatic stress disorder (27.1%), alcohol dependence (76.3%) and drug dependence (63.6%) were also highly prevalent among a sample of rural prison inmates. Major depression also featured prominently among prisoners in Greece, with more than 1 in 5 (22.5%) meeting diagnostic criteria according to a semi-structured psychiatric interview (Fotiadou, Livaditis, Manou, Kaniotou, & Xenitidis, 2006). A number of differences in methodology can be considered to at least partially account for the variation in rates of mental illnesses across studies, such as the methods that are used to ascertain cases (that is, psychiatrist vs. validated diagnostic assessment), sample size and the timeframe employed (e.g., 1-month vs. 6-months).

Among the most prevalent of the mental disorders studied in the criminal justice system are substance use disorders. In one study, three-quarters of a sample of 400 prison inmates met criteria for lifetime substance abuse or dependence disorders. In the 30 days prior to study interview, over half the sample met diagnostic criteria for an abuse or dependence disorder. Alcohol dependence was the most common of the dependence disorders with more than 1 in 4 (26.3%) meeting diagnostic criteria, followed by cocaine (12.8%) and cannabis (10.7%) (Peters, Greenbaum, Edens, Carter, & Ortiz, 1998).

Notably, the body of literature has consistently demonstrated that the prevalence of mental disorder is significantly greater amongst prisoners as compared to the general population (Mullen et al., 2004; Teplin, 1990b). Butler and colleagues (2006), for example, found that prisoners were 11.8 times more likely to rate for psychotic disorders and 4.7 times more likely to rate for affective disorders as compared to the general population.

Findings from the criminal justice system indicate that not only is the prevalence of mental disorder high, but that it is higher among female prisoners than male prisoners (Walsh, 2003). This has further been supported by a study conducted by Brinded and colleagues (2001). These researchers interviewed all males and females who were remanded in prisons in New Zealand. They also interviewed all sentenced female prisoners, and 18% of sentenced male prisoners using a diagnostic interview to arrive at estimated rates of current (one-month) mental disorder according to DSM-IV diagnoses. These researchers found that mental disorder, in particular post-traumatic stress disorder and major depression, were twice as prevalent amongst females as compared to sentenced male prisoners. The most prevalent disorders among female prisoners were substance use problems,

posttraumatic stress disorder and major depression. Remarkably consistent findings were reported in a study by Tye and Mullen, who investigated rates of mental disorders amongst female prisoners in Victoria, Australia. While prevalence rates were generally higher in this study, probably due to mental disorders being rated over a 12-month period prior to study interview, they were similar however to the findings of Brinded and colleagues (2001), in that the most prevalent disorders were drug use disorder, major depression, and post traumatic stress disorder. When compared to women in the community, female prisoners had a greater likelihood of meeting diagnostic criteria for all Axis-1 disorders, with the exception of obsessive compulsive disorder and harmful alcohol use (Tye & Mullen, 2006).

A consistent finding in the literature has been a high prevalence of mental disorder found among remanded prisoners. In fact, rates of mental disorder have been demonstrated to be higher among remand prisoners as compared to sentenced prisoners. This may be due to the criminal justice system acting as a filtering system, to some extent, by identifying offenders with serious mental illnesses and transferring them to appropriate mental health care (Ogloff, 2002). For example, Brooke and colleagues (1996) interviewed a random sample of 750 male remand prisoners in England and Wales, representing 9.4% of the unconvicted prison population. Based on assessments that included a semi-structured interview and a case note review, they found that 63% of the sample was diagnosed with a mental disorder. Substance use disorders were the most prevalent (38%), followed by neurotic (18%), personality (11.2%) and psychotic disorders (4.8%). Moreover, more than 1 in 2 (55%) remand prisoners required immediate mental health treatment, of whom a substantial minority (9%) required transfer to a psychiatric bed.

Additional support for these findings has been demonstrated by other studies. Birmingham and colleagues (1996) found that of 569 male remand prisoners, 1 in 4 rated for a current mental disorder, such as a psychotic or mood disorder. This rate is significantly lower than the 63% reported by Brooke and colleagues (1996), even though both studies used a semi-structured interview to ascertain mental disorder. However, rates are remarkably comparable when substance use disorders are included, with the rate increasing from 1 in 4 to a staggering 62% of prisoners. Of 168 men who required psychiatric attention, 50 were in urgent need (Birmingham et al., 1996). Similar results have been found for female remand prisoners (Parsons, Walker, & Grubin, 2001). In their study of New Zealand prisoners, Brinded and colleagues (2001) also found that rates of disorders were higher for remand prisoners as compared to sentenced prisoners for all categories of Axis-I disorders.

Given that rates of mental illnesses appear to increase as the focus of the literature moves from the back end of the criminal justice system towards the front end of the criminal justice system, it may be that rates of mental illnesses may be even higher at the entry point to the criminal justice system, in police cells. This may be because of the short time lag between arrest and being detained in a police cell, the diversion of some offenders to mental health treatment at this point in the criminal justice system, the provision of some treatment opportunities, and higher rates of mental illness among remand prisoners as compared to sentenced prisoners (Ogloff, Davis, Rivers, & Ross, 2007; Riordan, Wix, Kenney-Herbert, & Humphreys, 2000). The following section will consider the current state of the literature regarding the rates of mental illnesses among people detained in police custody.

### **1.3. Police Cells**

Limited research has been conducted at the front end of the criminal justice system, that is, in police cells. It is critically important to further investigate the mental health needs of police cell detainees to gain a more complete estimate of the health-related burden among those who come into contact with the police through their criminal offending (McKinnon & Grubin, 2010). This is because detention in police cells represents the first point of contact with the criminal justice system. While some will continue their path further through this system to prison, the majority will be released back to the community after their court hearing. Therefore, the number of individuals passing through police cells is significantly higher than those entering prisons. Given this, it is likely that levels of mental illness will be higher in police cells as compared to those found in prisons.

#### **1.3.1. Conditions in police cells.**

The limited research in police cells exists despite damning reports of the substandard conditions that detainees must spend their time in while awaiting their court hearing. A report by the Ombudsman Victoria and Office of Police Integrity (2006) and a more recent report by the Office of Police Integrity (2011) highlighted a number of unsatisfactory conditions that existed in these settings. Concerns regarding the physical conditions of police cells, and the lack of access to basic amenities and appropriate health care services were the primary concerns that were highlighted.

With regard to the standard of the physical conditions of police cells, it was found that many were overcrowded and that detainees often had long stays in police cells, especially those with specific vulnerabilities. Complaints were made about the poor ventilation in some police cells, as well as water seeping into the older cell

complexes. Concerns were raised regarding the cleanliness of the police cells as well as the use of 24-hour lighting, which made it difficult for detainees to sleep during the night. Even some of the new cell complexes were very basic for people who had to spend more than a day or two in there (Ombudsman Victoria and Office of Police Integrity, 2006). These conditions are clearly not in line with international regulations regarding the conditions of police cell complexes. A United Nations report, for example, stipulates that sleeping accommodation should meet certain health standards, with due regard being paid to climatic conditions, minimum floor space, lighting, heating and ventilation (United Nations, 1977).

The Ombudsman Victoria and Office of Police Integrity report also raised concern regarding the lack of access to basic amenities and services for police cell detainees. These included restricted access to receiving visitors and making telephone calls, a lack of information about rules to follow in the cells, concerns about the quality of the food provided, poor access to drinking water and the absence of purposeful activity for detainees in the cells. Deficiencies in the provision of health care, particularly mental health care were also noted. While custodial nurses conduct regular rounds in most parts of metropolitan Melbourne, police cell complexes in regional parts of Victoria have limited access to such services. The facilities for health care staff also vary, with some of the larger stations equipped with purpose-built interview rooms, while smaller stations often use storage rooms and kitchens. Also, practical difficulties often arise in organising medications for detainees, especially methadone, as this needs to be verified by their doctor and dispensing pharmacist (Ombudsman Victoria and Office of Police Integrity, 2006). It is evident that many of these concerns regarding the conditions in police cells are yet to be fully addressed (Office of Police Integrity, 2011), making it clear that the

police cell environment is lacking in a number of key (basic) areas for detained individuals.

The poor standard of police custody conditions have also been noted in the wider international literature. Blaauw (2001), for example, conducted a study that evaluated the adherence to 126 standards concerning the treatment of detainees in 60 police stations in the Netherlands. Data were collected from interviewing the police officer in charge of the cell-block, an officer in charge of custodial tasks and two detainees from each station. It was found that there were considerable differences in the adherence to these governmental standards. Overall, 70% of the stations met the standards for quality of accommodation (physical surroundings), 66% for quality of facilities (provision of facilities), 57% for quality of interaction (procedures designed to improve psychological well-being of detainees) and 48% for quality of differential treatment (differential treatment of various groups detained in custody) (Blaauw, 2001; Blaauw, Vermunt, & Kerkhof, 1997). Thus, it is evident that further improvements are necessary across police stations to provide a basic minimum standard of conditions that are consistent with internationally stipulated principles (e.g., United Nations, 1977) for detainees.

### **1.3.2. Deaths and suicides in police cells.**

While there is a lack of research investigating rates of mental illness in police cells, there is a large body of literature that has investigated deaths and suicides of detainees in police cells. It is necessary to briefly review these studies as they highlight the tragic consequences when mental illness is not identified and managed appropriately in these settings, and the role that custodial personnel may have in this. Evidence suggests that worldwide, people who have died in police cells were quite often people at risk, such as those with substance use problems (Johnson, 1982).



The high rates of Aboriginal admissions and deaths in police custody have been noted worldwide. In Canada, Aboriginal Canadians accounted for 19% of provincial admissions and 17% of federal admissions to custody during the period of 2000-2001, but only constituted 3.3% of the general population during the same period (Roberts & Melchers, 2003). A similar pattern of Aboriginal over-representation has also been found in other countries (Cunneen, 2006).

In Australia, between January 1980 and May 1989, ninety-nine Aboriginal and Torres Strait Islander people died in custody, including police, prison and juvenile detention. Given the growing public concern that deaths of Aboriginal people in custody were far too common, a Royal Commission was established in 1987 to account for the circumstances of these tragedies. The Aboriginal community advocated for the Royal Commission to account for the injustice done towards them and their families. The non-Aboriginal community also lent their support for this, having witnessed the accumulating evidence of the mistreatment of Aboriginal people (Johnston, 1991).

A thorough investigation into these deaths led the Royal Commission to report that in contrary to many expectations, there was no evidence of deliberate violence and brutality by police and prison officers to persons in custody. However, a number of other factors were found to be responsible for these deaths. It was found that the high rates of Aboriginal deaths were directly related to the over-representation of Aboriginals in custody (McDonald, 1990). The Royal Commission also noted custodial authorities and officers had little appreciation for, and a lack of dedication to, the duty of care owed to persons held in custody. System defects in the provision of care, such as a failure to exercise proper care and a general poor

standard of care were common. These defects and failures were causally related to some of the investigated deaths (Johnston, 1991).

The problem of deaths in custody has not been limited to people of Aboriginal descent. Thomson and McDonald (1993) found that the risks of death in police custody were between 10 and 20 times greater for Aborigines and non-Aborigines as compared to the general population. Similar findings have been found by other groups (Wobeser, Datema, Bechard, & Ford, 2002).

The causes of deaths in custody have included suicide, misadventure and accidental death and natural causes. Of these, suicide has been cited as one of the leading causes of deaths in custody (Johnson, 1982), with some arguing that it is the most common cause (Norfolk & Cartwright, 1996). For example, Norfolk and Cartwright (1996) found that of a total of 32 deaths investigated by police in the UK, 13 were the result of suicide (12 by hanging and 1 by other means) and a further 13 due to poisoning (7 due to alcohol and 6 due to drugs). Petschel and Gall (2000) investigated deaths in custody in Victoria, Australia during the period of January 1991 to December 1996. There were a total of 45 deaths in police custody (this category included deaths while a person was pursued by police and those detained in police cells). Of these deaths, police shootings were the most common (18), followed by suicide (12) and accidental (12). Blaauw and colleagues investigated the deaths of 59 persons held in Dutch police stations. They found that rates of mortality, suicide and poisoning in police stations were all significantly higher than those found in penitentiary institutions and in the general population (Blaauw, Kerkhof, & Vermunt, 1997).

The presence of mental illness has been a complicating factor in many of these deaths in police cells. For example, Best and colleagues investigated 43 drug-

related deaths involving police contact and found that 42% had significant indicators of mental health problems, such as psychosis, previous self-harm or suicidal attempts, or indications of anxiety or depression (Best et al., 2004). Wobeser and colleagues found that a history of psychiatric illness or substance abuse was more common amongst those who committed suicide in custody as compared to others (Wobeser et al., 2002). These findings have been corroborated by other studies, showing that mental illness has been significantly involved in both deaths (Segest, 1987) and suicides (Blaauw, Kerkhof et al., 1997) in police custody, and has been highlighted as a risk factor in separate reviews (Fazel, Cartwright, Norman-Nott, & Hawton, 2008; McCleave & Latham, 1998).

### **1.3.3. Prevalence of mental illness in police cells.**

To date, limited research has investigated rates of mental illness in police cells, and only one published study that has sought to account for the occurrence of mental illness in this setting.

Studies have demonstrated that rates of substance use problems are high among police cell detainees. Payne-James and colleagues surveyed 150 consecutive admissions to eleven police stations in Central and East London, UK, who stated that they were drug misusers. Heroin was the drug of choice for the majority of these drug misusers (77%), with almost 1 in 3 also reporting that they had used both heroin and cocaine regularly (Payne-James, Dean, & Keys, 1994). Ten years later, Payne-James and colleagues surveyed a sample of 113 detainees who also admitted to using illicit drugs in an area broadly similar to their previous study. They found that levels of drug use appeared to be substantially higher in this sample, with an overwhelming majority (93%) reporting heroin use and was still the most frequently used drug by police cell detainees (Payne-James, Wall, & Bailey, 2005). However,

the extent of substance use problems as a proportion of the entire detainee population was unclear as these surveys were conducted only for those detainees who admitted to misusing drugs.

In contrast to the methodology employed by researchers from the United Kingdom, a number of studies in Australia have sought to examine the level of substance use problems among consecutive admissions of detainees to police custody. In 1999, a major and ongoing program was established to evaluate drug use and crime amongst police cell detainees across the whole of Australia. This program, called Drug Use Monitoring in Australia (DUMA), has been conducted annually and is comprised of two components: a self-report survey and a voluntary urinalysis to corroborate recent drug use. The most recent survey in 2008 recruited a total of 4107 adult detainees from nine different sites. Of these, it was found across all of the sites, almost 2 in 3 (65%) tested positive for drug use, most commonly for cannabis (48%), benzodiazepines (23%) and amphetamines (21%). Contrary to the UK study findings (Payne-James et al., 2005), only 11% tested positive for heroin use. While there was some variation in rates as obtained from urinalysis compared to self-report, the comparisons were generally consistent. For example, 11% of detainees reported using heroin and 1 in 4 used amphetamines in the 30 days prior to assessment. Moreover, more than a third (34%) of the sample rated for alcohol dependence and 41% were rated as being dependent on drugs (Gaffney, Jones, Sweeney, & Payne, 2010). While these findings are difficult to compare to those obtained by Payne-James and colleagues (1994; 2005) due to the varied methodologies employed, they are consistent with the over-representation of substance use problems found among 288 police detainees at the Brisbane City Police Watch House. Heffernan and colleagues found that 80% of men and 85% of women rated for at least one

substance dependence disorder according a diagnostic interview (Heffernan, Finn, Saunders, & Byrne, 2003).

Studies have also demonstrated the high rates of psychiatric symptoms and distress amongst police cell detainees. Ogloff and colleagues surveyed a group of 614 police detainees in police cells across Victoria, Australia. It was found that a third of the detainees rated as psychiatric 'cases' on the Brief Psychiatric Rating Scale, and that over half the sample had prior contact officially recorded with the public mental health system (Ogloff, Warren, Tye, Blaher, & Thomas, 2010). Heffernan and colleagues (2003) found that psychological distress was common among the detainees at the Brisbane City Police Watch House, with 82% of men and 94% of women identified as cases on an established measure of general psychiatric distress. Differences in the rate of psychopathology between these studies may have emerged as the study by Ogloff and colleagues (2010) employed a measure that assessed psychiatric symptoms among detainees and the level of *psychiatric caseness*, as compared to Heffernan and colleagues (2003) who employed a measure that was developed as a screening tool that assesses general psychiatric distress to detect those likely to have or be at risk of developing psychiatric disorders.

High rates of psychopathology have also been noted among police cell detainees in the Netherlands. In their survey of 309 detainees, Blaauw and colleagues found that scores on depression and somatisation were significantly higher amongst the detainees as compared to the general population and jail inmates. In fact, levels of psychopathology amongst detainees resembled those of psychiatric outpatients. As in the study by Ogloff and colleagues (2010), almost half of their sample had prior contact with mental health services (Blaauw, Kerkhof, & Vermunt, 1998).

A limitation with the previous research conducted in police cells is that it has mainly focussed on psychiatric symptomatology and substance use disorders, and has not expanded the evidence base on other diagnosable disorders, such as depression and schizophrenia. A notable exception, however, was a study conducted by Shaw and colleagues. These researchers completed a structured psychiatric interview for those who screened positive to questionnaires for psychiatric disorders. The sample comprised defendants appearing at a magistrate's court, both from police custody and also from the community. Of those from police custody, 6.6% rated for a serious psychiatric disorder, 17.4% for alcohol dependence, and 15.7% for drug dependence. These rates were 2 to 4 times higher compared to defendants from the community (Shaw, Creed, Price, Huxley, & Tomenson, 1999). This could be important to consider in future studies in the police cell context as it would allow researchers to determine the extent to which the high rates of psychopathology evident among people detained in police cells can be attributed to the potentially deleterious impact of the police cell environment or alternatively, to the pre-existing conditions that are brought into police custody. Thus, there is a pressing need for further studies to conduct systematic assessments of diagnosable mental disorders in police cells; one such approach could be to use a structured clinical interview.

Further to this, limited research in police cells has also considered the broader health-related burden amongst the detainee population (McKinnon & Grubin, 2010; Payne-James et al., 2010). Given the high level of ongoing difficulties across the health spectrum of the prisoner population, and given that physical and mental health are inextricably intertwined (Thomas et al., 2003), there is a critical need to determine the broader health and social needs of police cell detainees. This is particularly important at the front end of the criminal justice system to inform

treatment services in police cells and to establish links with appropriate service providers in the community so that detainees released to the community may be linked into appropriate services.

Previous research has also not fully considered the occurrence of mental illness that is prominent amongst detainees. This lends itself to a number of pertinent questions, such as, are the symptoms identified in police cells brought in as part of a pre-existing mental illness? Or are the symptoms a result (or indeed an exacerbation) of the process of incarceration and the potentially deleterious impact of the police cell environment? Knowledge of such factors has significant implications for service providers in police cells.

#### **1.3.4. Summary.**

It is evident from the preceding sections that there has been limited research conducted in police cells, which represents the entry point to the criminal justice system. This has been despite alarming reports that have noted the substandard conditions that police cell detainees must commonly spend time in while awaiting their court hearing, often with a lack of access to basic services and amenities. This puts vulnerable people at an increased risk of death and suicide, a risk much greater compared to those in prisons and the general population. Literature from other parts of the criminal justice system, such as jails and prisons, suggests that the prevalence of mental disorder is higher among inmates as compared to general population, and this is also likely to be the case in police custody settings. Moreover, given the higher flow-through of people in police cells, and that many are released back to the community at this point, it is likely that rates of mental disorders will be higher in this context. Thus, there is a pressing need for future research to conduct systematised assessments of mental illness in police cells. Such a knowledge base

may be important in informing the planning and delivery of healthcare services in police custody.

#### **1.4. Healthcare Services in the Criminal Justice System**

Prisoner healthcare needs are the responsibility of custodial and medical services in the criminal justice system. A substantial proportion of inmates do not access services in the community prior to imprisonment. For example, Simpson and colleagues found that 58.2% of women, 56.4% remand men and 68.8% sentenced men had never received treatment prior to incarceration for mental illness (Simpson, Brinded, Laidlaw, Fairley, & Malcolm, 1999). It follows that accurate identification of mental illness should be a necessary feature of healthcare service provision in the criminal justice system, and particularly in police cells. The criminal justice system is therefore considered to be an ideal ‘treatment opportunity’ to identify those in need of further assessment and / or treatment through their criminal offending and thereby link them to appropriate treatment services (Brooke, Taylor, Gunn, & Maden, 1998; Singleton, Meltzer, & Gatward, 1998).

In this section of the literature review, guidelines on developing a service in the criminal justice system will be briefly discussed, with reference to how they may be applied to the police cell context. This will be followed by a consideration of some of the recent key advances in service provision in jails and prisons, and how they may translate into healthcare service provision in police cells. The current state of healthcare services in police cells will be reviewed thereafter.

##### **1.4.1. Recent developments in service provision.**

Internationally, significant developments have been achieved in the provision of medical services in the criminal justice system. These have been driven by two reports, namely ‘Psychiatric Services in Jails and prisons’ (American Psychiatric



Association, 2000b) and ‘Standards for health services in jails’ (National Commission on Correctional Health Care, 2008). These guidelines make recommendations concerning provision of healthcare services in these settings based on overarching principles governing such services, such as quality of care and professional development for mental health staff.

According to the APA (American Psychiatric Association, 2000b), it has been recommended that medical services in the criminal justice system should comprise four basic elements: (1) screening and referral; (2) assessment and evaluation; (3) mental health treatment; and (4) discharge planning.

Screening and referral services are the cornerstone in service provision as they collect mental health information and refer inmates in need of further assessment and treatment to appropriate services. Mental health screening occurs immediately upon arrival of the inmate to the police cell, jail or prison. Assessment and evaluation services collect further information regarding mental health status. They should be conducted by a mental health professional and include recommendations regarding further assessment and treatment of a mental illness. Mental health treatment is generally comprised of crisis intervention, prescribing of psychotropic medications, psychological therapies and patient education. The last component is discharge planning relating to the need to link inmates with mental illnesses to relevant community services if released from a police cell, jail or prison, or made known to appropriate services if transferred from a police cell or jail to prison (American Psychiatric Association, 2000b). These recommendations are broadly similar with those made by the National Commission of Correctional Health Care (National Commission on Correctional Health Care, 2008).

Such guidelines proposed by the American Psychiatric Association (2000b) suggest that it is critical that future research with detainees in police cells evaluate screening tools for the identification of those experiencing mental illness, as this is central to securing further in-depth mental health evaluation and possible mental health treatment for detainees in need of clinical care. Before considering the state of healthcare services in police cells, however, it is necessary to briefly consider healthcare services in jails and prisons in an attempt to gain insights from the literature that has examined screening procedures at the back end of the criminal justice system.

#### **1.4.2. Healthcare services in jails and prisons.**

In general, the current state of prison research suggests that prison healthcare services have largely failed mentally disordered offenders. To date, the majority of the literature has been concerned with counting the number of people experiencing mental illness at the expense of improving outcomes for this population. The problem with this approach is that it does not seek to improve the quality of services that are offered to those with a mental illness. While this may be a necessary first step to understand the scale of the problem, given the scarcity of resources, the problem has been one of an over-supply of studies that have examined the prevalence of mental illness, with few that have specifically considered how to improve outcomes for these individuals (Maden, 2003).

The state of current research must be considered, however, within the broader context of the role of prisons. Prisons exist, first and foremost, to deter people from committing crime and to punish those who have broken the law (Ogloff, 2002). Secondary to this role is to prevent the offender, while in prison, from committing further crime when released and to reform prisoners so that they lead law-abiding

lives when released (Reed, 2002). While the traditional role of punishment is based on deprivation of liberty, this period may also inadvertently deprive them of access to healthcare services. While, in theory, prisoners should have access to the same quality and range of services as exists in the community, this is not normally the case (Reed & Lyne, 1997). There are numerous problems to providing prison healthcare services, such as ethical dilemmas surrounding informed consent and patient choice, the lack of suitably trained and qualified staff to work in prisons, and the meagre budgets that services often operate on. In addition, prisons consist of an assortment of buildings, many of which are old and unsuitable for prison healthcare services (Birmingham, 2002; Birmingham, Wilson, & Adshead, 2006; Earthrowl, O'Grady, & Birmingham, 2003; Reed, 2002).

The quality of prison healthcare services often falls below the level of those provided in the community. For example, in a survey of inpatient care facilities in 13 prisons across England and Wales, it was found that facilities were often of a poor standard, many staff were not sufficiently trained, and patients spent most of their time locked up and had insufficient therapeutic activities (Reed & Lyne, 2000). Manderscheid and colleagues found that there had been growth in the provision of mental health services in state adult correctional facilities in the United States from 1988 to 2000. This comprised an increase of 20% in provision of 24-hour mental health care, 35% increase in psychiatric testing or assessments, and 37% increase in counselling or therapy. The most significant increase was in provision of monitoring or distribution of medications, with a 46% increase. However, this growth had been outstripped by significant expansions of correctional facilities (increase of 45%) and prisoner populations (increase of 115%). Also, the number of prisoners who were using these services grew exponentially during this period of time. Thus, while there

was some growth in the provision of mental health services, this was far outstripped by prisoner demand, making these services less available to the prisoner population (Manderscheid, Gravesande, & Goldstrom, 2004). In Australia, prison healthcare services have been described as ‘fragmented’ due to the lack of a continuous forensic health service that covers the entire spectrum of the criminal justice system. As a result, services lack any meaningful coordination and communication (Ombudsman Victoria and Office of Police Integrity, 2006). Not surprisingly, prisoner satisfaction with health services was low compared to other health areas (Bjørngaard, Rustad, & Kjelsberg, 2009).

#### **1.4.3. Screening for mental disorder in jails and prisons.**

The literature regarding screening practices in jails and prisons suggest that they have been quite ineffective (Birmingham et al., 1996; Teplin, 1990a). In one study, prison officers were able to correctly identify only up to 40% of prisoners with a severe mental illness (Birmingham & Mullee, 2005). Health reception screening practices in jails and prisons have also missed a substantial amount of psychiatric morbidity. For example, Birmingham and colleagues (1997) found that nearly half of those with current illicit drug use and past psychiatric histories had not previously been identified by prison hospital officers or prison doctors. In a separate study, it was also found that less than a quarter of prisoners with a current mental disorder had been identified by prison reception screening, thereby indicating a significant missed opportunity for further assessment and treatment (Birmingham et al., 1996). The same is true for women, it appears, with one study reporting that two-thirds of women with a mental disorder (encompassing psychotic, mood, anxiety and also personality disorders) were not identified by prison reception screening (Parsons et al., 2001).

In response to the need for screening tools with adequate psychometric properties, and stimulated by the above-mentioned guidelines for services in the criminal justice system (American Psychiatric Association, 2000b; National Commission on Correctional Health Care, 2008), a growing body of literature has investigated best practices for identifying mental disorders. These have included the Correctional Mental Health Screen (Ford, Trestman, Wiesbrock, & Zhang, 2007), Co-occurring Disorders Screening Instrument for Mental Disorders (Sacks et al., 2007) and the Mental Health Screening Form (Carroll & McGinley, 2001).

When evaluating the performance of these screening tools in identifying people experiencing mental illness, it is important to consider a number of psychometric properties, namely the sensitivity and specificity of the screening tools. These tools are typically compared to a ‘gold standard’ diagnostic assessment, such as the Structured Clinical Interview for DSM-IV-TR (First, Spitzer, Miriam, & Williams, 2002) or another such similar diagnostic schedule. The sensitivity is defined as the proportion of true positives that are correctly identified by the screening tool (i.e., the proportion of those with a mental illness that are correctly identified by the screening tool). The specificity, on the other hand, is defined as the proportion of true negatives that are correctly identified by the screening tool (i.e., the proportion of those without a mental illness that are correctly identified by the screening tool) (Altman & Bland, 1994).

When selecting a cut-off point on the screening tool at which those experiencing mental illness are to be identified, a trade-off between sensitivity and specificity must occur – as the relationship between these indices is reciprocal. Thus, a cut-point is selected depending on whether the primary aim is to identify as many

of those experiencing mental illness (i.e., maximising sensitivity), or to screen out as many of those without a mental illness (i.e., maximising specificity).

One of the earliest tools to appear in the literature was the Referral Decision Scale (RDS) (Teplin & Swartz, 1989). This tool was developed because existing psychometric scales at the time, such as the Minnesota Multiphasic Personality Inventory, were too long to administer to every newly-admitted prisoner. These clinical tools were also not suitable for prisoner screening because of the paucity of mental health professionals in these services, the poor reading skills of many prisoners and the lack of validity for their use in these settings.

Teplin and colleagues statistically generated the 14-item RDS from established diagnostic schedules (e.g., National Institute of Mental Health Diagnostic Interview Schedule), and comprised three subscales: schizophrenia, manic-depressive illness and major depression. When compared to assessments made on the Diagnostic Interview Schedule for a sample of prisoners, the RDS was reported to demonstrate sound validity (sensitivity of 0.791 and specificity of 0.987) (Teplin & Swartz, 1989). A number of subsequent validation studies however, questioned the psychometric properties of this measure (Veysey, Steadman, Morrissey, Johnsen, & Beckstead, 1998). For example, Hart and colleagues (1993) investigated the RDS amongst a sample of pretrial jail inmates at the Vancouver Pretrial Service Centre. While the RDS had excellent reliability, it was also demonstrated to make a large number of false positives as compared to independent assessments of mental disorder. These authors recommended that the cut-off score for the major depression subscale be increased to improve validity, and also highlighted the need for further empirical investigation before the RDS was to be used for clinical purposes.

The Brief Jail Mental Health Screen (BJMHS) was subsequently developed by Steadman and colleagues as a brief version of the RDS (Steadman, Scott, Osher, Agnese, & Robbins, 2005). The BJMHS utilised a single composite scale, as previous research demonstrated that the RDS did not perform well at discriminating between inmates with schizophrenia, manic and major depression. The BJMHS was also shortened to comprise eight items with a focus on current psychiatric symptomatology, as compared to the focus on lifetime psychopathology in the RDS. The BJMHS was primarily developed for use by correctional officers and was designed to screen for the presence of serious mental illness (psychotic and mood disorders). When compared to independent psychiatric assessments by trained interviewers, the BJMHS correctly classified 73.5% of males but was less accurate at classifying females, with only 61.6% correctly classified (that is, the tool missed 34.7% of women with a diagnosable mental illness).

A subsequent investigation of the BJMHS was conducted to improve the accuracy of detecting mental disorder amongst female inmates by adding questions for depression and posttraumatic stress disorder to the original eight item scale. However, it was found that detection rates still did not improve for females, so it was recommended to retain the original scale (Steadman, Robbins, Islam, & Osher, 2007).

In contrast to the actuarial tools described above (i.e., those that utilised cut-off scores to identify people requiring further assessment), the Jail Screening Assessment Tool (JSAT) (Nicholls, Roesch, Olley, Ogloff, & Hemphill, 2005) was based on the structured professional judgement approach. Structured professional judgement has been described as making a decision without fixed or explicit rules

but based at least in part by considering a standardised base of information (Kropp & Hart, 2000).

The JSAT screens inmates for self-harm, suicide, mental disorder, violence and victimisation (Nicholls et al., 2005), and appears to be a valid means of identifying male and female inmates with a mental illness. Of a sample of male inmates referred to the mental health program by intake interviewers using the JSAT, 4 in 5 rated for an Axis-1 disorder according to independent SCID-III-R assessments. Similarly, all female inmates with psychotic disorders, anxiety disorders and suicide risk were referred to the mental health program (Nicholls et al., 2005; Nicholls, Lee, Corrado, & Ogloff, 2004).

#### **1.4.4. Healthcare services in police cells.**

Developments in service provision at the front end of the criminal justice system, in police cells, have largely been lacking. Given that the flow-through of people is higher in police cells and that they may be more likely to present with acute psychopathology and be affected by the events that culminated in their arrest, there has been limited research that has investigated the clinical utility of screening tools for mental illnesses in police custody.

An emerging body of literature has investigated assessment and management procedures for detainees presenting with substance use problems in police cells. This has been a particularly important topic to address as substance use, including alcohol, has been a factor in a significant number of police custody deaths. This research has been reviewed elsewhere and will not be considered in depth here (Bean & Nemitz, 1998; Blaauw & Lulf, 1999). In short, Brownell and Naik recommended that detainees with a history of excessive alcohol intake be evaluated for their level of alcohol intake and the presence of co-morbid psychiatric disorders. A clinical



interview was recommended as the cornerstone in evaluating alcohol intake, with suggested guidelines for evaluating co-morbid disorders (Brownell & Naik, 2000). Guidelines for the management of police detainees under the influence of alcohol with co-morbid psychiatric disorders have also been developed (Naik & Brownell, 2000). Further work in the identification and management of substance use disorders has also been conducted by other researchers (Franklin, 2000; Pearson, Robertson, & Gibb, 2000; Stark & Gregory, 2005).

In contrast, little is known about screening techniques for mental illnesses in police cells. The relatively high level of psychopathology among police cell detainees indicates that identifying those experiencing mental illness is critically important. Screening is a vital part of health services in the criminal justice system as it is not fiscally possible, nor particularly desirable, to conduct comprehensive health assessments with every newly admitted detainee. Such research is necessary as it may assist both police officers and medical personnel to identify and manage people afflicted with these conditions. Accurate identification of people experiencing mental illness will also assist in diverting some offenders out of the criminal justice system. For others, accurate identification will assist in securing further assessments and appropriate treatment as in a triage type of model, focussing on those with the highest level of need. Indeed, screening for mental disorders has four aims: (1) to identify those with a mental disorder to provide timely access to treatment and improve their subjective well-being; (2) to prevent violence and disruptive incidents in such settings; (3) to allocate limited resources to those most in need; and (4) to reduce cycles of admission between health, social and criminal justice systems (Nicholls et al., 2005).

Previous research, for example, has utilised Custody Sergeants as one source of referral for further assessment with mental health professionals (James, 2000; Scott, McGilloway, & Donnelly, 2009). However the accuracy of assessments made by police officers has previously not been empirically evaluated. The identification of mental illness by police can play an integral role in the safety and well-being of detainees by supplementing the work of medical services in custody (Gibbs, 1986; Steadman, McCarty, & Morrissey, 1989).

Some insights into the accurate identification of mental illness by police officers can be gauged from research that has been conducted in other situations, such as in the community. This research suggests that police officers possess some degree of accuracy in identifying people experiencing mental illness. Teplin, for example, set out to compare evaluations made by both police officers and their accompanying fieldworker (psychology graduates) as to whether a person was experiencing mental illness. It was found that there was a moderate to strong association between the judgements made by police officers and the fieldworkers. Both judgements agreed on the apparent mental health status of the suspect in 97% of the cases. The discrepancy, however, was one of under-identification of mental illness by police, who identified only 15 of the 30 suspects who were defined as experiencing mental illness by the fieldworker (Teplin, 1984). Similar results have been found elsewhere (Engel & Silver, 2001; Riordan et al., 2000). This might suggest the need for further training of police officers in observing the overt signs of mental illness, or the development of a standardised screening tool for the identification of mental illness in their daily interactions with citizens on the street (Vermette, Pinals, & Appelbaum, 2005).

Moreover, there is currently considerable heterogeneity across medical services in police custody in screening practices for mental illness. In central London, an 80-item coding sheet is completed for every detainee. This coding sheet is utilised to record a breadth of data, such as demographic information, alleged offences committed, a psychiatric and offending history, and an assessment of mental status (James, 2000). In Australian police cells, some jurisdictions use detailed assessment tools (albeit non-standardised), while others utilise no screening assessment at all. Mental health assessments are generally conducted by general health or psychiatric nurses as part of a broader health screen, typically within a day or two of the detainee being admitted to the cells. Moreover, health assessments tend to be brief due to time pressures, with a study in London noting that the average time for mental health assessments for suspected mental illness was a meagre 15 minutes (Revolving Doors, 1994). It is therefore particularly important that such mental health assessments be able to accurately identify those most in need of treatment immediately upon admission to police custody in a time-efficient manner. While the assessment tool that is currently used in Victoria, Australia, is considerably detailed, covering information regarding demographics, general medical, psychiatric, drug and alcohol and an assessment of mental status (Ogloff et al., 2007), the accuracy of such assessments is yet to be evaluated against a 'gold standard' of a diagnostic interview.

Standardised screening tools that are commonly used in police cells have not been validated against a diagnostic interview to assess their clinical utility in police custody. In Ireland, Scott and colleagues (2009) completed an extensive battery of measures, including the Brief Psychiatric Rating Scale (Overall & Gorham, 1962) and the 12-item version of the General Health Questionnaire (Goldberg & Williams,

1988) amongst a sample of 1089 police detainees referred to mental health nurses for further assessment. While the authors collected information regarding probable diagnosis, mental illness was not evaluated according to a standard psychiatric nosological system. A comparison of the outcome of a screening tool to a diagnostic assessment of mental illness is important as it would allow a more thorough examination of the clinical utility of such a tool. Central to this issue is the need for screening assessments to be brief so that they are not unduly burdensome on police time at reception. Also, there is a need for the screening assessments to be able to be completed routinely, without formal training and to also have adequate psychometric properties.

#### **1.4.5. Summary.**

While the primary function of police cells is to detain individuals for the purpose of a court hearing, this setting may also present as an opportunity to identify people experiencing mental illness. To do so, however, requires the use of a validated screening tool for this purpose. Thus, there exists a critical need for an investigation into the clinical utility of screening tools for mental illness in police cells that meets the requirement of being time efficient for busy custodial healthcare personnel. This may assist both medical personnel and police officers to identify those with a mental illness at an earlier point in the justice system and divert some into treatment facilities rather than jails and prisons. For those detainees due to be released back to the community, police cells also present as an ideal opportunity to link this marginalised population with appropriated services in the community. Findings from the latter parts of the criminal justice system suggest that standardised screening tools for mental illnesses, such as the Brief Jail Mental Health Screen and

the Jail Screening Assessment Tool, may be suitable candidates to investigate in the police cell context.

### **1.5. Accounting for Mental Illness in Police Cells**

Given the relatively high rates of psychopathology in police custody, and the limited knowledge regarding healthcare service provision in this context, future research in police cells should consider understanding the origins of this phenomenon as this knowledge may be used to further develop effective strategies to address the relatively high rates of psychopathology in police cells. Traditionally speaking, mental illness in the criminal justice system has been considered to occur as a result of one of two ways: the psychiatric symptomatology is either brought into the police cells by detainees (as proposed by the importation model) or it can arise as a result of the conditions of the police cell environment (as proposed by the deprivation model). Further developments in understanding the origins of psychopathology in the criminal justice system have moved on from this early conceptualisation to endorse factors from both of these earlier models (as proposed by the interaction model).

#### **1.5.1. Importation model.**

According to the importation model, prisoners 'import' values, attitudes, beliefs, social norms, mental health status and biographies into the criminal justice system (Cohen & Taylor, 1981; Irwin, 1970). These pre-prison characteristics that are imported presumably shape the adjustment process of prisoners (Irwin & Cressey, 1962). That is, this model suggests that the mental illness existed prior to the incarceration of offenders. Researchers have found that substantial numbers of newly arrived inmates enter with a history of psychiatric care and current psychiatric disorders (Blaauw et al., 1998; James, 2000). For example, 35% of a sample of jail

inmates rated for a current psychiatric disorder (Teplin, 1994). Research findings from police cells also support this notion, as a substantial number of detainees referred to a diversionary scheme presented with significant psychiatric histories and current psychiatric disorders (James, 2000). Importation factors are therefore important for explaining the mental health status of detainees.

Blaauw and colleagues investigated a variety of personal factors to account for the high prevalence of mental illness in police cells. They examined a variety of personal factors, such as history of psychiatric treatment and hospitalization, reported abuse of alcohol and drugs, age, education and whether they had served a prior custodial sentence. It was found that detainees with a history of psychiatric treatment and hospitalisation reported significantly higher levels of psychopathology (symptoms of depression, somatisation and hostility) as compared to those without such histories. Detainees who reported abuse of hard drugs, were younger than 28 years of age, and those with elementary school also exhibited higher levels of psychopathology as compared to those who did not abuse hard drugs, were older than 28 years and had completed further education, respectively. However, these factors only partially accounted for the psychopathology seen in police custody (Blaauw et al., 1998). Thus, future research is further required to elucidate the role of other personal factors that may account for the high rates of psychiatric symptomatology in police cells.

This person-centred hypothesis implies that person-centred solutions are required to address this problem, such as provision of psychiatric treatment and by not 'criminalising' those with a mental illness (Gibbs, 1987; Teplin, 1984). An investigation of the relationship between psychiatric disorders and symptoms in police cells is critical to the role of providing psychiatric treatment in these settings.

While some detainees may exhibit high levels of symptomatology due to the stressors associated with incarceration, the importation model suggests that psychiatric disorders will be a significant predictor of psychiatric symptoms in police cells. If this is found to be the case, healthcare services will require empirically validated screening tools to identify those experiencing mental illness and to target the limited supply of professional services to such individuals to provide timely treatment and prevent decompensation in the cells.

### **1.5.2. Deprivation model.**

The deprivation model, on the other hand, proposes that imprisonment is synonymous with the deprivation of key rights, possessions, liberties and relationships with family and friends, and that these deprivations can result in significant physical, social and psychological repercussions for individuals (Clemmer, 1958; Sykes, 1966). That is, this model posits that mental illness is the product of the stressful and oppressive conditions within the criminal justice system itself. Research findings have also supported this model. For example, Gibbs interviewed a sample of jail inmates within 72 hours of their confinement, and obtained ratings of symptoms in the week prior to their arrest and confinement, and since the time they had been confined (that is, within the last 72 hours). The same sample was re-interviewed after 5 days of incarceration and were asked to rate their symptoms since the first interview. Gibbs found that there was a marked increase in most of the symptom dimensions during the initial period of incarceration, and then stabilise or decrease after 5 days of confinement. Contrary to predictions from the importation model, Gibbs also found that while those with a history of psychiatric disorder had higher symptom ratings on most dimensions than those without such a history, inmates without a history of disorder showed a greater increase in some

symptom dimensions (Gibbs, 1987). The effects of prison confinement have also been demonstrated elsewhere (Dhami, Ayton, & Loewenstein, 2007). Thus, deprivation factors are also important in accounting for the high prevalence of mental illness in police custody.

In the above-mentioned study from the Netherlands, Blaauw and colleagues also investigated a variety of situational factors to account for psychopathology in police custody. These factors included objective measures of the police cell environment (housing, facilities, interactions and an aggregate quality of detention variable), and subjective measures (detainee evaluations of the fairness of police officer behaviour, and fairness of the facilities provided). They found that detainees who rated police officer behaviour as unfair exhibited higher levels of symptomatology (depression, somatisation and hostility) as compared to those who rated police officer behaviour as fair. Detainees who rated the quality of provided facilities as unfair exhibited higher levels of symptoms (somatisation and hostility) as compared to those who rated the quality of facilities as fair (Blaauw et al., 1998). The situational factors explored in this study also did not account for a vast proportion of the psychopathology, warranting further research to elucidate the role of other situational factors that may explain the occurrence of mental health problems in police custody.

According to this model, solutions to addressing the high rates of mental illness include provision of decent facilities for detainees and certain basic amenities and services, such as appropriate sleeping accommodation (Blaauw et al., 1998; Blaauw, Vermunt et al., 1997; Ombudsman Victoria and Office of Police Integrity, 2006).



### **1.5.3. Interaction model.**

More recently, a newer and developing tradition has taken a broader perspective by considering both personal and environmental factors in accounting for the mental status of prisoners. This approach, referred to as the interaction model, proposes that individuals enter the criminal justice system with unique needs that are met to differing degrees by the conditions of the institutional environment. The differing degrees of incongruence between personal needs and the environmental conditions are thought to be associated with different levels and presentations of psychopathology (Murray, 1938; Toch, 1977/1992). Thus, this approach regards both importation and deprivation models as compatible as pre-prison characteristics may help shape how detainees respond to police cell conditions.

One of the pioneers of this approach, however, conceded that while it may be easy to suggest that people are inextricably linked to their surroundings, inextricability is a difficult concept to study (Toch, 1977/1992). Thus, while this approach may aid our understanding of the mental health problems among prisoners and police cell detainees alike, methodological limitations have impeded our understanding of people's varied responses and adjustments to institutional settings. Nonetheless, some researchers have applied this model in the prison setting. For example, Wright (1991) found that the interaction between person and environment was a significant predictor of external (e.g., arguments) and physical (e.g., being taken advantage of) problems among prisoners. However, the interaction between person and environment did not predict disruptive infractions and internal problems (e.g., being fearful). More recently, Dhimi and colleagues (2007) found that time spent in prison and their quality of life before prison had an interactive effect on the amount of contact prisoners had with their family and friends. It follows that if the

interactive effects of person and environment can be replicated in the police cell context, then potential solutions to reducing psychopathology amongst those detained may be formulated by accommodating people's needs with congruent environmental responses, such as providing clarity about the procedures in police cells and minimising doubts about one's circumstances.

While these results and potential solutions are promising, it is yet to be seen if the interaction model is able to aid our understanding of the occurrence of mental health problems in the police cell context. As such, further development of healthcare services in police cells is reliant on which of these competing models is better able to account for psychopathology in police custody.

#### **1.5.4. Summary.**

To the knowledge of the author, only one published study has investigated the occurrence of mental health problems in police custody. There is a critical need to extend this knowledge base and examine whether other personal or situational factors may account for the high rates of psychopathology in this context, which may also guide treatment and intervention efforts for medical personnel. Moreover, it is yet to be determined if an interaction between person and environment variables may further the understanding regarding the phenomenon of mental health problems in custody.

#### **1.6. Police Interactions with Mentally Disordered Offenders**

The police interact with individuals in the community, including people experiencing mental illness, in their role as: (a) protectors of the public, and (b) protectors of disabled citizens or *parens patriae* (Lamb, Weinberger, & DeCuir, 2002; Teplin, 2000). As such, they typically represent the first point of contact with the criminal justice system for most people. They are one of a few available services

that respond to people in need 24 hours a day, seven days a week and are typically the first service called when a person is acting irrationally or in a way that might put themselves or others in danger (Finn & Sullivan, 1989; Teller, Munetz, Gil, & Ritter, 2006; Teplin & Pruett, 1992). Police services play a major role in referring individuals to mental health services and hospitals for treatment (Compton, 2006; Liberman, 1969). As a result, police have been described as ‘street-corner psychiatrists’ (Teplin & Pruett, 1992) and ‘forensic gatekeepers’ (Menziez, 1987).

### **1.6.1. Frequency of contacts with people experiencing mental illness.**

A significant body of research now exists that has demonstrated that police are in frequent contact with persons with mental illness and that these contacts are typically a lengthy ordeal (Borum, Williams, Deans, Steadman, & Morrissey, 1998; Cotton, 2004; Knott, Pleban, Taylor, & Castle, 2007; Wells & Schafer, 2006; White, Goldkamp, & Campbell, 2006). For example, almost a quarter of police officers surveyed in Canada estimated that they had contacts with the mentally ill one or more times a week (Cotton, 2004). Deane and colleagues estimated that 7% of all official police contacts involve individuals with mental health problems (Deane, Steadman, Borum, Veysey, & Morrissey, 1998). Another study found that nearly 40% of responding officers indicated that they have an average of one to two contacts per month with a person they believe has a mental illness or should be evaluated for a mental illness (Wells & Schafer, 2006). A recent survey of 3534 police officers in the state of Victoria, Australia found that at least 20% of their contact with citizens in the community involved dealing with people experiencing mental illness (Godfredson, Thomas, Ogloff, & Luebbers, in press). Taken together, these contacts represent a significant burden for police, both in terms of monetary

costs in processing and incarcerating individuals with mental illness, and time spent away from other policing functions.

This burden for police, however, has typically been underestimated, as limited studies have sought to investigate the broader array of police contacts beyond arrests or obtained documented contacts with police rather than relying on self-report data from police officers (Stuart & Arboleda-Florez, 2001). For example, Wallace and colleagues (1998) linked records of convictions for 4156 offenders from the higher courts (County and Supreme Courts of Victoria) with a state-wide psychiatric register (Victorian Psychiatric Case Register). They found that 1 in 4 individuals had prior contact with the public mental health system; with schizophrenia, affective disorders and substance use disorders over-represented among the sample. Thus, there is an established evidence base that has explicated police involvement with people experiencing mental illness as offenders, and has also demonstrated the heightened risk of offending among those with mental illness (Swanson, Holzer, Ganju, & Jono, 1990), particularly those diagnosed with psychotic disorders (Fazel, Gulati, Linsell, Geddes, & Grann, 2009; Mullen, 2009). However, few studies have examined police involvement with people experiencing mental illness as victims of crime, in spite of recent findings suggesting that they are at a heightened risk of criminal victimisation (Teplin, McClelland, Abram, & Weiner, 2005). Indeed, recent studies suggest that the risks posed *from* society to people experiencing mental illness are greater than the risks they pose *to* society (Choe, Teplin, & Abram, 2008; Pandiani, Banks, Carroll, & Schlueter, 2007). This is particularly concerning given that such individuals are a group that are typically socially marginalised and stigmatised as a group, and already experience a host of vulnerabilities, such as

poverty and homelessness (Dinos, Stevens, Serfaty, Weich, & King, 2004; Folsom et al., 2005; Saraceno & Barbui, 1997).

### **1.6.2. Victimization of people experiencing mental illness.**

There has been limited research that has sought to investigate the criminal victimisation experiences of people experiencing mental illness, and the extent to which such experiences are reported to the police to secure protection from the law. Given the 'social welfare' type role now performed by police, it is increasingly expected that police be able to interact with varied citizens in the community, including people experiencing mental illness, deliver quality and valued customer service in their interactions, increase their communication and collaboration with the community and afford such interactions due process and equality (Coleman, 2005).

The criminal victimisation of people experiencing mental illness has predominantly been studied with both general population and clinical samples. Maniglio (2009) conducted a review of the criminal victimisation literature and found that between 4% and 35% of those with severe mental illness had been the victim of a violent crime. Prevalence rates have varied significantly among studies however, with rates of 87% reported among psychiatric inpatients (McFarlane, Schrader, Bookless, & Browne, 2006). In the largest and most thorough of these studies, Teplin and colleagues (2005) recruited a sample of adults with severe mental illness and compared them to individuals that took part in the National Crime Victimization Survey. These researchers found that violent crime victimisation (attempted or completed) was more than eleven times greater among persons with severe mental illness as compared with the general population.

Methodological limitations in the studies to date are the most likely cause of the large discrepancy in rates of victimisation reported among people experiencing

mental illness. One such limitation has been in the ascertainment of criminal victimisation with most researchers utilising self-report questionnaires (e.g., Honkonen, Henriksson, Koivisto, Stengard, & Salokangas, 2004), and only one study to date, to the knowledge of the author, that has utilised official police records (Pandiani et al., 2007).

Further limitations in the criminal victimisation literature have concerned the definitions used, variations in study samples, the timeframe of reporting and the comparison group against which people with experiencing mental illness are compared. The definitions of criminal victimisation have varied significantly across studies, with some using a single item to capture both violent and non-violent victimisation (Vaughn et al., 2010), and others using more detailed questions regarding specific types of victimisation (Teplin et al., 2005). In regards to the timeframe of reporting, studies have considered lifetime history (McFarlane et al., 2006), past year (Vaughn et al., 2010) and 1-month timeframes (Fitzgerald et al., 2005).

With regard to the choice of comparison group, Hsu and colleagues (2009) investigated the risks of criminal victimisation among patients with a diagnosis of schizophrenia as compared to patients with a diagnosis of affective disorder. While such an approach may elucidate differences in victimisation among various diagnostic groups, it falls short of elucidating differences posed to persons experiencing mental illness as compared to the general population. Indeed, few studies have compared the criminal victimisation experiences of people experiencing mental illness in comparison to persons with no mental disorder (Silver, Arseneault, Langley, Caspi, & Moffitt, 2005; Teplin et al., 2005). Such methodological

variations across studies most likely account for the large variation in rates of criminal victimisation reported to date.

Nonetheless, the socio-demographic correlates associated with criminal victimisation have been investigated by a number of researchers. Heightened risks for criminal victimisation have been demonstrated among younger persons (Dean et al., 2007), among those unemployed and with a lack of daily activity (Fitzgerald et al., 2005; Wohlfarth, Winkel, Ybema, & Brink, 2001), those with more education (Hiday, Swartz, Swanson, Borum, & Wagner, 1999), and also among those with substance use problems (Brekke, Prindle, Bae, & Long, 2001; Chapple et al., 2004). In regards to gender, while contradictory findings have been reported by some (Chapple et al., 2004; Vaughn et al., 2010), it appears that males are more likely to be victims of threatened, attempted or completed physical assaults and females more likely to be victims of sexual assault when specific types of victimisation are considered, (Silver et al., 2005).

With regard to the clinical correlates of criminal victimisation, psychotic symptoms have been demonstrated to have a strong association with sexual victimisation. Darves-Bonoz and colleagues (1995) recruited a sample of in- or out-patients with schizophrenia and bipolar disorder from twelve public hospital departments of psychiatry in France. It was found that 22% of women with a diagnosis of schizophrenia and 15% of those with bipolar disorder had been the victim of rape in adulthood (from 16 years of age). These findings have been further corroborated by the British National Survey of Psychiatric Morbidity. This survey comprised a large sample of adults aged 16-74 years. It was found that of all the lifetime victimisation experiences investigated, the largest odds for those with

probable psychotic disorder (i.e., those who met two or more of the psychotic screening questions) was for sexual abuse (Bebbington et al., 2004).

Psychotic disorders have also been strongly associated with violent criminal victimisation. Findings from the British National Survey of Psychiatric Morbidity indicated that victimisation was independently with psychotic symptoms (Johns et al., 2004). Among a sample of homeless adults in Sydney, Australia, those with a diagnosis of a psychotic disorder or schizophrenia were more likely to be a victim of violence compared to those with no such disorders, even after taking into account the impact of different levels of depressive symptoms and psychostimulant use (Larney, Conroy, Mills, Burns, & Teesson, 2009). Moreover, greater rates of violent criminal victimisation have been reported among those with any mental disorder compared to those with no mental disorder (Silver et al., 2005).

While the literature concerning the criminal victimisation of people experiencing mental illness in the community is accumulating (Maniglio, 2009), there is a critical need to determine if this is the case for those who make contact with the criminal justice system (Teplin et al., 2005). It is important to consider this as it has been demonstrated that police cell detainees are at an increased risk for a number of adverse outcomes, such as suicide (Blaauw, Kerkhof et al., 1997), mental disorders (Baksheev, Thomas, & Ogloff, in press) and physical health problems (McKinnon & Grubin, 2010). A consideration of the criminal victimisation experiences of police cell detainees may be important in designing a more complete treatment and intervention package, as such experiences have been demonstrated to be a strong predictor of poor functional outcome (Hodgins, Lincoln, & Mak, 2009) and can exacerbate existing psychiatric disorders (Lam & Rosenheck, 1998).



### **1.6.3. Summary.**

It is evident from the preceding section that police are in frequent contact with mentally ill individuals. While such interactions may occur as a result of offending behaviour on the part of people experiencing mental illness, recent research findings suggest that police also have considerable contact with people experiencing mental illness as victims of crime and that, in fact, they may be more common than contacts as perpetrators. Despite the methodological limitations apparent in this literature to date, it appears that victimisation experiences are a significant concern and problem for people with a mental illness. However, it is yet to be determined if such experiences are reported to the police to secure protection from the law.

### **1.7. Global Summary**

There exists a critical need to further investigate psychiatric symptoms and disorders at the front end of the criminal justice system, in police cells. While the back end of the criminal justice system has seen a significant expansion of studies explicating the prevalence of disorders and establishing services to meet the needs of mentally disordered offenders, there is a paucity of research in police cells. This is quite astounding given the higher flow through of people in police custody compared to prisons, and the numerous reports that have highlighted the substandard conditions that detainees must often spend time in while awaiting their court hearing. It is likely that rates of mental disorders will be higher in police custody compared to prisons due to the time lag between arrest and transfer to prison, diversion of some offenders into mental health treatment services at the point of police cells and the available treatment opportunities provided by custodial nurses and doctors in police cells. There is also a significant knowledge gap of the broader health-related burden

amongst detainees, which is essential to address to inform the need for establishing collaborations between services in the criminal justice system and those provided in the community.

Given that it is likely that mental disorders will be over-represented among detainees in police custody, this setting may be an opportune time to identify people experiencing mental illness. Validated screening tools in this setting may be of benefit to police and custodial nurses as this will assist them in the accurate identification of those in need of more urgent clinical attention, for follow-up support and enacting referral options. However, evaluation of the validity of screening tools in this context has largely been lacking. Further developments in our knowledge of the factors that account for the occurrence of mental health problems in police custody will also yield significant benefits for healthcare professionals, as this will assist them in their treatment and intervention efforts to address the relatively high levels of psychopathology among detainees.

In contrast to the significant body of evidence that has accumulated regarding the offending behaviours among people experiencing mental illness, relatively little is understood in relation to their victimisation experiences, especially if these experiences are reported to the police. Knowledge of the criminal victimisation experiences among people detained in police cells has significant implications for the development of a more complete treatment and intervention package for this population.

## **2. Chapter Two: Method**

This chapter provides a detailed description of the methodology that was employed in the study. The chapter begins with a description of the research design and rationale for its adoption, the inclusion / exclusion criteria employed to determine participation eligibility, and participants recruited to the study. This is followed by an explanation of the site identification for conducting the research, the measures that were employed and the databases consulted, and the procedures for conducting the study. This is followed by a consideration of the ethical requirements for the conduct of this study. This chapter concludes with an overview of the analytic strategy adopted to address the aims of the study.

### **2.1. Research Design**

The study employed a cross-sectional descriptive design. This design allowed for a detailed characterisation of a series of consecutive admissions to police cells during the period from May 2008 to February 2009. This was selected due to the paucity of research at the front end of the criminal justice system and lack of empirical evidence. Cross-sectional studies are ideal to collect initial information about what is happening in a sample at one point in time (Peat, 2001).

### **2.2. Inclusion and Exclusion Criteria**

Police cell detainees were eligible to participate in the study if they were: (1) at least 18 years old, and (2) a recent admission to the police cells, having spent a minimum of 12 hours there before the interview to adjust to the environment and/or stabilize if withdrawing from substances (unless transferred from another police cell). Potential participants were excluded if they were: (1) non-English speaking, (2) detained solely for public drunkenness and disorderliness, (3) brought in from prison

to attend a court hearing at the local Magistrate's Court, or, (4) a repeat admission to the cells during the time of the study for a different offence / matter (i.e., recidivist).

Participants were excluded according to the criteria outlined above for the following reasons: (1) the difficulty in organizing an interpreter in the police cells, (2) people detained for public drunkenness and disorderliness are treated differently to people charged with an offence, being held for only a few hours to sober up and then released, (3) those brought out from prison constituted a different population as they usually spent approximately 6 weeks in prison before coming back to the police cells, whereas the focus of the study was on the acuity of symptoms following the transition from street-to-cell, (4) recidivists were not recruited as this was not the focus of the study.

### **2.3. Participants**

Participants were recruited from two busy metropolitan police stations in metropolitan Melbourne, Australia. Of a total of 259 police cell detainees who were approached, 150 agreed to take part in the study, corresponding to a recruitment rate of 57.9%. Ninety-four (36.3%) detainees declined to participate, and a further 15 (5.8%) started the interview but did not complete the battery of assessments as they were taken to court and released. A further 60 detainees were not approached because police officers requested that they be left alone due to unstable mood and behaviour and also because some detainees were taken to court and released before they could be approached.

The sample for the study therefore comprised 150 police cell detainees. Of these, the mean age of participants was 30.4 years (SD=8.95), the majority were male ( $n=136$ , 90.7%), and were born in Australia ( $n=113$ , 75.8%). Overall,

participants had spent an average of 32.1 hours in the police cells at time of the interview (SD=24.66; range: 3 - 144 hours).

#### **2.4. Site identification**

The two police stations were selected on the basis of a previous study that investigated psychiatric symptoms and histories of contacts with the public mental health system in nine police stations across Victoria, Australia (Ogloff et al., 2010). The two busiest police stations were identified in this study, and were selected to ensure an adequate sample for the study.

#### **2.5. Measures**

Upon consent from potential participants, an assessment pack (see Appendix) was administered eliciting information regarding demographics, level of psychiatric symptomatology, diagnosable mental illness, socially desirable responding, and measures of the police cell environment. Databases were also consulted regarding criminal records and public mental health system usage if consent was provided. The following section outlines the measures that were used in the current study, together with a brief explanation of their purpose and psychometric properties.

##### **2.5.1. Jail Screening Assessment Tool.**

The Jail Screening Assessment Tool (JSAT) (Nicholls et al., 2005) was employed to measure psychiatric symptoms. The tool is a structured interview that comprises various sections, covering demographics, legal status, substance use, suicide / self-harm issues and mental health status. The tool incorporates an abridged version of the Brief Psychiatric Rating Scale (Ventura, Green, Shaner, & Liberman, 1993), comprising 24 items (e.g., Depression, Suicidality) that are rated on a 3-point scale, where 0 = absent, 1 = possible and 2 = present. Scores ranged from 0 to 48, with higher scores indicating higher levels of psychiatric symptomatology.

The JSAT was designed to identify all Axis-1 disorders, excluding substance use disorders. To standardize referral evaluation, a table was created (see Appendix) with a listing of the referral criteria as outlined in the manual (Nicholls et al., 2005). Items were scored as 1 = 'Yes' or 0 = 'No'. Detainees were considered for mental health evaluation referral if they endorsed any of the listed criteria. This approach was considered suitable as the task of the screening tool was to identify detainees with a possible mental disorder, making it necessary to increase the false positive rate rather than the false negative rate (Dolan & Doyle, 2000; Nicholls et al., 2005).

The JSAT was selected for inclusion in the study for its ease in administration and scoring. The psychometric properties of the BPRS have been extensively demonstrated in clinical populations (Lukoff, Liberman, & Nuechterlein, 1986), with mentally disordered inmates (Hart et al., 1993), and have been demonstrated to possess excellent reliability and validity (Dingemans, Linszen, Lenior, & Smeets, 1995; Thomas, Donnell, & Young, 2004; Ventura et al., 1993). The JSAT has also been well validated for use with criminal justice populations (Nicholls et al., 2005; Nicholls et al., 2004; Ogloff, 2002).

### **2.5.2. Brief Jail Mental Health Screen.**

The Brief Jail Mental Health Screen (BJMHS) was utilised to identify people experiencing mental illness, specifically, those with mood and psychotic disorders (Steadman et al., 2005). The BJMHS is a short screening tool that was developed for use by correctional officers in the jail intake process. This tool consists of two sections. The first section is comprised of six items about mental health symptoms, such as, 'Do you *currently* believe that someone can control your mind by putting thoughts into your head or taking your thoughts out of your head?' The second section is comprised of two items about previous psychiatric hospitalisations and

about the current use of psychotropic medications. Each item is scored as 'yes' or 'no'. For items that have been scored as 'yes,' a note is required in the general comments section to document information that is relevant about the detainee, and information requested by the question. A detainee is required to be referred for further mental health evaluation if they endorsed two items from section one, or one of the two items from section two. The reliability and validity of this measure has been established (Steadman et al., 2007; Steadman et al., 2005).

### **2.5.3. Structured Clinical Interview for DSM-IV-TR Axis-I disorders.**

The Structured Clinical Interview for DSM-IV-TR Axis 1 Disorders (Patient Edition) (SCID-IV) (First et al., 2002) was utilised to assess both current (past month) and lifetime Axis-I disorders. This measure is a semi-structured interview used to evaluate mood, psychotic, substance use, anxiety and eating disorders. Other disorders, such as somatoform and personality disorders were excluded due to constraints in time, capacity and location. For paper 3, titled 'Identification of mental illness in police cells: a comparison of police processes, the Brief Jail Mental Health Screen and the Jail Screening Assessment Tool,' current disorders were ranked according to a hierarchy. Schizophrenia and other psychotic disorders took precedence, followed by bipolar affective disorders, depressive disorders, anxiety disorders, eating disorders and substance use disorders. Participants without a current diagnosable mental illness constituted the 'no diagnosis' group, in line with extant research (Wallace et al., 1998).

The Patient Edition of the SCID-IV was utilised because even though inmates are classified as a non-patient population, previous research has demonstrated that the prevalence of mental disorders is relatively high amongst the

jail and prison population (Fazel & Danesh, 2002). It was selected as it was expected that mental illness was common amongst this population, and also because the patient edition comprised the full module to evaluate psychotic disorders (as compared to a psychotic screened in the non-patient edition). The SCID-IV has been extensively used as the ‘gold standard’ measure of mental illness in clinical (Lyness, Yu, Tang, Tu, & Conwell, 2009; Shear et al., 2000) and prison (Herrman et al., 1991; Zoccali et al., 2008) populations. The SCID-IV has also been reported to be both a reliable and valid measure (Basco et al., 2000; Ventura, Liberman, Green, Shaner, & Mintz, 1998; Zanarini & Frankenburg, 2001; Zanarini et al., 2000).

Axis 5 of the SCID-IV, the Global Assessment of Functioning (GAF), was utilised to make a single rating scale of overall functioning in the worst week of the month preceding the interview. The scale ranges on a continuum of mental health to mental illness, from 1 (representing the hypothetically sickest individual) to 100 (representing the hypothetically healthiest). Higher scores reflect higher levels of functioning. The reliability and validity of this measure has been established (Goldman, Skodol, & Lave, 1992) and has been successfully used in jail and prison settings (Trestman, Ford, Zhang, & Wiesbrock, 2007).

#### **2.5.4. Demographics.**

A standard coding sheet was developed and completed to record all pertinent demographic information (see Appendix). This sheet recorded gender, date of birth, current employment and living status, type of accommodation, education level, marital status, country of birth, history of significant medical illness, current prescribed medications, and time spent in police cell at time of study interview.

#### **2.5.5. Marlowe-Crowne Social Desirability Scale.**



The Marlowe-Crowne Social Desirability Scale (MCSDS) (Crowne & Marlowe, 1960) was utilised to measure socially desirable responding as it is the most commonly used tool for this purpose (Beretvas, Meyers, & Leite, 2002). The original scale is comprised of 33 forced-choice, true-false items concerning socially disapproved but common behaviours. The study employed a 13-item short form (Reynolds, 1982). Five items are considered attribution items where selection of the 'true' response awarded participants one point, thereby indicating a stronger tendency to respond in a socially desirable way than someone who had responded with 'false.' The remaining 8 items are considered denial items for which a 'false' response is assigned one point. Scores ranged from 0 (when no responses match) to 13 (when all responses match). Higher scores indicate higher socially desirable responding (see Appendix).

The 13-item short form was found to be a reliable and well validated measure, and was suggested to be a viable alternative to the original measure (Reynolds, 1982). The 13-item short form was selected as it has been successfully used with a forensic population therefore making it possible to compare to forensic specific norms (Andrews & Meyer, 2003).

#### **2.5.6. Checklist of physical conditions in police cells.**

Levels of satisfaction with physical conditions and services provided in police cells were measured using the Checklist of Physical Conditions in Police Cells (see Appendix). This measure was original and was developed on the basis of a report describing the substandard conditions of police cells in Victoria, Australia (Ombudsman Victoria and Office of Police Integrity, 2006). The report highlighted concerns regarding overcrowding, the lack of access to basic amenities, such as decent food and drinking water, and also poor access to health care services. As

research in police cells is in its infancy, no measure existed at the time of the study to assess the physical conditions in police cells. Thus, the measure was designed specifically for use in this study.

The Checklist comprised 12 items assessing physical conditions (e.g., overcrowding, sleeping accommodation, cleanliness of the cells) and 12 items assessing provision of services and amenities (e.g., food, access to drinking water, and access to health care). Each item was rated on a 6 point scale (1 = Very Unsatisfied to 6 = Very Satisfied). Total scores ranged from 24 to 144, with higher scores indicating greater satisfaction with police cell conditions.

#### **2.5.7. Major concerns of being in police cells.**

Given the infant state of the literature concerning the environmental effects of police cells on the mental health status of detainees, a qualitative exploration of the major concerns of being in custody was undertaken. The purpose of this exploration was to further assess the environmental effects of police cells on detainees. This measure was original and developed for the purposes of the study (see Appendix). The measure was used to enquire about up to 10 major concerns that detainees had whilst in custody. Open-ended probes were used, with follow-up questions to add clarity, such as ‘What is a major concern for you whilst staying here in the police cell?’ ‘Could you tell me more about that?’ ‘What do you mean by that?’

The Prison Environment Inventory (Wright, 1985) was initially employed as part of the pilot study, and was selected based on its superior psychometric properties and theoretically derived rationale. However, it was found that this measure was not suitable for use in police cells, as detainees in short-term lock-up in police custody presented with different concerns as compared to inmates in longer-

term lock-up in jails and prisons. It was therefore decided to explore concerns in police cells qualitatively to guide future research.

#### **2.5.8. Camberwell Assessment of Need – Forensic Version.**

The Camberwell Assessment of Need – Forensic Short Version (CANFOR-S) (Thomas et al., 2003; Thomas et al., 2008) was utilised to measure individual needs across 25 domains, considering both needs that are met by current interventions and those that remain unmet and ongoing problems despite any help being received. Some of the domains that were covered included accommodation, intimate relationships, drugs, alcohol and money. Each need is scored as 0 (no need), 1 (met need), 2 (unmet need), 8 (not applicable), or 9 (not known). The total met and unmet needs were recorded, along with the total number of needs. Individual needs were recorded from the participants' perspective. The reliability and validity of this measure has been established (Thomas et al., 2008), and it has been used successfully with prisoner populations (Harty et al., 2004).

#### **2.5.9. Prisoner information record.**

The Prisoner Information Record (PIR) is a file located at the police station that contains a collection of documents for each detainee. For the purposes of the current study, the Custody Risk Assessment Form was accessed, as well as the standard health screen (Confidential Treatment Record) performed by the custodial nurse. Of the two police stations attended, only one police station completed the Custody Risk Assessment Form. This form was completed by police officers, typically the Custody Sergeant, upon entry into custody. Questions included 'Suffering any injuries or illnesses?' 'Depressed or suicidal?' and 'Mentally ill or been diagnosed with any mental illness?' The Custody Risk Assessment Form was

utilised to ascertain current police processes to identify persons experiencing mental illness in police cells.

## **2.6. Documented Contact Histories with Mental Health Services and Police**

For those who consented, participant details were utilised to search for their records in police and public mental health system databases. Records were searched using first name, middle name (if applicable), last name, date of birth, gender, date of interview, and whether the participant was a resident of Victoria. The latter information was collected to explain the absence of records, as some participants may have come from other states and territories in Australia. The criteria and process that was used to extract data from the respective databases for police and public mental health records is included in the Appendix.

### **2.6.1. Victorian Psychiatric Case Register.**

A state-wide public mental health database, the Client Management Interface – Operational Data Store (CMI-ODS), was consulted to obtain documented histories of contacts with specialist mental health care services in the public sector. The CMI-ODS database is more commonly referred to as the Victorian Psychiatric Case Register (VPCR). The VPCR is one of the oldest and most comprehensive psychiatric case registers worldwide. It was established in 1961 as a purpose-built database that annually extracted data from an independent patient management system (Patient Management Information System) (Wood & Burgess, 2003). The VPCR has been developed in various phases since its inception. The first phase, from 1961 to 1982, included data being transcribed from an extensive card system into electronic format. The 1961 to 1982 Historical Register comprised records of 22,000 persons. The VPCR was maintained as a separate project independent of

patient management systems until 1982. At that time, an on-line Patient Management Information System (PMIS; also known as the Medical Records Administrator (MRA)) was implemented. Data for the register was extracted annually for the VPCR from PMIS. The second phase, from 1982 to 1992, included use of the first electronic data system (MRA). The third phase, from 1990-1992, included a replacement of the electronic data system with PRISM. The PRISM system continued until October 2000, when it was replaced with the CMI-ODS database (also referred to as RAPID during development). Data from PRISM was migrated to CMI-ODS if clients were active at the time of database replacement. Thus, most of the data from 1992 onwards is accessible via CMI-ODS. It is currently estimated that records of approximately 637,000 persons are available on CMI-ODS and VPCR combined. This makes the VPCR one of the oldest and most comprehensive psychiatric case registers, and has been used in national and international research (Short, Thomas, Luebbers, Ogloff, & Mullen, 2010; Wood & Burgess, 2003).

Data regarding registrations with services in the public mental health system, ongoing contacts with area mental health services, types of services used, admissions to psychiatric hospitals, ICD-10 diagnoses as recorded by mental health clinicians, and community treatment orders (CTO; involuntary outpatient treatment as defined in Victoria's *Mental Health Act 1986*) were extracted from the VPCR. Whilst the VPCR captures all contacts with the public mental health system, it does not capture contacts with the private system, such as privately practicing clinicians or general medical practitioners. It is now estimated that contacts with the private system equate to about 20% of all community mental health contacts, consisting primarily of people with high prevalence disorders, such as mood disorders (Department of Health and Ageing, 2007).

Diagnostic data is updated at the outset and completion of each episode of care. VPCR records suggest approximately 0.7% of the Victorian population were treated for a schizophrenic disorder, suggesting comprehensive ascertainment (Short et al., 2010). Other disorders, such as affective and personality disorders, are not recorded as comprehensively. This is likely due to people with such disorders seeking treatment from private providers or general medical practitioners.

It follows that participants with several treatment episodes may have varying primary diagnoses recorded. For the purposes of the fourth study, participants were assigned a single primary diagnosis using a diagnostic hierarchy, with psychotic disorders taking precedence, followed in descending order by affective disorders, personality disorders, substance use disorders, residual diagnostic group (e.g., anxiety and adjustment disorders, whose low frequency precluded diagnostic separation) and a no diagnosis group (i.e., person had contact with public mental health system for a general psychiatric examination) (Wallace et al., 1998).

### **2.6.2. Law Enforcement Assistance Program.**

Data on contacts with the police were obtained from the Law Enforcement Assistance Program (LEAP), a state-wide criminal record database held by Victoria Police. Histories of contacts with the police were extracted, which included contacts as suspects, offenders, victims, intervention orders and family incidents. Offence data comprised types of offences committed, dates of offences and whether they had served a prison / custodial sentence. Criminal offences were categorised using an adaptation of the Cormier-Lang system (Quinsey, Harris, Rice, & Cormier, 2006). This system was chosen as it was developed on the basis of the Criminal Code of Canada which was derived from British Common Law, as are the criminal codes in Australia. Multiple offences can be categorised using this system according to

severity of the conduct. The categories, in order of severity, were: homicide, sexual assault, physical violence, kidnapping, weapons offences, threats of violence, property damage, stalking, drug offences, deception offences, theft offences, breaches of legal orders and bad public behaviour. Victim data comprised types of offences that were committed against person, dates of offences, and the relationship with the offender.

Prior to the introduction of LEAP on March 1<sup>st</sup> 1993, police records of offenders and victims were kept by the Information Bureau of Records (IBR). Records were kept as a hardcopy 'card' system, and were filed in a Manilla folder together with photographs, antecedents, prior convictions and other relevant information. The current electronic LEAP database contained data regarding the presence of participants on this old 'card' system if they continued to have contact with police.

## **2.7. Procedure**

Before explaining the study procedure, a brief paragraph is provided to set the context for this research and the processes that normally occur in police cells.

Following the commission of an offence and the arrest of a person, detainees are brought into the police cell block to the Custody Sergeant desk. At this desk, all personal belongings are taken off the person, together with shoe laces and belts, and placed in a bag that is kept behind the desk. The Custody Sergeant, or another police officer, typically complete the Custody Risk Assessment Form at this point and then transfer the detainee to the cell block. Within 48 hours, or usually the following morning, a custodial nurse (employed by the police) visits the cells to interview the detainees. The purpose of this assessment is to enquire about the health of the

detainee, provide medications that may be needed and conduct a suicide risk assessment. The notes from this assessment, together with all police documents, are placed into a separate file for each detainee (called the 'Prisoner Information Record'). The detainee is then taken to the local Magistrate's court at the appointed time, and is either released or taken to prison for a later court appearance.

Thus, potential participants for the study were identified in a similar manner as custodial nurses identified who they needed to interview. Every morning, the student researcher attended the relevant police station and noted the people who were detained in the cell block. Newly admitted detainees were identified through consultation with the police on duty, such as the Custody Sergeant, and the custodial nurses. The student researcher then attended the health screen with the custodial nurse, with permission from the detainee. At the completion of this health screen, the student researcher informed the detainee that there was a research project being conducted. If a detainee refused to see the nurse for a health screen, they were approached in the secure clinical interview room to be informed of the study and to determine their interest in taking part.

Detainees were informed, both verbally and in written form, of the study aims, that participation was voluntary, the requirements for participation and the limits to confidentiality. It was explained that they could withdraw their consent at any stage of the interview process and that doing so would not affect their stay in the police cells. If a detainee agreed to participate, they were initially asked for a verbal agreement to participate. A consent form was not signed at this stage due to time constraints: the custodial nurse had other detainees to assess and the police were waiting to escort other detainees back and forth from the police cells to the interview



room. Detainees who initially declined the invitation to participate were approached up to twice more, either in a further assessment with the custodial nurse or in the interview room. However, this was not completed for detainees who strongly requested not to be approached again.

Following this initial contact with detainees, they were escorted back to the cell block. Once these health screens were completed, police officers were occupied with escorting detainees to the secure interview rooms for their appointments with lawyers, forensic nurses and other professionals. Procedurally, considerable time was spent waiting for an empty interview room and negotiating with police to have detainees escorted to the interview room. The assessment was able to be conducted once a room was available and police officers were able to transfer a detainee from the cells to the interview room.

The assessment began with another explanation of the study aims, requirements and limits to confidentiality. Due to the nature of the secure interview room (see below), it was not possible to give the plain language statement to the detainee to read nor the consent form to sign. Therefore, to satisfy ethical requirements, the contents of the explanatory statement were read to each detainee. Having obtained their verbal informed consent, the battery of measures was administered. Questionnaires were read out to detainees as they could not be given to be completed by participants, and also not to embarrass them if they had difficulty with reading. Questionnaires were reverse ordered to control for interview fatigue, and opportunities were provided to stop for breaks if needed. The average interview time was 1 hour 30 minutes, but ranged from 40 minutes (if the participant presented with minimal psychiatric symptomatology) to 3 hours (if participants presented with acute psychiatric symptomatology or complex clinical histories).

At the completion of the interview, the student researcher asked police officers to transfer participants to the Custody Sergeant's desk. At this desk, participants were given a consent form to sign, indicating their consent to complete the interview, and a separate consent to access their mental health records, police records and police file (Prisoner Information Record) (see Appendix). Thereafter, they were transferred back to the cellblock by the police officers. As prisoners were not allowed to keep anything with them in the cells, a copy of the explanatory statement was put into their personal file (see Appendix).

Interviews were conducted in a secure clinical interview room to minimise impact on police time and to provide safety to the researcher. They were located just outside the cellblocks in booths that are divided in half by double glazed glass. Communication was via a wired mesh. Each detainee was brought in by a police officer and placed on one side of the booth and the door closed and locked behind them.

### **2.8. Data Management and Statistical Analyses**

Data entry and management was performed using Microsoft Access databases. One database was utilised to store personal information, such as participants' names and their assigned ID numbers. A second database was utilised to enter interview data, corresponding to their ID numbers. Databases were password protected, and interview material was kept in locked filing cabinets in a secure office. Upon study completion, 20% of the data was re-entered for verification. Satisfied with the accuracy of data verification, data was imported into the Statistical Package for Social Sciences (SPSS) version 17 for Windows. SPSS was used to characterise the sample by running descriptive commands, and a range of statistical analyses were conducted to test the hypotheses and research questions. Further

details regarding specific analyses that were conducted are described in the manuscripts, and will not be reiterated here.

## **2.9. Ethical Considerations**

### **2.9.1. Ethical principles governing research with human participants.**

The use of human participants in biomedical and behavioural research is governed by an elaborate set of rules, guidelines and regulations. However, this has not always been the case. The current ethical principles grew out of a troubled history with experimentation on humans, such as the use of prisoners in drug research (Schroeder, 1983) and the use of vulnerable populations to study the course of syphilis (Corbie-Smith, 1999). Ethical codes began with the adoption of the Nuremberg Code (Shuster, 1997), which came into existence to judge physicians and scientists who had conducted biomedical experiments on concentration camp prisoners. The Nuremberg Code was the prototype for later codes. For example, the World Medical Association developed a more comprehensive set of guidelines, known as the Declaration of Helsinki. In the USA, the Department of Health, Education and Welfare (now the Department of Health and Human Services) released the Belmont Report (Sims, 2010), and further recommended broader ethical principles from which specific rules could be formulated. Numerous ethic codes now govern various disciplines (e.g., Australian Psychological Society Code of Ethics).

The above guidelines are based on fundamental moral principles guiding humane treatment of fellow men. The principles underling these codes are: approval of the research protocol by an Institutional Review Board, informed consent, competence, risk / benefit assessment and confidentiality. These principles were adhered to in the study as discussed below.

### **2.9.2. Ethical approval by institutional review boards.**

Ethical approval was obtained from the Monash University Standing Committee on Ethics in Research involving Humans (Project number 2007/1864), the Victorian Government Department of Human Services Human Research Ethics Committee (Project number 92/07) and the Victoria Police Human Research Ethics Committee (see Appendix).

### **2.9.3. Informed consent.**

As mentioned previously, participants were informed that participation was voluntary and that they were able to withdraw from the study during the interview at any time without being disadvantaged in any way. If a detainee was not able to understand the nature of the project and make an informed decision, they were not invited to take part in the study. If a detainee stabilised from substances whilst in the cells, then they were informed of the research project so that they could make an informed decision. If a detainee was unable to give informed consent (e.g., intellectual disability), they were not included in the project.

### **2.9.4. Competence.**

Competence was determined by assessing (in hierarchical manner) the participant's understanding, appreciation, reasoning, and/or choice. Understanding was assessed by asking the participant to recall and paraphrase the information related to the proposed project, including emphasis on participation being voluntary and no consequences associated with not participating. If understanding was not achieved, appreciation was assessed. If appreciation was not achieved it was assumed that the participant was not competent to give consent and their participation in the project ceased.

### **2.9.5. Risk / benefit assessment.**

The benefits outweighed the risks in this research. There were no risks that any participants would experience any significant distress or harm. As some questions were personal in nature, there was some slight possibility that they may have caused some discomfort to the participant in the short-term (none identified in the long-term) beyond the normal experience of everyday life. If this was apparent, participants were given a chance to stop for a short break and continue when they were ready or leave the question and continue with the remainder of the interview. The more likely risk was that participants may have experienced some level of inconvenience, such as giving up time to participate in the project. However, participation rates from the study suggested that detainees enjoyed the opportunity to leave the cells and take part in the project. Therefore, any discomfort was minimal, both in the short and longer-term.

The potential benefits of the research were many. These included significant gains in knowledge about the health-related burden amongst police cell detainees, levels of contact with police and public mental health services, suggestions for improving social welfare and individual wellbeing, and positive gains in skill and expertise for Victoria Police. Therefore, the potential benefits justified the (minimal) risks involved in the study.

### **2.9.6. Confidentiality.**

Participants were informed that the information collected was to be kept confidential, and that they will not be identified in any journal articles or reports, as only aggregate data was to be utilised. However, they were also informed that there were limits to confidentiality. These limits included suicidal thoughts, homicidal thoughts, or evidence of illegal activity that had not been dealt with by the law.

### **2.10. Pilot Study**

A pilot study of 20 participants was conducted prior to commencing the substantive project with the aim of ascertaining prevalence rates of mental illness in police cells, the feasibility of the assessment pack and gather the requisite data to inform a sample size calculation (see below) for the main study. The pilot study highlighted overlaps in some of the measured variables and redundancy in other items. The pilot was conducted within the same environment and structure as the main study. As a result, amendments were made and a reduction in the assessment battery ensued.

### **2.11. Sample Size Calculation**

A sample size calculation was conducted for the main study on the basis of results from the pilot study. It was found in the pilot that those who rated for an Axis-I disorder, excluding substance use disorders had a median psychiatric symptom rating (as measured by JSAT) of 7.5 (SD = 6.6), and that those without an Axis-I disorder had a median symptom rating of 2.5 (SD = 1.65) (median was used as a conservative estimate). Setting the alpha level at 0.05, and the power at 99%, it was determined that the main study required a total sample size of  $N = 70$  ( $n = 35$  in each group of with / without Axis-I disorder).

However, due to the variation in the prevalence of mental illness, this may not have extrapolated to a larger sample. It was found in the pilot study that half of the sample rated an Axis-I disorder, excluding substance use disorders. So, if 150 detainees were interviewed, a 95% confidence interval informed that between 42% and 58% of the sample (i.e., 68-87 of 150 detainees) would rate for an Axis-I disorder. This was deemed sufficient for the main study, as the power of detecting

differences between with and without an Axis-I disorder was doubled by interviewing 150 people.

### **2.12. Psychiatric Symptoms among Police Cell Detainees**

This section will provide a brief overview of the methodology used in a previous study that investigated psychiatric symptoms and histories of contacts with the public mental health system amongst police cell detainees (Ogloff et al., 2010). An overview of this study is included in this chapter as this dataset was combined with the dataset arising out of the current study, and resulted in a joint publication (Chapter Six, Paper 4 – titled ‘Correlates of criminal victimisation among police cell detainees in Victoria, Australia’). This previous study was conducted by researchers at the Centre for Forensic Behavioural Science, Monash University. .

Briefly, this previous investigation surveyed 614 detainees across nine police stations in metropolitan and rural Victoria, Australia (Ogloff et al., 2010). Having completed the health screen, custodial nurses informed detainees about the project, and completed the Brief Psychiatric Rating Scale (Ventura et al., 1993) with their informed consent. Consent was also sought to access the VPCR (public mental health database) and LEAP (criminal record database). The average age of the sample was 30.59 years (SD = 9.0), and was predominantly comprised of males ( $n = 560, 91.3\%$ ).

### **3. Chapter Three: Psychiatric Disorders and Unmet Needs among Police Cell Detainees**

#### **3.1. Preamble to Paper 1**

This chapter presents the first paper of the thesis. This study sought to investigate the rates of psychiatric disorders and to assess the level of individual needs among a sample of police cell detainees. This study recruited a sample of detainees in police custody to extend our knowledge regarding those who make contact with police through their criminal offending, but who do not necessarily make their way further down the criminal justice system into prison.

This paper has been published in the *Australian and New Zealand Journal of Psychiatry*, a peer-reviewed journal. This journal is the leading psychiatry journal of the Asia-Pacific region and publishes research articles of interest to psychiatrists. The journal has an impact factor of 2.253 (ISI Web of Knowledge, 2011). The article was co-authored with Dr Stuart DM Thomas, a forensic mental health epidemiologist, and Professor James RP Ogloff, a clinical forensic psychologist.



### 3.2. PART B: Declaration for Thesis Chapter 3, Paper 1

#### Monash University

#### Declaration by candidate

In the case of Chapter 3, Paper 1, the nature and extent of my contribution to the work was the following:

<b>Nature of contribution</b>	<b>Extent of contribution</b>
Study design, data collection, analyses, write-up	75%

The following co-authors contributed to the work. Co-authors who are students at Monash University must also indicate the extent of their contribution in percentage terms:

<b>Name</b>	<b>Nature of contribution</b>	<b>Extent of contribution</b>
<b>Dr Stuart Thomas</b>	Study design, data analyses, write-up	15%
<b>Professor James Ogloff</b>	Study design, data analyses, write-up	10%

**Candidate's Signature**

	<b>Date</b>
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#### Declaration by co-authors

The undersigned hereby certify that:

- (1) the above declaration correctly reflects the nature and extent of the candidate's contribution to this work, and the nature of the contribution of each of the co authors;
- (2) they meet the criteria for authorship in that they have participated in the conception, execution, or interpretation, of at least that part of the publication in their field of expertise;
- (3) they take public responsibility for their part of the publication, except for the responsible author who accepts overall responsibility for the publication;
- (4) there are no other authors of the publication according to these criteria;
- (5) potential conflicts of interest have been disclosed to (a) granting bodies, (b) the editor or publisher of journals or other publications, and (c) the head of the responsible academic unit; and
- (6) the original data are stored at the following location(s) and will be held for at least five years from the date indicated below:

**Location(s)**

All data are stored at Centre for Forensic Behavioural Science, Monash University.
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<b>Signature 1</b>		<b>Date</b>
<b>Signature 2</b>		<b>Date</b>

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**3.3. Paper 1: Psychiatric Disorders and Unmet Needs in Australian Police Cells**

# Psychiatric disorders and unmet needs in Australian police cells

Gennady N. Baksheev, Stuart D. M. Thomas, James R. P. Ogloff

**Objective:** To determine the prevalence of current psychiatric disorders and unmet needs in a sample of police cell detainees in Victoria.

**Method:** A cross-sectional descriptive study was conducted, including data linkage with the Victoria Police database and the Victorian Psychiatric Case Register. In Melbourne, Australia, 150 detainees were recruited from two busy metropolitan police stations. Outcome measures included estimated rates of psychiatric disorders, using the Structured Clinical Interview for DSM-IV-TR, and individual needs, using the Camberwell Assessment of Need – Forensic Version.

**Results:** One quarter ( $n = 32$ , 25.4%) of detainees had a prior admission to a psychiatric hospital, and three quarters met current criteria for a diagnosable mental disorder. The most common disorders were substance dependence ( $n = 81$ , 54%) and mood disorders ( $n = 60$ , 40%). A third met diagnostic criteria for both a mental illness and a substance use disorder. The odds of being classified with mood (OR = 10.1), anxiety (OR = 2.2), psychotic (OR = 15.4) and substance use disorders (OR = 26.3) were all significantly higher in the current sample as compared with the general population. Detainees with a mental illness identified significantly more needs and significantly more unmet needs (e.g. psychological distress) than those who did not rate as having a current mental illness.

**Conclusions:** There remains a pressing need to evaluate standardized screening tools for mental illnesses in police cells to provide timely access to assessment and treatment services. The need for functional interagency collaborations are highlighted and discussed.

**Key words:** interagency relations, needs assessment, police cells, psychiatric diagnosis.

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The last three decades have seen an extensive body of literature that has investigated the prevalence of mental disorders among those in prisons and jails. A recent large scale meta-analysis of 23 000 prisoners succinctly summarized this evidence, estimating that 4% of prisoners were afflicted with psychotic illnesses, and 10–12% with major depression in the previous six months [1]. Notably, studies have consistently demonstrated that people with

mental illnesses are over-represented in these institutions, and that rates of disorders in the criminal justice system are substantially higher than those found in the general population [2,3].

By contrast, the health and social needs of detainees at the front end of the criminal justice system (i.e. in police cells) are poorly understood. This is mostly because research has predominantly focused on the ‘captive population’ of prisoners within the broader criminal justice system [4]. However, it is arguably just as, if not more, important to investigate the needs of detainees being held in police cells to gain a more complete estimate of the prevalence of mental disorder and range and scale of health needs among those who come into contact with the police having committed an offence. This is because

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detention in police cells represents the first point of detention in the criminal justice service following the alleged commission of an offence and arrest by the police [5]. The acuity of psychiatric symptoms and prevalence of disorders and other health-related needs are likely to be significantly higher here than those found in prison due to the time lag between arrest and transfer to prison, the diversion of some offenders into mental health services [6], and the (albeit limited) available treatment opportunities possible (e.g. detoxification) if identified in police cells. Therefore rates of disorders in police cells are likely to be a better estimate of the prevalence of disorders within the offending population in the community, and are likely to be higher than those found in prisons and jails. The handful of studies that have been conducted at this interface support these propositions [7,8], and indicate an additionally vulnerable population [9–11]; however, they have been limited by the lack of systematized assessments of mental disorder and limited or no consideration of their broader health and social needs. Moreover, the deleterious effect of the police cell environment, such as the substandard conditions of police cells, further compounds the suffering experienced by those with a mental illness in custody [7,11]. As such, there remains an acute need to determine the scope of this health-related burden to help inform the potential need for partnerships between the police, primary care and mental health services [12].

Against this background, the aim of the study was to investigate levels of psychiatric disorders and individual needs in a sample of recently arrested police cell detainees. Based on previous findings of high rates of mental disorder in jails and prisons, it was hypothesized that: (1) rates of psychotic and substance use disorders would be higher among police cell detainees compared to the general population; (2) rates of mood and anxiety disorders in police cell detainees would be significantly higher than in the general population; and (3) that there would be a significant association between the presence of mental illnesses and the number of unmet needs reported by the detainees.

## Methods

### Participants

Participants were recruited from two police stations in metropolitan Melbourne, Australia. Melbourne is a large multicultural city with a population of just under 3.9 million people [13]. These stations were selected on the basis of a study that investigated psychiatric symptoms amongst police cell detainees in nine police stations across Victoria, Australia [14]. The two busiest police stations were identified and

selected for the current study to ensure adequate sample size. Attempts were made to recruit all people meeting the inclusion criteria: (1) being at least 18 years old and (2) having spent a minimum of 12 hours in detention before interview to adjust to the environment and/or stabilize if withdrawing from substances (unless transferred from another police cell). Potential participants were excluded if they were: (1) non-English speaking, due to difficulty in organizing an interpreter, (2) detained solely for public drunkenness and disorderliness, as these individuals are kept in custody until the police determine that they are sober enough to leave (usually around 4 h), (3) transferred from prison to attend a court hearing at the local Magistrate's Court, or, (4) repeat admissions (i.e. detained again for a different offence/matter) to the cells during the time of the study.

### Procedure

Detainees were approached by the researcher at the completion of a standard health screen with a custodial nurse, where information about the project was provided. If the detainee had refused to attend the health screen, they were approached in the secure clinical interview room. If consent was given, measures were administered with participants completing the consent form upon their return to the cell block due to the practical logistics of completing interviews in a secure interview room. Separate consent was also sought for access to their mental health and police records.

### Measures

The Structured Clinical Interview for DSM-IV-TR (Patient Edition) (SCID-IV) was used to assess mental disorders in the past month (current) [15]. The disorders evaluated were: mood, psychotic, substance use, anxiety, and eating disorders. Other disorders, such as somatoform and personality disorders were excluded due to time constraints. The SCID has been reported to be both a reliable and valid measure [16] and has been successfully used with offender populations [17].

The Camberwell Assessment of Need – Forensic Short Version (CANFOR-S) was used to measure individual needs across 25 common domains, considering both needs that are met by current interventions and those that remain unmet and ongoing problems despite any help being received [18,19]. Training was provided for the administration of the SCID-IV and CANFOR-S. All interviews were completed by one of the authors (G.B.), with discrepancies and ambiguities for individual items discussed and agreed upon with the other authors.

A standard coding sheet was developed to record general background characteristics such as gender, age, employment status, marital status and time spent in cells at the time of the study interview.

### Formal contact histories with mental health services and the police

A state-wide public mental health database, the Client Management Interface – Operational Data Store (CMI-ODS), was consulted to obtain documented histories of contact with the public mental health system. This database is more commonly referred to as the Victorian Psychiatric Case Register (VPCR). The VPCR is one of the oldest and most

comprehensive psychiatric case registers worldwide. It was established in 1961 as a purpose-built database that annually extracted data from an independent patient management system (Patient Management Information System) [20]. The VPCR covers all specialist mental health care in the public sector, except for specialist drug and alcohol services. Data regarding contact with public mental health services, admissions to public psychiatric hospitals and community treatment orders (CTO; these are outpatient involuntary treatments under the Mental Health Act) were extracted using three types of personal identifiers: name (first, middle and last), date of birth and gender. The VPCR, however, does not capture contacts with the private system, such as privately practising clinicians or general medical practitioners. It is now estimated that private clinicians account for 20% of all community mental health contacts, consisting primarily of people with high prevalence disorders (e.g. mood disorders) [21,22].

The Law Enforcement Assistance Program (LEAP) database, maintained by Victoria Police, was also consulted to obtain documented histories of all contacts with the police (as suspects, offenders and victims). Data were extracted from this database using the same personal identifiers listed above (name, date of birth and gender). Offences were coded using an adaptation of the Cormier-Lang system for quantifying criminal history [23]. This system was chosen as it was based on the Criminal Code of Canada which is based on British Common Law, as are the criminal codes of Australia. This system allowed multiple offences to be categorized according to the severity of the offence. The categories in order of severity were: homicide, sexual assault, violence, kidnapping, weapons offences, threats of violence, property damage, stalking, drug offences, deception offences, theft offences, breach of legal order and bad public behaviour. Full histories were extracted at the end of data collection in April 2009. Twenty-four of the participants did not consent to access their criminal records. Data on offences and charges were not available for those who did not participate.

## Ethical considerations

Ethical approval was obtained from the Monash University Standing Committee on Ethics in Research involving Humans, the Victorian Government Department of Human Services Human Research Ethics Committee and the Victoria Police Human Research Ethics Committee. Detainees were fully informed of study requirements, limits to confidentiality, and were given a consent form and an explanatory statement. Interviews were conducted in secure clinical interview rooms without police presence.

## Statistical analysis

Statistical Package for Social Sciences (SPSS) version 17 was used to characterize the sample, with chi-square tests and t-tests used to test for group differences. Participants were grouped according to those with and without mental illness by separating those that met and did not meet criteria for Axis-I diagnoses, excluding substance use disorders. Estimated rates of psychotic disorders were compared to 1-month estimated rates from a community control sample [24], and estimated rates of mood, anxiety and substance use disorders were compared to 12-month rates from the most recent Australian household survey [25]. History of mental health contact with the public mental health system was compared with estimated rates obtained from a control sample

using the same methodology [22]. Rates of disorders from the current study and estimated rates from these comparison samples were used to tabulate and then calculate odds ratios, with 95% confidence intervals determined using Miettinen's approach [26].

## Results

Of 259 eligible detainees initially approached, 150 agreed to participate in the study, corresponding to a recruitment rate of 57.9%. Ninety-four (36.3%) detainees declined to participate, and 15 (5.8%) detainees started the interview but did not complete assessments due to being taken to court and released. A further 60 detainees were not approached as police requested not to approach due to unstable mood and/or behaviour, or where the detainee was taken to court and released. There were no significant differences between consenters and refusers according to age or gender ( $p = 0.14$  and  $p = 0.74$  respectively).

## Background and self-reported clinical characteristics

As indicated in Table 1, the mean age of participants was 30.4 years ( $SD = 8.95$ ). Eight participants (5.4%) identified themselves as being of Indigenous Australian descent. Overall, participants had spent an average of 32.1 hours in the police cells at the time of the interview ( $SD = 24.55$ ; median: 23.5; range: 3–144 hours). The most commonly reported lifetime medical illnesses for the participants were: mental illnesses (e.g., depression, anxiety, and psychosis), broken bones/head injuries, and hospitalizations/operations.

## Formal police contact

The offences that led to arrest at the time of this study were mainly non-violent ( $n = 88$ , 69.8%), such as obtaining property by deception, failing to answer bail, and theft. Violent offences, including making threats to kill, threatening to inflict serious injury, and recklessly causing serious injury had been committed by 38 of the participants (30.2%). The majority of the sample had an offence history ( $n = 121$ , 96%), of whom two thirds ( $n = 86$ , 68.6%) had committed violent offences.

## Formal psychiatric history

Over half the sample ( $n = 69$ , 54.8%) had been registered with a mental health service according to the VPCR database at some point during their lives, a slightly higher proportion compared to self-reported data ( $n = 64$ , 43%). The mean number of contacts was positively skewed at 146.98 ( $SD = 273.10$ ; median: 39; range: 1–1482). Thirty-two (25.4%) had been admitted on at least one occasion to a psychiatric hospital (mean = 4.16;  $SD = 5.03$ ; median: 2; range: 1–25). Eleven (8.7%) of the participants had previously been on a community treatment order (CTO). Of these, eight (72.7%) participants had completed a CTO, 7 (63.6%) participants had a CTO revoked, four (36.4%) had a CTO extended, and two (18.2%) participants had an ongoing CTO.

Table 1. Demographic and self-reported clinical characteristics of sample

	Female (n = 14)		Male (n = 136)		Total (n = 150)	
	n	%	n	%	n	%
Mean age (years) (SD)	29.1 (10.04)		30.5 (8.86)		30.4 (8.95)	
Age range (years)	18–54		18–62		18–62	
Marital status						
Single/divorced	4	28.6	78	57.4	82	54.7
Married/partnered	10	71.4	58	42.6	68	45.3
Employment status						
Unemployed	9	64.3	76	55.9	85	56.7
Employed	5	35.7	60	44.1	65	43.3
Living status						
Alone	3	21.4	37	27.2	40	26.7
Not alone	11	78.6	99	72.8	110	73.3
Education status						
Secondary or less	4	28.6	77	56.6	81	54.4
More than secondary	10	71.4	58	42.6	68	45.6
Country of birth						
Australia	12	85.7	101	74.3	113	75.8
New Zealand	1	7.1	4	2.9	5	3.4
Other	1	7.1	30	22.1	31	20.8
History of mental health treatment	7	50	57	41.9	64	43
Current use of opiate substitutes	3	25	20	16.1	23	16.9
Current use of psychiatric medications	9	64.3	31	22.8	40	26.7
Any current Axis-I disorder excluding substance use disorders (according to SCID-IV)	11	78.6	66	48.5	77	51.3

One participant had missing data for education status and country of birth.

## Psychopathology

According to the SCID-IV, three-quarters of the sample (n = 114, 76%) met diagnostic criteria for at least one disorder (see Table 2). Substance dependence disorders were the most common, followed by mood disorders. Women were more likely than men to be diagnosed with anxiety disorders ( $\chi^2 = 7.33$ ,  $p = 0.007$ ) and mood disorders ( $\chi^2 = 9.57$ ,  $p = 0.002$ ). A third (51, 34%) were diagnosed with both mental and substance use disorders.

Overall, the most common disorders diagnosed were major depression (n = 48, 32%), alcohol dependence (n = 32, 21.3%), opioid dependence (n = 32, 21.3%), post-traumatic stress disorder (n = 20, 13.3%), schizophrenia (n = 4, 2.7%) and schizoaffective disorder (n = 4, 2.7%). The other psychotic disorders diagnosed were psychotic disorder NOS (n = 2, 1.3%) and substance induced psychotic disorder (n = 1, 0.7%).

The chances of meeting diagnostic criteria were significantly higher for the current sample as compared to the general population for all psychiatric disorders. For example, the odds of meeting diagnostic criteria for psychotic disorders was 15.4 times higher (95%CI = 11.55–20.64,  $p < 0.001$ ) in the current sample than in the general population. For men, the odds were highest for substance use disorders (OR = 19.57; 95%CI = 15.33–24.97,  $p < 0.001$ ), while for women, the odds were highest for mood disorders (OR = 47.69; 95%CI = 22.97–99.00,  $p < 0.001$ ) (see Table 2).

## Individual needs

Participants reported having an average of 4.91 needs of a possible 25 needs (SD = 3.54); a large proportion of which were considered to be unmet (M = 3.06, SD = 2.71), thus representing ongoing difficulties for the participants. The most commonly presenting needs reported by participants were benefits (n = 75, 58.1%), accommodation (n = 75, 57.7%), and money (n = 69, 53.5%). The most common unmet needs reported were money (n = 62, 48.1%), company (n = 40, 31%), day-time activities (n = 40, 30.8%), drugs (n = 40, 30.8%), and intimate relationships (n = 39, 30.2%).

Those who met diagnostic criteria for a mental illness had a significantly higher number of needs overall ( $t(114.23) = -5.51$ ,  $p < 0.001$ ) and unmet needs ( $t(110.26) = -5.07$ ,  $p < 0.001$ ) compared to those without a mental illness (see Table 3), but the profile of needs between the mentally ill and those without mental illness were similar. That being said, those with a mental illness presented with unique unmet needs in two domains: psychological distress and safety to self. That is, more than half (n = 33, 51.6%) of those with a SCID diagnosis presented with unmet needs for psychological distress (compared to n = 4, 6.1% of those without mental illness), and one in four (n = 17, 26.6%) of those with mental illness presented with unmet needs in regard to safety to self (as compared to n = 1, 1.5% of those without mental illness). There were no differences in the presence of needs between different diagnostic groups.

Table 2. Comparisons between police cell detainees and the general population: Rates of psychiatric disorders, odds ratios and 95% confidence intervals

Mental Disorder	Females			Males			Total		
	Police cells n = 14	General population n = 8,065,500 <sup>†</sup>	Odds ratio (95%CI)	Police cells n = 136	General population n = 7,949,800 <sup>†</sup>	Odds ratio (95%CI)	Police cells n = 150	General population n = 16,015,300 <sup>†</sup>	Odds ratio (95%CI)
Mood <sup>†</sup>	11	575 800	7.1 (22.97–99.00)	49	420 100	5.3 (7.61–13.38)	60	995 000	10.1* (7.73–13.07)
Anxiety <sup>†</sup>	8	1 442 300	17.9 (2.42–15.47)	32	860 700	10.8 (1.73–3.71)	40	2 303 000	2.2* (1.52–3.09)
Psychotic <sup>†</sup>	1	1.7	0.43 (16.67–19.03)	10	3.3	0.57 (9.33–20.40)	11	4.9	15.4* (11.55–20.64)
Substance use <sup>†</sup>	7	263 500	3.3 (15.09–58.11)	81	556 00	7.0 (15.33–24.97)	88	819 800	26.3* (21.20–32.65)
Any disorder	13	–	–	101	–	–	114	–	–
Any mental health contact <sup>§</sup>	6	241	9.7 (2.77–17.46)	54	279	11.4 (3.66–7.14)	60	520	5.6* (4.16–7.65)

One participant (male) was diagnosed with an eating disorder. <sup>†</sup>Data for comparison were obtained from ABS [25]. <sup>‡</sup>Data for comparison were obtained from [24] (Total sample of 980, with 586 males and 394 females). <sup>§</sup>Data for comparison were obtained from [22] (Total sample of 4916, with 2443 males and 2473 females). \*p < 0.001.



*Table 3. Comparison of total and unmet needs between mentally ill and non-mentally ill*

Needs	Mentally ill	Non-mentally ill
Total	6.50 (3.67)	3.41 (2.66)
Unmet	4.19 (2.91)	1.97 (1.97)

Data missing for 13 participants; Numbers presented are means, and standard deviations in parentheses.

## Discussion

The current study found that one quarter of police cell detainees had a prior admission to a psychiatric hospital and that three quarters met the DSM-IV-TR diagnostic criteria for at least one Axis-I disorder in the month prior to the study interview. One third met diagnostic criteria for both a mental illness and a substance use disorder. Consistent with community surveys of mental health [27], substance use disorders and mood disorders were the most frequently seen psychiatric disorders.

The first and second hypothesis, that rates of psychotic, substance use, mood and anxiety disorders would be significantly higher among those detained in police cells as compared to those in the community, was supported. Results of the current study suggested that rates were between 2 and 26 times higher among detainees as compared to the general population. This was evident across all of the diagnostic category types and was consistent with high rates of mental disorder found among prisoners [2]. Indeed, rates of disorders from the current study were higher when compared to sentenced prisoners [17] and similar to a remand population [2]. The high rates of mental disorders, coupled with the deleterious effect of the police cell environment [7], such as the lack of basic facilities and services and the substandard conditions of police cells [11], has the net effect of compounding the suffering experienced by people with mental illnesses in police custody.

The difficulties experienced by those with a mental illness were further demonstrated by the finding that they reported higher total and unmet needs as compared to those without mental illness, supporting the third hypothesis. Moreover, individuals experiencing mental illness had a higher proportion of ongoing difficulties in the areas of psychological distress and suicidal concerns than those without a mental illness. These suicidal concerns, together with the stresses of being held in police custody, such as the impending legal proceedings and the restricted family visiting times, can increase the vulnerability of detainees experiencing mental illness. The extent to which psychological distress and suicidal concerns are

related to substance abuse, mental illness or the police cell environment remains unclear, but is the subject of a separate paper currently under review (details available from the authors). The fact that there was a high level of unmet need in social and welfare domains amongst this sample, particularly for those experiencing mental illness, suggests the need for close collaborations between mental health, social and welfare services in the community to better address these needs.

These findings are in line with previous studies [10] and suggest that of a group of people coming into contact with police through their criminal offending, those with a mental illness are disproportionately represented and are particularly vulnerable in police custody. These findings have significant clinical implications for those responsible for providing psychiatric services to the police cell population, and suggest that there is a pressing need to evaluate standardized screening tools for mental disorders to identify those in need of further assessment and treatment. Currently, some jurisdictions use detailed assessment tools (albeit non-standardized) to help identify detainees with mental illnesses, while others have no formal screening instrument at all [28]. While it may not be possible to conduct comprehensive mental health assessments with every person coming into police cells, use of an effective screening tool can facilitate the identification of those who may require comprehensive medical and/or psychological evaluation and perhaps diversion into treatment services [28,29]. Effective screening of mental illnesses in police cells could also assist to identify and re-engage those individuals who may have lost contact with their health care providers [30,31], and highlight the need for effective linkages between criminal justice and community-based care [32]. While the use of standardized screening tools in police custody may lead to better detection of those experiencing mental illness, it is also unavoidable that this process will be over-inclusive and identify some who may be regarded as false positives. Therefore, in a very much more practical sense, this initial screening would need to be followed by a second tier triage assessment to further refine and prioritize those in most need of treatment [33,34].

The results from the current study make a valuable contribution to our knowledge of mental illness among a sample of arrestees in Australia. This is because they highlight that providing treatment for this population in the community has far reaching complexities. If their needs were to be considered more specifically, then resources could be targeted that address the key challenges facing police cell detainees. The most common unmet needs were found to be in broad life domains, such as money, company, daytime activities, drugs and intimate relationships. These unmet needs, intertwined with

high rates of mental illness and substance use problems, represented major ongoing difficulties from the perspective of the detainees; some of which have been highlighted as risk factors for criminal offending [35]. These results confirm the need to further develop and strengthen functional interagency collaborations across the criminal justice, health and social systems that provide a range of targeted and concerted services that meet the consumer's individual needs [36].

By way of example, one participant in this study reported ongoing problems with depression, substance use problems, budgeting money and paying bills and occupational difficulties. As this detainee was due for release on bail, one potentially viable option may be for an out-reach service worker from the local area mental health service to make contact with the detainee in the police cell to help case-manage an effective transition back to the community. However, given the often high levels of non-compliance amongst this population and their generally poor levels of engagement with services, it may be necessary to consider an intense case-management model of working, such as the use of assertive community treatment teams. These teams, common in general mental health services, may help contribute to better outcomes for detainees [37], especially when complemented with additional criminal justice components [38]. The development of such an arrangement is clearly not without substantial service provision implications. Given the sheer breadth and diversity of needs representing ongoing challenges for the detainees, a number of elements would need to be set in place, such as a level of information sharing across systems, adequate services in the community, and an integration of services across the varied systems and agencies [39]. Whilst such an integrated approach is not without its complexities, not least of which would be the initial financial burden and manpower logistics, it would serve to improve the appropriate identification of the complex needs of this vulnerable population, facilitate access to appropriate community services and supports, and thereby contribute to better health-related outcomes for these additionally vulnerable groups. Study findings also reinforced the additional considerations required for women who are being held in police custody, especially in relation to their general medical and psychiatric treatment needs. Further, more specialized service responses may also be indicated for this group.

A number of limitations must be noted. It may be possible that exclusion of those brought in for public drunkenness may have biased the sample. The state of Victoria is one of the last states to decriminalize public drunkenness, so efforts were made to recruit a sample representative of all states and territories [40]. In fact, the exclusion of these individuals may have led to an underestimate of

the prevalence of mental disorders as they are likely to have co-morbid psychiatric and substance use disorders, thus further highlighting the potential importance of the current study findings. A further limitation of the study was the difficulty in recruiting a representative sample of detainees. It must be considered that the generalizability of the results may have been limited due to the large number of individuals who declined to participate or were unavailable due to police decision making. However, support for the generalizability of the study findings was demonstrated in that key demographic characteristics were broadly similar to other studies of police cell detainees with higher consent rates [8,41]. It must also be considered that selection of the two busiest inner city sites may have posed a selection bias. A further limitation concerns the inclusion of a limited number of psychiatric conditions in the assessment interview. Limits due to time, capacity of the detainees and location of the interviews precluded a more thorough or detailed assessment. For example, it is arguably clear that future research should investigate levels of acquired brain injury in this population, as there is emerging evidence that there is a relatively high prevalence of brain injury in offender populations [42,43]. Such findings will have further implications for health care providers, such as screening, assessment and service provision. Finally, while it may have been more appropriate to compare rates of mental disorders from the current sample to a similarly disadvantaged group from the community, they were compared with rates from the general population as they provided the best estimates currently available.

In conclusion, the current study highlights the significant psychiatric morbidity found in the police cell population, and the pressing need to evaluate standardized screening tools for mental illnesses to provide timely access to assessment and treatment services. Such recommendations cannot be taken lightly, not least because of the additional burden this kind of service overhaul would place on the police and health care providers. Any procedural changes can and would require substantial planning and investment from both criminal justice and mental health systems. However, exactly this kind of functional interagency collaboration needs to be developed across government systems and agencies in order to better meet individual needs and contribute to improved health and justice related outcomes.

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#### **4. Chapter Four: Explaining Psychopathology in Police Cells**

##### **4.1. Preamble to Paper 2**

This chapter presents the second study of the thesis. This article sought to extend the current state of knowledge regarding the occurrence of psychopathology in police cells by considering personal factors from the importation model, situational factors from the deprivation model, and the interaction between these factors in explaining the occurrence of psychopathology among police cell detainees.

This paper has been submitted to *Social Psychiatry and Psychiatric Epidemiology*. This is an international peer-reviewed journal that publishes articles on the epidemiology of psychiatric disorders and the relationship between psychiatric disorders and the social environment. The journal has an impact factor of 2.052 (ISI Web of Knowledge, 2011).

## 4.2. PART B: Declaration for Thesis Chapter 4, Paper 2

### Monash University

#### Declaration by candidate

In the case of Chapter 4, Paper 2, the nature and extent of my contribution to the work was the following:

Nature of contribution	Extent of contribution
Study design, data collection, analyses, write-up	75%

The following co-authors contributed to the work. Co-authors who are students at Monash University must also indicate the extent of their contribution in percentage terms:

Name	Nature of contribution	Extent of contribution
Dr Stuart Thomas	Study design, data analyses, writ-up	15%
Professor James Ogloff	Study design, data analyses, writ-up	10%

<b>Candidate's Signature</b>		<b>Date</b>
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#### Declaration by co-authors

The undersigned hereby certify that:

(1) the above declaration correctly reflects the nature and extent of the candidate's contribution to this work, and the nature of the contribution of each of the co-authors.

(2) they meet the criteria for authorship in that they have participated in the conception, execution, or interpretation, of at least that part of the publication in their field of expertise;

(3) they take public responsibility for their part of the publication, except for the responsible author who accepts overall responsibility for the publication;

(4) there are no other authors of the publication according to these criteria;

(5) potential conflicts of interest have been disclosed to (a) granting bodies, (b) the editor or publisher of journals or other publications, and (c) the head of the responsible academic unit; and

(6) the original data are stored at the following location(s) and will be held for at least five years from the date indicated below:

<b>Location(s)</b>	All data are stored at Centre for Forensic Behavioural Science, Monash University.
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<b>Signature 1</b>		<b>Date</b>
<b>Signature 2</b>		<b>Date</b>

.....

### **4.3. Confirmation of Submission of Paper 2**

Following is the email from Social Psychiatry and Psychiatric Epidemiology confirming the submission of the article.

15<sup>th</sup> June 2010

Dear Mr Baksheev,

Your submission entitled "Psychopathology in police custody: The role of importation, deprivation and interaction models" has been received by journal Social Psychiatry and Psychiatric Epidemiology.

You can check on the progress of your paper by logging on to Editorial Manager as an author. The URL is <http://sppe.edmgr.com/>.

Your manuscript will be given a reference number once an Editor has been assigned.

Thank you for submitting your work to this journal.

Kind regards,

Editorial Office

Social Psychiatry and Psychiatric Epidemiology



**4.4. Paper 2: Psychopathology in Police Custody: The Role of Importation, Deprivation and Interaction Models**

Title: Psychopathology in police custody: The role of importation, deprivation and interaction models

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Abstract word count: 247 words

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## Abstract

**Purpose:** To investigate the predictive power of personal factors (e.g., history of psychiatric treatment), situational factors (e.g., police cell conditions) and their interactive effects to explain the occurrence of mental illness in police custody.

**Methods:** 150 detainees were recruited from two metropolitan police stations in Melbourne, Australia, over a 9 month period. Measures included the Structured Clinical Interview for DSM-IV-TR, Jail Screening Assessment Tool, Marlowe-Crowne social desirability scale, and an index of the environmental effects of police cells. Hierarchical regression analyses were conducted with personal factors, situational factors, and the interaction between person and environment to explain psychiatric symptomatology in police cells, controlling for social desirability.

Analyses of covariance were also conducted to further explore interaction effects of person and environment on psychopathology. Major concerns reported by detainees were analysed utilising established qualitative techniques.

**Results:** Personal factors, such as current psychiatric disorder and history of psychiatric hospitalisation, were significantly associated with psychiatric symptomatology, but deprivation factors and interaction terms showed no association. Detainees with pre-existing vulnerabilities and those unsatisfied with police cell conditions demonstrated higher levels of psychopathology. Most commonly cited concerns by detainees related to legal outcome, not being able to smoke and loss of liberties.

**Conclusions:** While all detainees understandably experience some difficulties in police cells, it is those with pre-existing vulnerabilities that suffer the most. This may be due to the exacerbation of vulnerabilities by police cell conditions. The

implications of these findings for provision of health care services in police cells are discussed.

Keywords: mental illness, importation model, deprivation model, interaction model, police custody

## Introduction

The high prevalence of mental illness amongst those in the criminal justice system has been well documented [15], with consistent findings of higher rates of mental illness amongst the incarcerated as compared to the general population [10]. At the front end of this system, in police cells, it has been estimated that as many as 82% of male and 94% of female police detainees exhibited high levels of psychological distress [18]. A further study estimated that as many as 62% of police detainees reached the threshold for psychiatric caseness [23]. Outlining effective service provision strategies to manage the relatively high rates of symptomatology in police cells requires an understanding of the epidemiology of this phenomenon. Quite simply, is psychiatric symptomatology that is displayed by detainees brought into the cells, or is it a result of the environmental conditions of the police cells? Two models have been proposed that may help our understanding of this: the importation model and the deprivation model.

The importation model posits that pre-prison characteristics that are brought into the criminal justice system (i.e., imported) shape the adjustment process of prisoners [20, 21]. According to this model, detainees are mentally ill when they are incarcerated. Research findings generally support this notion, as a substantial number of police detainees referred from custody to diversionary schemes present with significant psychiatric histories and current psychiatric disorders [22]. This person-centred hypothesis implies that person-centred solutions are required to address this problem, such as provision of psychiatric treatment and by not ‘criminalising’ those with a mental illness [17, 35].

By contrast, the deprivation model proposes that imprisonment is synonymous with deprivation of key rights, possessions, liberties and relationships with family and friends. As a result, these 'deprivations' impact on the individual and inflict physical, social and psychological repercussions of varying degrees for individuals [11, 33]. Therefore the deprivation model posits that mental illness is the product of the stressful and oppressive conditions within the criminal justice system itself. Some support for this notion also exists, with findings of increased levels of psychopathology amongst a group of newly incarcerated jail inmates [17]. This model posits that solutions to the occurrence of symptomatology in this environment include the provision of satisfactory detention conditions and access to basic amenities and services, such as appropriate sleeping accommodation [6, 7, 28].

More recently, however, a third model has been suggested. The interaction model proposes that it is in fact the interaction between personal and situational factors that accounts for the levels and types of psychopathology that has been found in the criminal justice system. This model proposes that individuals arrive in the criminal justice system with unique needs that are met to differing degrees by the institutional environmental conditions. Therefore, this model proposes that differing degrees of incongruence between personal needs and environmental conditions will be associated with different levels and presentations of psychopathology [24, 36]. As such, this approach regards both importation and deprivation models as compatible as life before entering the criminal justice system can help shape how detainees respond to police cell conditions. Evidence for this model has been demonstrated amongst prison inmates, where it was found that the interaction between person and environment was a significant predictor of external (e.g., arguments) and physical (e.g., being taken advantage of) problems among prisoners, although it did not

predict disruptive infractions and internal problems (e.g., fearful) [38]. It follows that solutions to reducing psychopathology amongst those detained include accommodating needs with congruent environmental responses, such as providing clarity and minimising doubts about one's circumstances.

Developing effective service provision strategies in police cells depends on which of these competing models accounts for the high rates of psychiatric symptomatology. It has previously been found that both situational factors, such as the evaluations of the fairness of police officer behaviour by detainees, and personal factors, such as a history of psychiatric hospitalisation and low education, have in part explained the high prevalence of psychopathology in police custody [6]; but a large proportion of this variance remains unexplained, and the interaction of these factors in the police cell context remains unknown.

Against this background, the aim of the current study was to examine the predictive power of personal factors (as taken from the importation model), situational factors (as taken from the deprivation model), and the interaction of both personal and situational factors to account for the occurrence of mental illness in police cells. Given that it was unclear which of these models would better account for the presence of psychopathology in police cells, it was hypothesised that:

- Based on previous findings of elevated psychopathology amongst those with a history of psychiatric treatment and hospitalisation [6], there would be a significant relationship between personal factors and psychiatric symptoms in police cells;
- Based on previous findings of elevated psychopathology amongst those who rated police cell conditions as unfair [6], there would be a significant

relationship between situational factors and psychiatric symptoms in police cells;

- Based on previous findings of an interaction between person and environment in explaining adjustment to prison [38], there would be an interaction between personal and situational factors in predicting psychiatric symptoms in police cells.

## Method

### Participants

Between May 2008 and February 2009, 150 participants were recruited from two busy metropolitan police stations in Melbourne, Australia. Melbourne is a large multi-cultural city with a population of just under 3.9 million people [4]. Two of the busiest police stations were identified from a previous study that investigated psychiatric symptoms and histories of detainees in Victoria, Australia [27].

Detainees were invited to participate if they: (1) were at least 18 years old and (2) had spent at least 12 hours in detention before interview to adjust to environment and/or stabilise if withdrawing from substances (unless transferred from another police cell). Exclusion criteria included: (1) non-English speaking detainees, (2) those detained solely for public drunkenness and disorderliness, (3) those transferred from prison to attend a court hearing at the local Magistrates Court, or, (4) repeat admissions to the cells during the time of the study (that is, detained again for a different offence). The study was approved by the Monash University Standing Committee on Ethics in Research involving Humans, the Victorian Government



Department of Human Services Human Research Ethics Committee and the Victoria Police Human Research Ethics Committee.

## Measures

### Psychiatric Symptoms

Psychiatric symptoms were measured utilising the Jail Screening Assessment Tool (JSAT) [25], which includes an abridged version of the Brief Psychiatric Rating Scale - Expanded [37]. The measure comprised 24 items (e.g., Suicidality, Depression) rated on a 3-point scale, where absent = 0, possible = 1 and present = 2. Scores ranged from 0 to 48, with higher scores indicating higher levels of psychiatric symptomatology. The validity of this measure has been established [25, 26].

### Socially Desirability Bias

Social desirability bias was measured using a short form of the Marlowe - Crowne Social Desirability Scale (MC-SDS) [12, 29]. The short form is comprised of 13 forced-choice, true-false items concerning socially disapproved but common behaviors [29]. Five items are considered attribution items where selection of the 'true' response will award a participant one point, thereby indicating a stronger tendency to respond in a socially desirable way than someone who had responded with 'false.' The remaining 8 items are considered denial items for which a 'false' response is assigned one point. Scores range from 0 (when no responses match) to 13

(when all responses match). Higher scores indicate higher socially desirable responding. Forensic norms have been generated [3].

#### Measures of personal factors

Current (past month) psychiatric disorders were assessed using the Structured Clinical Interview for DSM-IV-TR (Patient Edition) (SCID-IV) [16]. Mood, psychotic, substance use, anxiety, and eating disorders were evaluated. Somatoform and personality disorders were excluded due to time constraints. The SCID has demonstrated reliability and validity [39] and has been successfully used with prisoner populations [19].

A standard coding sheet was also completed recording time spent in police cells at time of interview (hours), age, gender, employment status, and country of birth.

A state-wide public mental health database, the Client Management Interface – Operational Data Store (CMI-ODS) was consulted to obtain documented histories of mental health care. The CMI-ODS is commonly referred to as the Victorian Psychiatric Case Register (VPCR). The VPCR contains information on all contacts with the public mental health system, such as treatment episodes and admissions to public psychiatric hospitals, dating back almost 50 years. While the VPCR provides a good prevalence estimate of low prevalence disorders (i.e., psychotic disorders) since people with such disorders inevitably have contact with the public mental health service, it does not capture about 20% of community contacts that occur with private mental health practitioners or general practitioners (GP). These contacts are primarily accounted for by high prevalence disorders (such as mood and anxiety

disorders), which are increasingly being seen as being a central part of the role of the GP, with treatment provided by private psychologists and psychiatrists [30, 34].

#### Measures of situational factors

Levels of satisfaction with physical conditions and services provided in police cells were measured using the Checklist of Physical Conditions in Police Cells (hereafter referred to as the Checklist). This was an original measure developed on the basis of a report describing the conditions in police cells in Victoria, Australia [28]. The Checklist comprised 12 items assessing physical conditions (e.g., overcrowding, sleeping accommodation) and 12 items assessing provision of basic services and amenities (e.g., quality of food, access to drinking water and health care) (See Table 1). Each item was rated on a 6 point scale (1 = Very Unsatisfied to 6 = Very Satisfied). Total scores ranged from 24 to 144, with higher scores indicating greater satisfaction.

Insert Table 1 about here

Due to the undeveloped state of the literature regarding the environmental effects of police cells on the mental health status of detainees, a qualitative exploration of the major concerns of being in custody was also undertaken. The purpose of this analysis was to further assess the environmental effects of police cells. Detainees were asked to report between 5 and 10 major concerns they had whilst staying in custody. Open ended questions such as 'What is a major concern

for you whilst staying here in the police cell?’ were utilised, followed up with additional probes to help clarify or expand on the responses provided.

### Procedure

Police cell detainees were approached at the completion of a standard health screen with a custodial nurse, where information about the project was provided. Detainees were approached in the secure clinical interview room if they refused to attend the health screen. Study requirements were described in full, as well as the limits to confidentiality. Measures were administered to those who provided informed consent. Consent forms were completed upon return to the cell block due to the practical logistics of completing interviews in a secure interview room. The administration of questionnaires was counter-balanced to control for interview fatigue and were read out to all participants which helped to overcome some concerns about literacy levels in this population.

### Statistical Analyses

Statistical analyses were performed using SPSS version 17. Descriptive statistics, including numbers, percentages, means and standard deviations were run to characterise the sample. Hierarchical regression was employed to account for the variance in psychiatric symptoms, with social desirability entered in Step 1, personal factors in Step 2, situational factors in Step 3 and interaction terms in Step 4. Interaction terms were created by multiplying those personal factors that were significant at Step 2 (scored as binary values) with the total score from the Checklist.

Prior to analysis, the Checklist was centred (i.e., the mean was subtracted from original values) to avoid multicollinearity [2]. This centred Checklist variable was entered at Step 3. Prior to conducting the regression analysis, variables were examined for accuracy of data entry, missing values, outliers and regression assumptions. Cases with more than 25% missing data were excluded from the analyses. There were no multivariate outliers ( $p < 0.001$  criterion for Mahalanobis distance).

To further explore the relationship between person and environment, 2 X 2 between groups analyses of covariance (ANCOVA) were conducted. Preliminary checks were conducted to ensure no violation of the assumptions of ANCOVA. The total score from the Checklist was dichotomised at 84 (mid-point between the range of scores) to reflect those satisfied and unsatisfied with police cell conditions. The independent variables for the first ANCOVA were current psychiatric disorder (scored as absent / present) and the Checklist total score (dichotomised). The independent variables for the second ANCOVA were history of psychiatric admission (yes / no) and the Checklist total score (dichotomized) for the second ANCOVA. The dependent variable for the two ANCOVAs was the JSAT total score. Major concerns were analysed using thematic analysis [31]. The concerns raised by the sample were read and organised to generate discrete categories until saturation was reached. One or two word descriptors were used to label the emerging themes. Thematic categories were further refined and compared for similarities and differences. Similar themes were collapsed into more general categories [32].

## Results

The mean age of participants was 30.4 years (SD=8.95; range 18 – 62 years). The majority were male ( $n=136$ , 90.7%), more than half (85, 56.7%) were unemployed at the time of arrest, three-quarters (110, 73.3%) reported living with someone (e.g., partner, friends), and approximately the same proportion ( $n=113$ , 75.8%) were born in Australia. Eight participants (5.4%) identified themselves as being of Indigenous Australian descent. Overall, participants had spent an average of 32.1 hours in the police cells at the time of interview (SD=24.55; median: 23.5; range: 3 – 144 hours). The average psychosocial functioning level, as measured by the DSM-IV-TR Global Assessment of Functioning measure was 51.07 (SD=12.996; median: 50; range: 5 - 85), indicating serious to moderate symptoms (e.g., suicidal ideation) or serious to moderate impairment in social, occupational or school functioning.

The majority of participants ( $n=146$ , 97.3%) endorsed at least one symptom by rating as ‘present’ on at least one item on the JSAT. On average, participants rated for a number of symptoms, with a mean score of 7.95 on the JSAT (SD=5.05; range 0-21). The most commonly rated symptoms were depression ( $n=109$ , 72.7%), anxiety ( $n=102$ , 68%), guilt ( $n=87$ , 58%) and hostility ( $n=85$ , 56.7%).

## Psychiatric symptoms and personal factors

Results from the hierarchical regression indicated that social desirability explained 7.1% of the variance in psychiatric symptomatology at Step 1 (see Table 2). After entry of the personal factors at Step 2, the total variance explained by the model was 48.2% ( $F(6, 100)=17.41$ ,  $P < 0.001$ ). Of the personal factors entered, two were

significant and made unique contributions to explaining psychiatric symptomatology. The presence of a current psychiatric disorder (excluding substance use disorders) was the strongest and most significant predictor followed by history of psychiatric hospitalisation. Higher levels of psychiatric symptomatology were found among those with a current psychiatric disorder (excluding substance use disorders) and among those with a history of prior psychiatric hospitalisation. Other personal factors, such as age, history of psychiatric treatment and drug abuse / dependence did not reach statistical significance in the model.

Insert Table 2 about here

#### Psychiatric symptoms and situational factors

Results from the regression analysis indicated that after entry of the situational factors at Step 3, the total score from the Checklist and time spent in police cells were not significantly related to psychiatric symptomatology (see Table 2).

#### Interaction between personal and situational factors

Results also indicated that the interaction between person and environment was not significantly related to psychiatric symptomatology at Step 4. The overall model, however, remained significant ( $F(10, 96)=10.47, P < 0.001$ ) and explained 47.2% of the variance in psychiatric symptomatology.

To further explore the relationship between person and environment, two ANCOVA analyses were conducted. After adjusting for the possibility of socially

desirable responding, there was no significant interaction found between current psychiatric disorder and satisfaction with police cell conditions ( $F(1,123)=1.37, P = 0.245$ ). The main effects were significant for current psychiatric disorder ( $F(1, 123)=52.42, P < 0.001$ ) and satisfaction with police cell conditions ( $F(1,123)=5.06, P < 0.05$ ). Therefore those with a current psychiatric disorder ( $M=9.94, SE=0.557$ ) and those unsatisfied with police cell conditions ( $M=8.06, SE=0.36$ ) had significantly elevated levels of psychopathology compared to those without a current psychiatric disorder ( $M=4.47, SE=0.51$ ) and those satisfied with police cell conditions ( $M=6.35, SE=0.67$ ).

After adjusting for socially desirable responding, there was no significant interaction between history of psychiatric hospitalization and satisfaction with police cell conditions ( $F(1,102)=1.66, P = 0.200$ ). The main effect was not significant for history of psychiatric hospitalisation ( $F(1, 102)=1.71, P = 0.195$ ), although it was significant for satisfaction with police cell conditions ( $F(1,102)=5.05, P < 0.05$ ). Therefore those unsatisfied with police cell conditions ( $M=9.34, SE=0.57$ ) had significantly elevated levels of psychopathology compared to those satisfied with police cell conditions ( $M=5.93, SE=1.40$ ).

### Major concerns

The qualitative exploration of the concerns reported by detainees showed that the majority of the sample reported at least one major concern whilst in custody ( $n=125, 83.3\%$ ). The most frequent concerns mentioned were regarding their legal outcome ( $n=54, 36\%$ ), not being able to smoke cigarettes in police cells ( $n=38, 25.3\%$ ), and



practical issues associated with the loss of liberties ( $n = 33$ , 22%), such as the ability to make telephone calls (see Table 3).

Insert Table 3 about here

## Discussion

The current study sought to examine the predictive power of personal and situational factors, and their interaction, in explaining the occurrence of mental illness in police cells. The first hypothesis, that there would be a relationship between personal factors and psychiatric symptoms in police cells, was supported, thereby giving support to the importation model. Of the personal factors explored, current psychiatric disorder (excluding substance use disorders) and history of psychiatric hospitalisation were significant predictors of psychiatric symptomatology. These findings are consistent with previous research that found that while all detainees suffered in police cells, it was those with pre-existing vulnerabilities that suffered the most [6]. In fact, the inclusion of current psychiatric disorders in the current analysis rendered other factors, which have previously been identified to be related to psychopathology in police custody non-significant, such as a history of psychiatric treatment, age and drug abuse / dependence [6]. Future research can further validate the importance of this variable in the context of other variables that were not measured in the current study, such as personality and coping mechanisms, that may be related to the way in which detainees adapt to police cells and therefore related to levels of psychopathology.

Study findings also offered partial support for the hypothesis that there would be a relationship between situational factors and psychiatric symptoms in police cells. While the situational factors alone did not significantly predict symptomatology in the regression analysis, further analyses revealed that those unsatisfied with police cell conditions had significantly elevated levels of psychopathology compared to those satisfied with police cell conditions. This finding is in line with previous research that found that detainees with unfair perceptions of custodial facilities had higher levels of psychopathology compared to detainees with fair perceptions [6]. These findings add further weight to the notion that psychopathology in police cells is not ‘either’ due to importation factors ‘or’ due to deprivation factors, but that there is some interaction between person and environment in their adjustment to police cell conditions. While study findings did not support the hypothesis that there would be an interaction between personal and situational factors in their relationship with psychiatric symptoms in police cells, the data emerging from this study suggest that a possible reason why those with pre-existing vulnerabilities suffer the most in police cells may likely be that these vulnerabilities were exacerbated by the police cell conditions and the deprivation of key rights and liberties. Findings from other parts of the criminal justice system lend support to this notion. For example, Dhimi and colleagues found that time spent in prison and quality of life before prison had an interactive effect on the amount of contact prisoners had with their family and friends [13].

Findings from the current study also suggest that deprivations commonly seen in prisons, such as lack of privacy, may not be as much of a priority to detainees in the police cell context [33, 36]. Concerns about the loss of liberties were quite predictably prominent amongst participants in the current sample, in large part due to

the recency of the incarceration episode. Other common concerns reported by detainees were about legal outcome at court and not being able to smoke in the cells. Thus, matters beyond the control of detainees are more pertinent in the initial stages of the criminal justice system, compared to the longer term issues, such as privacy and safety, which become more commonplace in prisons [36].

### Clinical Implications

Findings from the current study suggest that the most effective approach to managing the high levels of psychopathology are to target those individuals with a current psychiatric disorder and those presenting with a history of psychiatric hospitalisation. This suggests that detainees presenting with pre-existing vulnerabilities should receive higher priority by health care workers attending police cells. Healthcare service providers may readily elicit information regarding psychiatric hospitalisation by implementing mechanisms to enquire about whether individuals have a history of contact with the public mental health system. Information regarding the assessment of current psychiatric disorders may be more practically difficult to obtain, due to the limited time to conduct such assessments and the limited resources available in these settings. Given that it is not feasible to conduct comprehensive mental health evaluations with every newly admitted detainee, there exists a pressing need to evaluate the utility of standardised assessment tools that screen for mental illnesses in the police cell context and thus identify those in need of further more specialised assessment and/or intervention by health care providers [5].

## Research Implications

Findings from the current study have wider research implications for the ‘criminalisation’ hypothesis. Briefly, this hypothesis suggests that people who otherwise might have received treatment in psychiatric hospitals are now being processed through the criminal justice system for, at times, minor offences [1, 8]. While the evidence for this hypothesis is far from convincing [14, 35], findings from the current study suggest that some individuals with a mental illness may have been ‘criminalised’ for their behaviour. While it can be argued that incarceration in the criminal justice system can provide a treatment opportunity [9], this relies on accurate screening procedures and appropriate linkages with community support agencies. It has previously been demonstrated that current police practices were not effective at identifying those experiencing a mental illness [5]. While previous research has shown that people observed to have a mental illness were less likely to be arrested by police [14], not all of those experiencing mental illness will exhibit such overt signs. If these people are not identified by police, there may be a chance that their behaviour may be ‘criminalised.’ For example, individuals suffering from depression, a condition typically characterised by ‘withdrawnness,’ might be less likely to attract the attention of police as compared with an individual exhibiting overt psychotic symptoms, such as acting out on hallucinatory content. The longitudinal outcome of those with non-observable mental illnesses, such as depression, that make contact with police services remains largely unexplored.

Given the cross-sectional design of the current study, it was evident that there was a relationship between the variables investigated, but it did not indicate the direction of causality. A longitudinal design with a follow-up of those who proceed

through the criminal justice system would clearly add to our knowledge about mental illness amongst those incarcerated. Also, half of the variance in psychiatric symptomatology was not accounted for by the personal and situational factors investigated in the current study. Therefore, future research could further elucidate the role of other situational factors that may impact on psychopathology in police cells, such as the satisfaction of interactions with police officers and the development of a measure to assess congruence between personal needs and the environmental conditions.

### Conclusion

Findings from the current study supported the importation model and provided partial support for the deprivation model. While there was no interactive effect of these models, the data suggested that while everyone suffers in police cells, it was those with pre-existing vulnerabilities that suffer the most, quite laudably because of the detrimental conditions imposed by the conditions of the police cells, even for a short period of time.

Table 1: Items in the Checklist of Physical Conditions in Police Cells

Item No	Physical conditions
1	Overcrowding
2	Sleeping accommodation
3	Cleanliness of cells
4	Cleanliness of showers
5	Cleanliness of toilets
6	Internal exercise yard
7	Heating
8	Condition of cell walls and floors
9	Floor space
10	Lighting
11	Ventilation
12	Overall standard of the physical conditions of the cells
Services and amenities	
13	Food
14	Access to drinking water
15	Access to health care
16	Personal hygiene (cleaning teeth, shaving)
17	Smoking
18	Use of showers
19	Access to internal exercise yard
20	Access to fresh air and sunlight
21	Privacy
22	Safety and security of the environment

23 Knowledge of the rules of the cells

24 Purposeful Activity

---

Table 2: Summary of Hierarchical Regression Analysis for Variables Predicting Psychiatric Symptomatology

Variables	B	SE B	B
Step 1			
Social desirability	-0.487	0.161	-0.283**
Step 2			
Social desirability	-0.307	0.125	-0.178*
Age	0.001	0.040	0.002
History of psychiatric treatment	-0.185	0.873	-0.018
History of psychiatric hospitalisation	2.574	0.994	0.223
Drug abuse / dependence (current)	-0.142	0.746	-0.014
Psychiatric disorder (current, excluding substance use disorders)	5.947	0.739	0.591
Step 3			
Social desirability	-0.291	0.127	-0.169*
Age	0.010	0.041	0.018
History of psychiatric treatment	-0.160	0.885	-0.016
History of psychiatric hospitalisation	2.553	1.007	0.221*
Drug abuse / dependence (current)	-0.213	0.755	-0.021
Psychiatric disorder (current, excluding substance use disorders)	5.932	0.743	0.589***
Checklist	-0.017	0.016	-0.078
Time spent in cells	0.000	0.015	0.001
Step 4			
Social desirability	-0.281	0.128	-0.163*
Age	0.011	0.041	0.020
History of psychiatric treatment	-0.088	0.899	-0.009



History of psychiatric hospitalisation	2.578	1.013	0.223*
Drug abuse / dependence (current)	-0.166	0.761	-0.016
Psychiatric disorder (current, excluding substance use disorders)	5.937	0.749	0.590***
Checklist	-0.003	0.022	-0.014
Time spent in cells	0.000	0.015	0.000
Interaction between psychiatric disorder and checklist	-0.020	0.034	-0.062
Interaction between psychiatric admission and checklist	-0.027	0.044	-0.050

---

Note: Adjusted  $R^2=0.071$  for Step 1;  $\Delta R^2=0.431$  for Step 2 ( $p<0.001$ );  $\Delta R^2=0.006$  for Step 3 ( $P = 0.564$ );  $\Delta R^2=0.005$  for Step 4 ( $P = 0.600$ )

\*\*\*  $P < 0.001$

\*\*  $P < 0.01$

\*  $P < 0.05$

Table 3: Frequency and percentage of major concerns amongst police detainees

Type of Major Concern	Frequency	Percentage (%)
Legal outcome / uncertainty	54	36
Can't smoke / cigarettes	38	25.3
Loss of liberties	33	22
Thinking about and missing friends / family	29	19.3
Can't leave cells	26	17.3
Food and drinks	25	16.7
Can't sleep / sleeping accommodation	23	15.3
Cell conditions	21	14
24-hour lighting	20	13.3
Missing personal relationships (partners)	18	12
Access to healthcare	17	11.3
Outside activities and responsibilities	17	11.3
Safety / demeaning treatment by police	13	8.7
Personal hygiene	11	7.3
Loss of possessions	9	6
Visitors (family, friends)	6	4
Depression / stress / suicidal thoughts	5	3.3
Other prisoners	5	3.3
Get better (control behaviour related to offending)	4	2.7
Lack of privacy	2	1.3

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Conflict of interest: The authors declare that they have no conflict of interest.

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## **5. Chapter Five: Screening for Mental Illness in Police Cells**

### **5.1. Preamble to Paper 3**

This chapter presents the third study of the thesis. This study sought to examine the effectiveness of current police practices in identifying people experiencing mental illness by comparing questions from routine police screening procedures with those of an independent assessment of psychopathology. Ratings from the Brief Jail Mental Health Screen and the Jail Screening Assessment Tool were also compared to independent ratings of psychopathology. Further analyses were conducted to examine the comparative predictive utility of these two standardised screening tools. This study makes a valuable contribution to the current state of the literature by noting that police practices may be significantly improved with the adoption of a standardised screening tool in routine assessments of recent admissions to police cells.

This article has been published as an advance online publication in *Psychology, Crime and Law*, a peer-reviewed journal that publishes articles on the study and application of psychological approaches to crime, criminal law and civil law. This journal has an impact factor of 0.771 (ISI Web of Knowledge, 2011).

## 5.2. PART B: Declaration for Thesis Chapter 5, Paper 3

### Monash University

#### Declaration by candidate

In the case of Chapter 5, Paper 3, the nature and extent of my contribution to the work was the following:

Nature of contribution	Extent of contribution
Study design, data collection, analyses, write-up	75%

The following co-authors contributed to the work. Co-authors who are students at Monash University must also indicate the extent of their contribution in percentage terms:

Name	Nature of contribution	Extent of contribution
<b>Professor James Ogloff</b>	Study design, data analyses, write-up	15%
<b>Dr Stuart Thomas</b>	Study design, data analyses, write-up	10%

Candidate's Signature

	<b>Date</b>
--	-------------

**Declaration by co-authors**

The undersigned hereby certify that:

- (1) the above declaration correctly reflects the nature and extent of the candidate's contribution to this work, and the nature of the contribution of each of the co-authors;
- (2) they meet the criteria for authorship in that they have participated in the conception, execution, or interpretation, of at least that part of the publication in their field of expertise;
- (3) they take public responsibility for their part of the publication, except for the responsible author who accepts overall responsibility for the publication;
- (4) there are no other authors of the publication according to these criteria;
- (5) potential conflicts of interest have been disclosed to (a) granting bodies, (b) the editor or publisher of journals or other publications, and (c) the head of the responsible academic unit; and
- (6) the original data are stored at the following location(s) and will be held for at least five years from the date indicated below:

**Location(s)**

All data are stored at Centre for Forensic Behavioural Science, Monash University.
--

<b>Signature 1</b>		<b>Date</b>
<b>Signature 2</b>		

.....

**5.3. Paper 3: Identification of Mental Illness in Police Cells: A Comparison of Police Processes, the Brief Jail Mental Health Screen and the Jail Screening Assessment Tool**

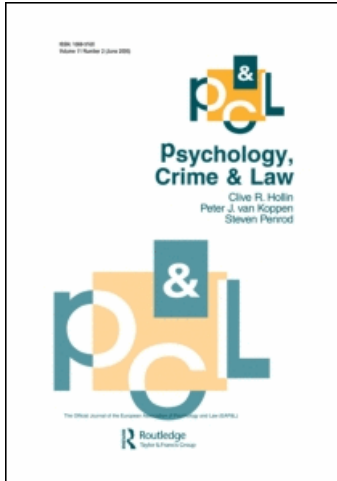
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### Identification of mental illness in police cells: a comparison of police processes, the Brief Jail Mental Health Screen and the Jail Screening Assessment Tool

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## Identification of mental illness in police cells: a comparison of police processes, the Brief Jail Mental Health Screen and the Jail Screening Assessment Tool

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*(Received 10 March 2010; final version received 16 July 2010)*

The study investigated current police practices employed to identify those with a mental illness in police custody, and to evaluate the predictive utility of the Brief Jail Mental Health Screen (BJMHS) and the Jail Screening Assessment Tool (JSAT). One hundred and fifty detainees were recruited from two police stations in Melbourne, Australia. Measures included the Structured Clinical Interview for DSM-IV-TR, BJMHS and JSAT. Axis-I disorders were compared with police decisions regarding identification of mental illness based on their usual practices. Participants were classified as requiring referral for further mental health evaluation according to the screening tools. Results indicated that current police practices produced high false negatives, with many of those experiencing mental illness not identified. There was no significant difference in performance between BJMHS (AUC = 0.722) and JSAT (AUC = 0.779) in identifying those with a serious mental illness ( $p = 0.109$ ). However, JSAT performed significantly better at identifying any Axis-I disorder, excluding substance use disorders, as compared with BJMHS (AUC = 0.815, vs AUC = 0.729;  $p = 0.018$ ). Given the high prevalence of mental illness among detainees, there is a pressing need to introduce standardised screening tools for mental illness in police custody. This can assist the police in managing detainees appropriately and securing mental health services as required.

**Keywords:** screening; mental illness; police cells; BJMHS; JSAT

### Introduction

An extant body of literature exists that has explicated the prevalence of mental illness in the criminal justice system. These include studies conducted from a range of countries, including Australia (Herrman, McGorry, Mills, & Singh, 1991; Mullen, Holmquist, & Ogloff, 2004), Canada (Corrado, Cohen, Hart, & Roesch, 2000; Ogloff, 2002), UK (Brooke, Taylor, Gunn, & Maden, 1996), USA (Teplin, 1990, 1994) and New Zealand (Brinded et al., 1999; Brinded, Simpson, Laidlaw, Fairley, & Malcolm, 2001). These studies consistently demonstrate a higher prevalence of mental illness among those in the criminal justice system as compared with the general population (Butler et al., 2006). Mullen and colleagues reviewed the epidemiological data from Australia, combining data sets to arrive at composite prevalence rates. They found that one in six male prisoners and one in five of

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female prisoners reported a prior admission to a psychiatric facility. Rates of mental health problems increased dramatically to four in ten male prisoners and one in two female prisoners when the broader criterion of any prior psychiatric assessment was utilised (Mullen et al., 2004). To put this in context, about one in ten in the general population have ever had contact with mental health services (Short, Thomas, Luebbers, Ogloff, & Mullen, 2010).

The extant literature regarding the prevalence of mental illness in the criminal justice system was summarised in a recent meta-analysis. Researchers combined data from a total of 62 surveys conducted in 12 countries, comprising almost 23 000 prisoners. They estimated that 4% of prisoners rated for psychotic disorders and 10–12% rated for major depression in the previous six months (Fazel & Danesh, 2002).

The relatively high rates of mental illness among those in the criminal justice system highlight a pressing need to identify such illnesses. Health screening is an integral component of healthcare service provision to identify those in need of further comprehensive care. High rates of mental illness among those in the criminal justice system highlight assessment and treatment. Health screening has four main aims: (1) to identify those with a mental illness to provide timely access to treatment and improve their subjective well-being; (2) to prevent violence and disruptive incidents in such settings; (3) to allocate limited resources to those most in need; and (4) to reduce cycles of admission between health, social and criminal justice systems (Nicholls, Roesch, Olley, Ogloff, & Hemphill, 2005).

Responding to this pressing need, significant developments have been achieved in the provision of health services in jails and prisons. These have been pioneered by publications such as *Psychiatric Services in Jails and Prisons* (American Psychiatric Association, 2000) and *Standards for Health Services in Jails* (National Commission on Correctional Health Care, 2008). These have been complemented by substantial research that has further investigated best practices for screening in jails and prisons (Ford, Trestman, Wiesbrock, & Zhang, 2009; Nicholls et al., 2005; Steadman, Scott, Osher, Agnese, & Robbins, 2005). Two screening tools that have been evaluated by researchers include the Brief Jail Mental Health Screen (BJMHS) and the Jail Screening Assessment Tool (JSAT). The BJMHS is a short screening measure primarily developed for correctional officers that consists of eight items and takes three–five minutes to complete (Steadman et al., 2005). When compared with data from the Structured Clinical Interview for DSM-IV, the tool correctly classified 73.5% of males but was less accurate at classifying females, with only 61.6% correctly classified (that is, the tool missed 34.7% of women with a diagnosable mental illness). Reasons for this are perhaps unclear, but could be partially explained by the differential presentation of certain mental illnesses in men and women (Bijl, Ravelli, & van Zessen, 1998; Ford et al., 2009), or may have been due to issues surrounding level of expert knowledge as police typically receive minimal training to assess mental illness (Vermette, Pinals, & Appelbaum, 2005). The JSAT, by contrast, requires a trained clinical expert to complete the assessment, taking approximately 20 minutes (Nicholls et al., 2005). The tool is reported to have a high degree of validity, referring all of those with psychotic disorders, anxiety disorders and suicide risk to a mental health program (Nicholls, Lee, Corrado, & Ogloff, 2004).

In comparison to the developments in healthcare services in jails and prisons, improvements in services have largely been neglected for people at the front end of the criminal justice system, that is, in short-term lockup in police custody.

Developments in service provision in police cells are particularly needed as many more prisoners make their way through police custody than enter jails or prisons. Also, police cell detainees are more likely to be intoxicated and affected by the incidents that culminated in their arrest. Despite this, limited research has investigated screening techniques for mental illness in custody (Scott, McGilloway, & Donnelly, 2009; Shaw, Creed, Price, Huxley, & Tomenson, 1999; Vaughan, Kelly, & Pullen, 2001). For example, detainees suspected of experiencing a mental illness by police officers were referred to services for further evaluation (James, 2000; Scott et al., 2009). While prison officers have been found to correctly identify up to 40% of prisoners with severe mental illness (Birmingham & Mullee, 2005), the accuracy of such assessments made by police officers has not been empirically evaluated. The identification of detainees with a mental illness by police can play an integral role in the safety and well-being of detainees by supplementing the work of medical services in custody (Gibbs, 1986; Steadman, McCarty, & Morrissey, 1989).

Use of a standardised screening tool may assist police officers and medical personnel to identify and manage people with mental illnesses, such as diversion into health services (James, 2000) and provision of further assessments and treatment for those who require it. While not all of those with a mental illness will warrant diversion into health services, or need treatment (Meadows, Burgess, Fossey, & Harvey, 2000; Regier et al., 1998), it could assist in identifying those that do require services as well as those who may have lost contact with their service providers (James, 2000). Current estimates suggest that only a third of those with a mental illness in the community have been in contact with services in the last 12 months (Meadows et al., 2000), thereby suggesting a significant missed treatment opportunity for a sizeable proportion of people could be in need of continued support and/or treatment.

Moreover, there is currently considerable heterogeneity in screening practices for mental illnesses across medical services in police custody. An 80-item coding sheet is completed in the UK that records data on mental health status, amongst other information (James, 2000). The accuracy of such assessments however, remains to be evaluated. In Australian police cells, some jurisdictions use detailed assessment tools (albeit non-standardised), and others no formal screening instrument at all (Ogloff, Davis, Rivers, & Ross, 2007). Screening tools are an essential part of service provision in custody as, in a similar vein to other parts of the criminal justice system, it has been demonstrated that there are substantial rates of psychopathology amongst police detainees (Blaauw, Kerkhof, & Vermunt, 1998; Heffernan, Finn, Saunders, & Byrne, 2003; James, 2000; Ogloff, Warren, Tye, Blaher, & Thomas, in press). This, coupled with the heightened risk for suicide (McCleave & Latham, 1998) and the varied stressors experienced (e.g. court proceedings, arrest experience, separation from family), highlights a pressing need to evaluate the utility of standardised mental health screening tools in police cells.

Against this background, the aims of the study were twofold: (1) to investigate the accuracy of current police practices in identifying those with a mental illness in custody, and (2) to examine the predictive utility of two standardised screening tools for mental illness in police cells: the BJMHS and the JSAT. The specific research questions addressed were: (1) What is the accuracy of current police practices in identifying those with a mental illness in custody?; (2) What is the predictive utility of the BJMHS and JSAT, separately, to identify mental illness in police cells?; and



(3) What is the comparative predictive utility of these two tools to identify mental illness in police cells?

## **Method**

### ***Participants***

Between May 2008 and February 2009, 150 participants were recruited from two metropolitan police stations in Melbourne, Australia. Melbourne is a large multi-cultural city with a population of almost 3.9 million people (Australian Bureau of Statistics, 2009). The two busiest police stations were selected from a previous study that investigated psychiatric symptoms amongst detainees in nine police stations across Victoria, Australia (Ogloff et al., in press). Inclusion criteria were: (1) being at least 18 years old and (2) having spent a minimum of 12 hours in custody before interview to stabilise if withdrawing from substances and/or adjust to environment (unless transferred from another police cell). Exclusion criteria were: (1) non-English speaking detainees, (2) those detained solely for public drunkenness and disorderliness, (3) prisoners transferred from prison to attend a court hearing at the local Magistrate's Court, or, (4) repeat admissions to the cells during the time of the study (that is, detained again for a different offence/matter). The study was approved by Monash University Standing Committee on Ethics in Research involving Humans and Victoria Police Human Research Ethics Committee. After providing a written and verbal description of the study to potential participants, written informed consent was obtained.

### ***Procedure***

Custodial nurses offer all newly admitted detainees a health screen. These health screens are detailed yet non-standardised, and consist of questions regarding physical and mental health, use of medications and drugs/alcohol. Potential participants were approached by the researcher immediately following the completion of this health screen. Given that the health screening assessments with the custodial nurse were voluntary, some detainees refused this assessment. Attempts to approach this group to invite them to participate in the research were made in one of two ways: (1) immediately following a visit from a professional, such as a lawyer, or (2) asking a police officer to transfer the detainee from the cell block to the secure interview room at a time when the interview room and the police officers were available. Procedurally this meant that, at times, participants were interviewed immediately following the assessment by the custodial nurse, and at other times several hours later. Potential participants were fully informed of study requirements, and the limits to confidentiality. If consent was provided, an interview was conducted and measures were administered in a secure interview room. Questionnaires were read out to all participants, and were reverse-ordered to control for interview fatigue.

### ***Measures***

The Structured Clinical Interview for DSM-IV-TR (Patient Edition) (SCID-IV) was used to assess current (past month) and lifetime Axis-I disorders (First, Spitzer,

Miriam, & Williams, 2002). Mood, psychotic, substance use, anxiety, and eating disorders were evaluated. Current disorders were ranked according to a diagnostic hierarchy, with schizophrenia and other psychoses taking precedence, followed by bipolar affective disorders, depressive disorders, anxiety disorders, eating disorders and substance use disorders. Those without a current Axis-I disorder constituted the 'no disorder' group (Wallace et al., 1998). The SCID has been demonstrated to be a reliable and valid measure (Zanarini et al., 2000) and has been successfully used with offender populations (Herrman et al., 1991). A standard coding sheet was completed recording age, gender, country of birth and ethnicity.

The Prisoner Information Record is a file located in the police station that contains police records for detainees. The Custody Risk Assessment Form was obtained from this file. This form was completed by a police officer, usually the Custody Sergeant, upon entry into custody. The Custody Sergeant is a senior police officer in charge of the welfare of the detainees in the police cells. Questions on the Custody Risk Assessment Form included 'Depressed or suicidal?', 'Mentally ill or been diagnosed with any mental illness?', 'Suffering any injury or illness?', 'To be kept separated?' and 'Currently on medication?' among others. The two former questions regarding depression and mental illness were used to assess current police practice of identifying persons experiencing mental illness. Of note, of the two stations where data collection took place, only one completed this form; therefore, it was not possible to obtain systematic police decisions regarding mental illness for all detainees.

The Brief Jail Mental Health Screen (BJMHS) (Steadman et al., 2005) was utilised to identify persons experiencing mental illness. The screening tool consists of two sections. The first section includes six items about mental health symptoms, e.g. 'Do you currently feel that other people know your thoughts and can read your mind?'. The second section includes two items about previous hospitalisations or current use of psychotropic medications. Each item is simply scored as 'yes' or 'no'. Detainees were considered to be referred for further mental health evaluation if they endorsed two items from section 1, or one of the two items from section 2. The tool was designed to identify those with mood and psychotic disorders. The reliability and validity of this measure has been established (Steadman, Robbins, Islam, & Osher, 2007; Steadman et al., 2005).

The Jail Screening Assessment Tool (JSAT) (Nicholls et al., 2005) was also utilised to identify persons experiencing mental illness. The tool is a structured interview that is made up of various sections, including demographic, legal situation, suicide/self-harm issues and mental health status. The tool incorporates the Brief Psychiatric Rating Scale (Ventura, Green, Shaner, & Liberman, 1993) and was designed to identify all Axis-I disorders excluding substance use disorders, with studies supporting its validity (Nicholls et al., 2004; Ogloff, 2002). To standardise referral evaluation, a table was created with the referral criteria as outlined in the manual (Nicholls et al., 2005). Referral criteria comprised self-harm ideation, suicide intent, current use of psychiatric medication(s) and previous psychiatric hospitalisations amongst others, and were scored simply as 'yes' or 'no'. Detainees were considered to be suitable for referral for further mental health evaluation if they endorsed any of the listed criteria. This approach was taken to identify all of those with a possible mental illness, with a subsequent higher false positive rate than a false negative rate (Nicholls et al., 2005).

### **Data analysis**

SPSS version 17 was used to characterise the sample by running descriptive statistics, including numbers, percentages, means and standard deviations. Cross tabulations were utilised to calculate sensitivity, specificity, positive and negative predictive values (Dolan & Doyle, 2000). To evaluate current police practices in the identification of persons experiencing mental illness, the 'Depressed or suicidal?' question from the Custody Risk Assessment Form was cross-tabulated with a composite variable of current diagnosis of depression (i.e. major depression, dysthymia or depressive disorder not otherwise specified (NOS)) and current suicidality. The question about 'Mentally ill or been diagnosed with a mental illness?' from the Custody Risk Assessment Form was cross-tabulated with a composite variable of current or lifetime Axis-I disorder excluding substance use disorders. To evaluate the predictive utility of the screening tools, BJMHS and JSAT were cross-tabulated with two levels of mental illness: serious mental illness (schizophrenia and other psychoses, bipolar affective disorders, and depressive disorders) and any Axis-I disorder excluding substance use disorders. To compare the BJMHS and JSAT, receiver operating characteristic (ROC) curves (Mossman, 1994) were plotted at both levels of mental illness, and the area under the ROC curves (AUC) was compared utilising an established nonparametric approach (DeLong, DeLong, & Clarkepearson, 1988). Two-tailed  $p < 0.05$  was considered to indicate a statistically significant difference.

## **Results**

### **Sample characteristics**

The majority of the 150 participants were men ( $n = 136$ , 90.7%), with a mean age of 30.4 years ( $SD = 8.95$ ). More than half ( $n = 85$ , 56.7%) were unemployed at time of arrest, and three-quarters ( $n = 110$ , 73.3%) reported living with someone (e.g. partner, friends). The majority were born in Australia ( $n = 113$ , 75.8%), and identified themselves as Caucasian ( $n = 114$ , 81.2%). Other ethnicities included Asian ( $n = 14$ , 9.5%), Indigenous Australian ( $n = 8$ , 5.4%), and other ( $n = 6$ , 3.9%) ethnic groups.

### **Current psychiatric disorders**

Current disorders included schizophrenia and other psychosis ( $n = 10$ , 6.7%), bipolar affective disorder ( $n = 2$ , 1.3%), depressive disorder ( $n = 52$ , 34.7%), anxiety disorder ( $n = 13$ , 8.7%) and substance use disorder ( $n = 37$ , 24.7%). Thirty-six (24%) participants did not rate for an Axis-I disorder.

### **Police identification of mental illness**

Six (10%) participants (of 60 for whom this data was available) were identified as depressed or suicidal according to the Custody Risk Assessment Form. A total of 33 (55%) participants were correctly classified. The item had a sensitivity of 16.1% and a specificity of 96.6% (see Table 1).

Table 1. Sensitivities, specificities, and predictive values for Custody Risk Assessment Form.

Disorders	Custody Risk Assessment Form		
	Total <i>N</i>	Depressed or suicidal? <i>n</i>	%
<i>Current depression or suicidality</i>			
Proportion correct	60	33	55
Sensitivity	31	5	16.1
Specificity	29	28	96.6
Positive predictive power	6	5	83.3
Negative predictive power	54	28	51.9
		Mentally ill or been diagnosed with any mental illness?	
	Total <i>N</i>	<i>n</i>	%
<i>Current or lifetime Axis-I disorder, excluding substance use disorders</i>			
Proportion correct	60	28	46.7
Sensitivity	40	9	22.5
Specificity	20	19	95
Positive predictive power	10	9	90
Negative predictive power	50	19	38

Note: *N* = 60 due to missing data

Ten (16.7%) participants were identified as mentally ill or had been diagnosed with a mental illness according to the Custody Risk Assessment Form. A total of 28 (46.7%) participants were correctly classified. The item had a sensitivity of 22.5% and a specificity of 95% (see Table 1).

### ***Referral requirement according to the BJMHS***

Of 132 participants with valid BJMHS data, 77 (58.3%) were classified as needing referral for further mental health assessment. A total of 92 participants (69.7%) were correctly classified when identifying those with a serious mental illness. The BJMHS achieved a sensitivity of 84.9% and produced an area under the ROC curve of 0.722. When identifying those with any Axis-I disorder, excluding substance use disorders, 96 participants (72.7%) were correctly classified with the BJMHS (sensitivity = 81.5%, AUC = 0.729) (see Tables 2 and 3).

At the individual disorder level, the BJMHS identified all of those with a diagnosis of schizophrenia ( $n = 6$ , 100%) and with bipolar disorder ( $n = 2$ , 100%); however it was less accurate at identifying depressive disorders ( $n = 37$ , 82.2%) and anxiety disorders ( $n = 8$ , 66.7%).

### ***Referral requirement according to JSAT***

Of the 150 participants with valid JSAT data, two-thirds ( $n = 102$ , 68%) were classified as needing referral for further mental health assessment. Three-quarters ( $n = 112$ , 74.7%) of those with a serious mental illness were correctly classified. The tool had a sensitivity of 100% and AUC of 0.779. When identifying those with any

Table 2. Sensitivities, specificities, and predictive values for BJMHS and JSAT.

Disorders	BJMHS			JSAT		
	Total <i>N</i>	<i>N</i>	%	Total <i>N</i>	<i>N</i>	%
<i>Serious mental illness</i>						
Proportion correct	132	92	69.7	150	112	74.7
Sensitivity	53	45	84.9	64	64	100
Specificity	78	47	60.3	86	48	55.8
Positive predictive power	77	45	85.5	102	64	62.8
Negative predictive power	55	47	85.5	48	48	100
<i>Any Axis-I disorder, excluding substance use disorders</i>						
Proportion correct	132	96	72.7	150	123	82.0
Sensitivity	65	53	81.5	77	76	98.7
Specificity	67	43	64.2	73	47	64.4
Positive predictive power	77	53	68.8	102	76	74.5
Negative predictive power	55	43	78.2	48	47	97.9

Note: *N* = 132 for BJMHS due to missing data.

Axis-I disorder, excluding substance use disorders, 123 participants (82%) were correctly classified (sensitivity = 98.7%, AUC = 0.815) (Tables 2 and 3).

At the individual disorder level, the JSAT identified all of those with a diagnosis of schizophrenia (*n* = 10, 100%), bipolar disorder (*n* = 2, 100%), depressive disorder (*n* = 52, 100%), and almost of those with an anxiety disorder (*n* = 12, 92.3%).

### Comparison of screening tools

There was no significant difference in the overall screening accuracy between the BJMHS and the JSAT for identifying those with a serious mental illness (*p* = 0.109). However, the JSAT was significantly more accurate at identifying those with any Axis-I disorder, excluding substance use disorders, as compared with the BJMHS (*p* = 0.018) (Table 3).

### Discussion

This study investigated the accuracy of current police practices in identifying persons experiencing mental illness in custody, as well as the comparative predictive utility of the BJMHS and the JSAT. Results suggested that the routine police custodial assessments using the Custody Risk Assessment Form produced high rates of false

Table 3. Area under curves (AUC) and 95% confidence intervals for BJMHS and JSAT.

Disorders	BJMHS		JSAT	
	AUC	95% CI	AUC	95% CI
Serious mental illness	0.722	0.63–0.81	0.779	0.71–0.85
Any Axis-I disorder, excluding substance use disorders	0.729	0.64–0.82	0.815	0.74–0.89

negatives, with many individuals with a mental illness not being identified using current police screening practices.

The current results also provide compelling evidence that increased accuracy in the detection of detainees with a current mental illness is possible by using a standardised screening tool. This study was different from previous studies of screening techniques for mental illness in the criminal justice system as it directly compared two screening tools. With the emergence of numerous screening tools in the last number of years (Nicholls et al., 2004; Shaw, Tomenson, & Creed, 2003; Steadman et al., 2005), a comparison of tools on the same sample allowed direct testing to determine their comparative accuracy at discriminating between alternative states of health, something that is not directly achievable across separate studies (Zweig & Campbell, 1993). Results from the current study suggest that while the two tools performed similarly well in identifying those with a serious mental illness, the JSAT was significantly more accurate at identifying those with any Axis-I disorder, excluding substance use disorders, as compared with the BJMHS.

These results have several clinical implications for the provision of healthcare services to those with a mental illness in police custody. Persons with a mental illness are particularly vulnerable in police custody (Cummins, 2007), with rates of psychopathology and suicide much higher than that found in the general population (Blaauw, Kerkhof, & Vermunt, 1997; Blaauw et al., 1998). This vulnerability is further compounded by the deleterious effect of the custodial environment adversely affecting the psychological well-being of prisoners (Gibbs, 1987). Appropriate identification in police custody will therefore have immediate 'here and now' implications for the management of these concerns. For example, early identification of suicidal concerns and/or mental health crises can expedite crisis intervention (Konrad et al., 2007) for those in need and may reduce levels of disruptive behaviour often associated with this population (Ditton, 1999).

Effective screening in police cells could further facilitate comprehensive psychological evaluations and treatment for those who may require this. As detainees typically only spend a few days in custody before being released or remanded to custody in a remand centre, it may not be possible to conduct comprehensive assessments in police cells. The criminal justice system, therefore, and police cells in particular, are an ideal opportunity to engage this arguably marginalised population with health and mental health services rarely accessed by prisoners in the community (Conklin, Lincoln, & Tuthill, 2000). For example, for those who attend court and are released back into the community, discharge planning processes need to be established, enacting referral pathways to community healthcare providers. Support for this notion has been demonstrated in other parts of the criminal justice system, where it was found that one in four remand prisoners requested treatment for substance use disorders. This represented a significant treatment opportunity, and dictated the need for close collaboration between prison and community services (Brooke, Taylor, Gunn, & Maden, 1998).

Police are particularly well placed to assist medical services in custody to identify those experiencing mental illness. Even though custodial nurses conduct screening interviews with newly admitted detainees, it is the police who serve as frontline workers. In their role of providing 24-hour supervision and support to people in custody, they are arguably the best placed to identify vulnerabilities that can otherwise remain undetected in a short interview. Given that the questions on the

Custody Risk Assessment Form currently used by police officers yielded low detection rates of mental illness, this may indicate the need for specific police training in observational skills to increase the rates of accurate detection of mental health vulnerabilities (Vermette et al., 2005), as well as the need to introduce a tool like the BJMHS into routine police screening procedures. While the police are not required to formulate diagnoses, their extended contact with people in custody can significantly assist the work of medical services to identify those in need of further assessment and treatment. Functional interagency collaborations need to be developed across the criminal justice, health and social systems not only to provide necessary treatment for those detainees identified in custody, but to target the broad range of criminogenic needs that have been found to be risk factors for offending and thereby reduce further risks of recidivism (Andrews & Bonta, 2006; Thompson, Reuland, & Souweine, 2003).

Continuity of care can also be established for those who attend their court hearing and are transferred to prison as part of their remand or imprisonment. A recent investigation highlighted a discontinuity in service provision, such that prison health care workers were not able to view medical notes written by police-employed custodial nurses. This resulted in prisoners needing to obtain new prescriptions and hoping that previously diagnosed illnesses were re-diagnosed by medical staff in prison (Ombudsman Victoria and Office of Police Integrity, 2006; Ridlen & Barr, 2002). To avoid this fragmentation, barriers to such information sharing, such as patient confidentiality and privacy, need to be circumvented to expedite follow-up assessments (e.g. comprehensive mental health evaluations) and further treatments. This may reduce the chances of people falling through the gaps between services.

### *Changes required to current practice*

It is probable, though not certain, that the introduction of a standardised screening tool would, at least initially, increase the burden on custodial services in police cells. For example, custodial nurses in Victoria, Australia, currently offer health screens to new admissions, so there will not be any additional cost in length of time to administer the measure. However, it may be that introduction of a standardised screening tool for medical services in custody would increase detection of those with a mental illness and subsequently increase work for custodial nurses in regards to 'here and now' crisis intervention and management, and discharge planning. Thus, each local service in police custody will need to evaluate best practices suited to their arrangements, as not all services may be in a position to offer assessments to every newly admitted detainee. For example, police could complete the BJMHS and refer identified cases to a nurse or psychologist for further evaluation with a more thorough assessment package including tools like the JSAT.

### *Limitations and future directions*

Given that neither police nor custodial nurses currently utilise standardised screening tools in Victoria, Australia, as well as many other countries, it would be beneficial if future research investigated the utility of the BJMHS as completed by police officers and the utility of the JSAT as completed by custodial nurses, in comparison to an

independent assessment of psychopathology. In addition, due to low numbers of females, gender comparisons were unable to be conducted for the tools, as differences in the utility of the BJMHS has previously been demonstrated (Steadman et al., 2005). Future research could investigate this, together with best practice models for the identification of substance dependent detainees (Stark & Gregory, 2005).

## Conclusions

There is a pressing need to further investigate standardised screening tools for mental illnesses in police cells, with an aim of introducing their application across services in police custody. Such an introduction would assist in identifying those who require mental health care in custody and linking into services either in prison or the community. The findings of the current study suggest current police practices of identifying persons experiencing mental illness are not accurate, and that detection may be improved by use of a standardised screening tool, such as the BJMHS. It was also demonstrated that while the BJMHS and the JSAT were equally as effective at identifying those with a serious mental illness, the JSAT was more accurate at identifying any Axis-I disorder, excluding substance use disorders, as compared with the BJMHS. The way that persons with a mental illness are identified and treated will have significant implications for their safety and well-being in police custody.

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## **6. Chapter Six: Correlates of Victimisation among Police Cell Detainees**

### **6.1. Preamble to Paper 4**

This chapter presents the fourth study of the thesis. This study sought to investigate the criminal victimisation experiences among police cell detainees using official police records. In particular, this study sought data from the public mental health records for participants and compared criminal victimisation experiences between those with a recorded mental disorder compared to those with no records on the public mental health database. This was done as evidence is accumulating that those with a mental illness are at increased risks for being a victim of crime using self-report methods, however it is yet to be determined if such experiences are reported to the police to secure protection from the law.

This article has been submitted to *Police Practice and Research*, a peer-reviewed journal that publishes articles on operational and administrative police practices from around the world.

**6.2. PART B: Declaration for Thesis Chapter 6, Paper 4****Monash University****Declaration by candidate**

In the case of Chapter 6, Paper 4, the nature and extent of my contribution to the work was the following:

<b>Nature of contribution</b>	<b>Extent of contribution</b>
Study design, data analyses, write-up	65%

The following co-authors contributed to the work. Co-authors who are students at Monash University must also indicate the extent of their contribution in percentage terms:

<b>Name</b>	<b>Nature of contribution</b>	<b>Extent of contribution</b>
<b>Dr Lisa Warren</b>	Data analyses, write-up	15%
<b>Professor James Ogloff</b>	Study design, data analyses, write-up	10%
<b>Dr Stuart Thomas</b>	Study design, data analyses, write-up	10%

<b>Candidate's Signature</b>		<b>Date</b>
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**Declaration by co-authors**

The undersigned hereby certify that:

- (1) the above declaration correctly reflects the nature and extent of the candidate’s contribution to this work, and the nature of the contribution of each of the co-authors;
- (2) they meet the criteria for authorship in that they have participated in the conception, execution, or interpretation, of at least that part of the publication in their field of expertise;
- (3) they take public responsibility for their part of the publication, except for the responsible author who accepts overall responsibility for the publication;
- (4) there are no other authors of the publication according to these criteria;
- (5) potential conflicts of interest have been disclosed to (a) granting bodies, (b) the editor or publisher of journals or other publications, and (c) the head of the responsible academic unit; and
- (6) the original data are stored at the following location(s) and will be held for at least five years from the date indicated below:

**Location(s)**

All data are stored at Centre for Forensic Behavioural Science, Monash University
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<b>Signature 1</b>		<b>Date</b>
<b>Signature 2</b>		
<b>Signature 3</b>		



### **6.3. Confirmation of Submission of Paper 4**

Following is the email from Police Practice and Research confirming the submission of the article.

21<sup>st</sup> February 2011

Dear Dr. Baksheev,

Thank you for your submission. I have assigned call number 210222 to your manuscript. The review process is usually completed within 90 days of submission. Please let me know if you have any questions.

Best regards,

Rishi Chopra

Associate Managing Editor, Police Practice and Research

**6.4. Paper 4: Correlates of Criminal Victimization among Police Cell  
Detainees in Victoria, Australia**



**RESEARCH ARTICLE**

**Correlates of criminal victimisation among police cell detainees in Victoria, Australia**

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**Abstract**

People with mental illness are more likely to be crime victims than others; however, little is known about the relationship between offending and victimisation among mentally ill offenders. This study investigated the rates and types of victimisation among people detained in police cells (N = 764), with and without histories of mental illness. Those with mental disorders were 1.56 times (95% CI = 1.11 – 2.17) more likely to be victims of violent crimes than other detainees. Some sub-groups of people with mental disorders were not over-represented as victims, raising the possibility that they were less inclined to report certain types of crimes. Implications are discussed with reference to police practice.

**Keywords:** mental disorder; victimisation; police cells

**Introduction**

A significant amount of police time and resources are focused on helping people who are experiencing mental illness (Wells & Schafer, 2006); one recent study estimating that at least a fifth of their contacts with the public involved contacts with the mentally ill (Godfredson, Thomas, Ogloff, & Luebbers, in press). It has been argued that this function, although now common to policing practice, is clearly distinct from the 'core business' traditions of community policing (Cotton, 2004; Stenning & Shearing, 2005). This is perhaps well emphasized by the 'social welfare' type role that is now routinely adopted by the police, including transporting the mentally disordered to hospital, containing the possibly mentally unwell individual in a public place, and contacting relatives to return disordered individuals to their care (Bittner, 1967; Green, 1997; Knott, Pleban, Taylor, & Castle, 2007).

Anecdotally, the time consumed in such tasks is reported to be highly significant, but there is little by way of empirical support for this perceived burden. In actual fact, and contrary to popular media depictions, people experiencing mental illness appear much more likely to be a victim of crime as opposed to being a perpetrator (Choe, Teplin, & Abram, 2008; Pandiani, Banks, Carroll, & Schlueter, 2007). The levels of social marginalisation and stigmatisation they experience, along with the additional vulnerabilities of increased likelihood of poverty, homelessness and substance use problems (Dinos, Stevens, Serfaty, Weich, & King, 2004; Hiday, Swartz, Swanson, Borum, & Wagner, 1999; RachBeisel, Scott, & Dixon, 1999; Silver, 2002) make this proposition all the more concerning.

The knowledge base pertaining to the criminal victimisation of people experiencing mental illness arises from a varied and, at times, contradictory evidence base. A recent review of the literature suggests that anywhere between 4% and 35% of persons diagnosed with a severe mental illness have been the victim of a violent crime (Maniglio, 2009); however rates as high as 87% have been reported in specific sub-populations, such as inpatient psychiatric samples (McFarlane, Schrader, Bookless, & Browne, 2006). These stark differences are, on the whole, attributable to the manner in which victimisation has been determined; most research has used self-report to ascertain rates of criminal victimisation, with only one study to date relying on official police records (Pandiani et al., 2007). Few studies have made use of a comparison group to facilitate the contextualisation of the rates and types of criminal victimisation experienced by individuals who do and do not have a mental disorder (Silver, Arseneault, Langley, Caspi, & Moffitt, 2005; Teplin, McClelland, Abram, & Weiner, 2005).

Notwithstanding these limitations, a number of studies have sought to delineate the risk factors associated with criminal victimisation experiences in the general population. Research has consistently found that being younger, separated/divorced, employed, better educated, and having substance use problems are more likely to be common characteristics found among victims of crime (Brekke, Prindle, Bae, & Long, 2001; Dean, et al., 2007; Goodman, et al., 2001; Hiday et al., 1999; Schomerus, et al., 2008; Vaughn, et al., 2010; Wohlfarth, Winkel, Ybema, & Brink, 2001). Findings have been contradictory regarding gender (Chapple, et al., 2004; Vaughn et al., 2010), although it appears males are more likely to be victims of threatened, attempted or

completed physical assaults, while females are more likely to be victims of sexual assault (Silver, et al., 2005).

With regard to clinical correlates of criminal victimisation, an emerging evidence base suggests that rates of violent criminal victimisation appear to be greater among those who have a mental disorder as compared to individuals with no mental disorder (Silver, et al., 2005). A strong association has been demonstrated between psychotic symptoms and sexual victimisation. For example, in one study 22% of women with a diagnosis of schizophrenia and 15% of those with bipolar disorder had been the victim of rape in adulthood (from 16 years) (Darves-Bornoz, Lemperiere, Degiovanni, & Gaillard, 1995). Findings from the British National Survey of Psychiatric Morbidity indicated that for those with probable psychotic disorder, the most prevalent of the lifetime victimisation experiences investigated was sexual abuse (Bebbington, et al., 2004). Psychotic disorders have also been strongly and independently associated with being the victim of a violent crime (Johns, et al., 2004; Larney, Conroy, Mills, Burns, & Teesson, 2009).

While the evidence base concerning the criminal victimisation of people experiencing mental illness in the community is accumulating (Maniglio, 2009), there is an urgent need to examine the extent of such experiences among those who make contact with the criminal justice system (Teplin et al., 2005). This is particularly important, as police cell detainees are at increased risk for a number of adverse outcomes, such as suicide (Blaauw, Kerkhof, & Vermunt, 1997), mental disorders (Baksheev, Thomas, & Ogloff, 2010) and general health problems (McKinnon & Grubin, 2010). A consideration of the criminal victimisation experiences of police cell

detainees may be important in designing a more complete treatment and intervention package for this population.

Against this background, the aims of the study were to examine criminal victimisation experiences among a sample of police cell detainees using official police records, and to identify socio-demographic and clinical correlates of criminal victimisation among police cell detainees. A sample of offenders was selected as little is known about the relationship between offending and victimisation in this population. Based on previous findings (Bebbington et al., 2004; Johns et al., 2004; Silver, et al., 2005), it was hypothesised that:

1. Those with a mental disorder would be more likely to be victims of violent crime compared to those with no mental disorder;
2. Those with psychosis would be more likely to be victims of violent crime compared to those with no mental disorder;
3. Those with schizophrenia would be more likely to be victims of a sexual crime compared to those with no mental disorder.

## **Method**

### ***Participants***

All participants were detained in police custody awaiting trial for criminal offences.

They were recruited from nine police stations around the state of Victoria, Australia from December 2006 to February 2009. Recruitment yielded a sample of 764 participants, 655 (85.7%) who had been detained within metropolitan Melbourne and 106 (14.3%) in rural Victoria. Victoria is a largely urbanised state with a population of approximately 5.4 million, just over four million of whom live in metropolitan Melbourne.

***Procedure***

Custodial nurses offer all newly admitted detainees a health screen comprised of questions regarding physical and mental health, use of medications and drugs/alcohol. Potential participants were informed about the study either by the custodial nurse at the completion of the health screen, or in some instances, by one of the researchers (GB) after the health screen. Where detainees refused the health screen, researchers made attempts to invite them to participate in the research by approaching them after a legal visit, or by asking police officers to transfer the potential participants to a secure interview room from their cells. All potential participants were informed of study requirements, and limits to confidentiality.

Consent was sought from participants to access their police records, which was given by all but 24 (3.14%) participants. Permission was also separately sought to examine their public mental health files, which was agreed by all but 24 (3.14%) participants too (these latter participants were largely different to non-consenters of police records). Data from these two databases were linked and merged in accordance with contemporary best practice ethical guidelines regarding data linkage in Australia (National Health and Medical Research Council, Australian Research Council, & Australian Vice-Chancellors' Committee, 2007).

***Measures******Mental health records***

The Victorian Psychiatric Case Register (VPCR) was consulted to obtain data regarding diagnostic histories, records of substance use disorders and demographic information, such as age, gender and employment status. The VPCR is a person-based register that records approximately 95% of in-patient, outpatient and community contacts with public

mental health agencies in Victoria (Burgess, Pirkis, Morton, & Croke, 2000). At the time of data collection these agencies serviced a community of approximately 5.4 million people (Australian Bureau of Statistics, 2009). Diagnostic data within the VPCR are updated at the outset and completion of each episode of care. VPCR records suggest approximately 0.7% of the Victorian population have been treated for a schizophrenic disorder, suggesting comprehensive ascertainment (Short, Thomas, Luebbers, Ogloff, & Mullen, 2010). High prevalence disorders (e.g., mood disorders, anxiety disorders) and personality disorders are not recorded as comprehensively. This is likely to result from persons with these disorders seeking services from the private sector and general medical practitioners, estimated at 20% of all outpatient contacts (Australian Institute of Health and Welfare, 2001), which are not captured on the VPCR.

Participants with several treatment episodes may have varying primary diagnoses recorded. In this study, participants were assigned a single primary diagnosis using a diagnostic hierarchy, where psychotic disorders took precedence, followed in descending order by affective disorders, personality disorders, substance use disorders, residual diagnostic group (e.g., anxiety and adjustment disorders, whose low frequency precluded diagnostic separation) and a no diagnosis group (e.g., had contact with the public mental health system for a general psychiatric examination) (Wallace et al 1998).

#### *Police records*

Data on contacts with police were drawn from the Victorian Police Law Enforcement Assistance Program (LEAP) database. The LEAP database records all contacts between members of the public and the police as suspects, victims, witnesses and persons in need of assistance. Prior to its commencement in 1993, these contacts were recorded using an



index card system, now scanned and included on the LEAP contacts database. The current analysis was based on extracted data regarding offences committed against each detainee. Offences were categorised using the Cormier-Lang system (Quinsey, Harris, Rice, & Cormier, 2006). Violent offences included: homicide, sexual assault, physical violence (i.e., assault), kidnap, weapons offences, threats of violence, and property damage. The remainder were categorised as non-violent.

### ***Ethical approval***

This study was approved by Monash University Standing Committee on Ethics in Research involving Humans, Victorian Government Department of Human Services Human Research Ethics Committee, and the Victoria Police Human Research Ethics Committee.

### ***Statistical analysis***

Simple descriptive statistics were employed where categorical data were reported as numbers and percentages and continuous data as means, medians and standard deviations. Logistic regression analyses were conducted to assess the impact of socio-demographic and clinical correlates on the likelihood that participants had been a victim of crime. Four dependent variables were created: any victimisation (yes / no), violent victimisation (yes / no), sexual victimisation (yes / no) and non-violent victimisation (yes / no). A variable covering ‘substance use problems’ was created as a composite variable indicated as present either by a recorded substance use disorder (VPCR register) or drug related offences (LEAP database). Mental health correlates, such as any disorder recorded on VPCR, the hierarchy of lifetime primary diagnoses (described above) and schizophrenia were compared to those who had no officially recorded

contact with the public mental health system. Mental health correlates significantly associated with victimisation in univariate comparisons were subjected to multivariate analyses, controlling for significant socio-demographic factors. All analyses were carried out using SPSS version 17.

## **Results**

### ***Sample characteristics***

The sample comprised 764 police detainees, 697 (91.2%) men and 67 (8.8%) women.

Their average age at the time of the interview was 30.5 years (SD=9.0; range 17-76 years), with no significant differences according to gender. Country of birth was known for all but 27 participants (3.5%); most were born in Australia or neighbouring New Zealand ( $n=617$ , 80.8%). Of the remaining, 6.4% ( $n=49$ ) were born in Europe, 6.1% ( $n=47$ ) in an Asian country, and 3.1% ( $n=24$ ) in Africa or the Americas, with a similar distribution for both males and females. Thirty-nine (5.1%) identified themselves as a Indigenous Australian, again with no significant differences according to gender.

### ***Prevalence of criminal victimisation***

According to the LEAP database, 527 (74.1%) of the participants had officially reported having been the victim of a crime. Forty (5.6%) of the participants had been the victim of a sexual offence, while over half ( $n=375$ , 52.7%) had been the victim of a violent offence or a non-violent offence respectively ( $n=414$ , 58.2%).

***Sociodemographic correlates of crime victimisation***

*Any crime.* Three sociodemographic variables were found to be significantly associated with being a victim of any type of crime. Females were 3.46 times (95% CI = 1.46 – 8.17) more likely to be have reported having been victimised than males, and those with substance use problems were 2.04 times (95% CI = 1.38 – 3.02) more likely to be victimised than those without substance use problems. Also, the older the participant, the less likely they were to officially report having been the victim of a crime to the police (OR=0.98, 95% CI = 0.97 – 1.00,  $p=0.052$ ). Marital status ( $p=0.437$ ), education ( $p=0.603$ ) and employment status ( $p=0.300$ ) were not statistically associated with being a victim of crime.

*Violent crime.* The older the participant, the less likely they were to have officially reported being the victim of a violent crime (OR=0.98, 95% CI = 0.97 – 0.99,  $p=0.032$ ). Females were 3.3 times more likely than males to have reported being victimised violently to police (OR=3.30, 95% CI = 1.79 – 6.10,  $p<0.001$ ). Substance use problems ( $p=0.115$ ), marital status ( $p=0.976$ ), education ( $p=0.794$ ) and employment status ( $p=0.062$ ) showed no such association.

*Sexual crime.* Consistent with the above, the older the participant, the less likely they were to have officially reported being the victim of a sexual crime (OR=0.93, 95% CI = 0.89 – 0.09,  $p=0.004$ ). Females were more than 9 times more likely to have reported to police that they had been victimised sexually than males (OR=9.28, 95% CI = 4.60 – 18.70,  $p<0.001$ ). Substance use problems ( $p=0.429$ ), marital status ( $p=0.986$ ), education ( $p=0.657$ ) and employment status ( $p=0.548$ ) were not statistically associated.

***Mental health correlates of crime victimisation***

Participants who had a diagnosed mental disorder according to VPCR records were over 1.5 times more likely to be a victim of a violent crime compared to those with no contact with the public mental health system ( $p=0.006$ ) (Table 1). This association remained significant after controlling for age and gender ( $p=0.010$ ). As indicated in Table 1, participants diagnosed with a personality disorder according to VPCR records were 4 times more likely to have reported being a victim of a violent crime compared to those with no contact with the public mental health system. Similarly, participants diagnosed with anxiety and adjustment disorders were more than 2 times more likely to be a victim of a violent crime compared to those with no contact with the public mental health system.

More broadly speaking, participants who had a diagnosed mental disorder were also over 1.5 times more likely to have reported having been a victim of any crime compared to those with no contact with the public mental health system ( $p=0.030$ ), but this association became non-significant after controlling for age, gender and substance use problems ( $p=0.147$ ). At the individual diagnostic category level, participants diagnosed with affective disorders were more than 2 times more likely to be a victim of a crime compared with those with no contact with the public mental health system. Similarly, participants diagnosed with anxiety and adjustment disorders were 2.69 times more likely to be a victim of a crime compared to those with no contact with the public mental health system. After controlling for socio-demographic correlates, only having been diagnosed with an anxiety disorder retained a statistically significant association with victimisation.

Participants diagnosed with a psychotic disorder according to VPCR records were no more likely than those not suffering from psychosis to be victims of violent crime ( $p=0.603$ ). A similar finding emerged when considering, participants diagnosed with schizophrenia ( $p=0.199$ ). Further, participants with a mental disorder according to VPCR records were no more likely than those without a mental disorder to be a victim of a non-violent offence ( $p=0.349$ ).

## **Discussion**

### ***Main findings***

The aim of the current study was to examine the criminal victimisation experiences among a sample of police cell detainees using official police records. Of immediate note, it was found that the overwhelming majority (almost three quarters of the detainees) had reported having been the victim of a criminal offence to police. The most common victimisation experiences were for theft, violent crimes, and property damage. These rates are particularly notable, given that rates are typically lower when obtained via official police records as compared to self-report (Hiday et al., 1999).

The hypothesis that those with a mental disorder would be more likely to be victims of violent crime compared to persons with no mental disorder was supported with these findings. On further examination, results showed that people diagnosed with personality disorders, and anxiety/adjustment disorders were more likely to report being a victim of violent crime compared to persons with no mental disorder. These associations remained significant after controlling for socio-demographic correlates that were significantly associated with being a victim of violent crime, such as age and gender. Such findings are in line with previous research (Silver, et al., 2005; Vaughan &

Stevenson, 2002), and lend support to the hypothesis that people with mental disorders are more vulnerable to assault compared to persons without mental disorders (Hiday et al., 1999). These results also provide encouraging signs that people experiencing mental illness are taking the necessary steps to report such experiences to the police and that such experiences were acknowledged by the criminal justice system.

Criminal victimisation experiences, however, were not over-represented among official police records for all subgroups of people experiencing mental illness. Study findings did not support the hypothesis that those with psychotic disorders would be more likely to be victims of violent crime compared to persons with no mental disorder. Such findings are at odds with some previous research (Johns et al., 2004). Similarly, the hypothesis that those with schizophrenia would be more likely to be victims of a sexual crime compared to persons with no mental disorder was also not supported. This also runs contrary to previous findings (Darves-Bornoz et al., 1995). It has been postulated that persons diagnosed with psychotic disorders may be vulnerable to victimisation for a variety of reasons. These include living in impoverished neighbourhoods, not having sufficient income, associating with violent people, problems with alcohol and drugs and experiencing psychotic symptoms (Chapple et al., 2004; Hiday et al., 1999). The significant discrepancies found between the commonality of victimisation experiences suggested through self-report and those formally identified through official police records is perhaps of concern, especially given the nature and severity of interpersonal violence these crimes represent for the victims. Of note, a similar discrepancy has also been documented among members of the general

population, with substantially higher rates of crime victimisation when considering self-report methods as compared to official records (Cantor & Lynch, 2000).

Perhaps most importantly, these findings may indicate that people diagnosed with psychotic disorders do not report their victimisation experiences to police nearly as often as victimisation is experienced. This is particularly striking, given that the seriousness of the offence experienced has been considered to be the most important factor noted by victims in influencing their decision on whether or not to report a crime to police (Tarling & Morris, 2010). While the reasons for the potential under-reporting of victimisation experiences are unclear from the current study findings, there are a number of possible explanations that have been suggested by the general victimology literature. Crimes experienced by our sample may not have been reported to police due to a lack of trust in the institution of policing (Tyler, 2006); that the crime might be considered too trivial for police enquiry, not wanting to waste police time and resources (Tarling & Morris, 2010); the social influence of family, friends and bystanders when making the decision of whether to report or not (Greenberg & Beach, 2004); feelings of paranoia; or perhaps simply the perception that they may not be taken seriously when they do try and report. Notably, evidence is emerging that perceptions of fair treatment by police in police-citizen encounters might be an important factor in trusting the policing service, especially when the victim has a history of criminal justice involvement as a perpetrator (Elliott, Thomas, & Ogloff, In submission). As such, issues of procedural justice (Thibaut & Walker, 1975) may be an additionally important component to consider when evaluating the decision making processes involved in understanding whether or not people experiencing mental illness report experiences of

victimisation to the police. Further research is required to examine the reasons why some people experiencing mental illness, particularly those diagnosed with psychotic disorders, may not report crime to the police.

### ***Implications***

Findings from the current study have implications for police practice. It is important that police are mindful that a substantial proportion of the offenders that they come into contact in the community are at a heightened risk for being a victim of crime. This risk of criminal victimisation, however, is particularly pronounced among people experiencing mental illness, and police practices would therefore be bolstered if members made an enquiry into this area during their interactions with those experiencing mental illness. The ability to elicit such sensitive information from a person experiencing mental illness may take considerable discretion and skill on the part of the attending officer. Such skills might include developing a trusting relationship with the person and taking some additional time to ascertain a detailed account of proceedings. Such an approach may be beneficial to people experiencing mental illness as they often present as vulnerable targets and experience significant levels of stigmatisation and social marginalisation (Crisp, Gelder, Rix, Meltzer, & Rowlands, 2000). Furthermore, public perceptions of people experiencing mental illness as potentially violent (Link, Phelan, Bresnahan, Stueve, & Pescosolido, 1999) may lead some predators to single out a person with mental illness for committing an alleged crime. This further highlights the critical need for socially responsible media reporting and anti-stigma campaigns in reducing psychiatric stigma and discrimination (Pinfold, Thornicroft, Huxley, & Farmer, 2005).



***Limitations***

Given that the data collected in the current study were cross-sectional, inferences about causality can not be made. As known from the literature, there are other potentially significant predictors that could be of importance to criminal victimisation. This literature has suggested that homelessness and psychic disorganisation (Chapple et al., 2004) have been significant predictors of criminal victimisation. Due to the retrospective nature of some of the data being used, it was not possible to adequately measure these factors here. Our findings are also limited by the sampling method. The sample of participants was drawn from people who had been detained in police custody at least once. It is not clear if this may have impacted on the results, as well as the generalisability of the study findings to other people experiencing mental illness. Future research may address this by recruiting a sample diagnosed with mental disorders from the community and corroborating criminal victimisation experiences obtained via detailed self-report measures with those available through official police records.

***Conclusions***

In summary, study findings indicated that people experiencing mental illness were over-represented among official police records of violent crime victimisation compared individuals who have not had any contact with the public mental health system. The challenge for future work is to understand the factors underpinning why certain subgroups of people with mental disorder may fail to report their criminal victimisation experiences to police. The elucidation of such factors will assist such individuals to secure protection from the law and improve the accessibility of criminal justice system responses to these victims of crime.

Table 1: Association between mental disorders and criminal victimisation among police cell detainees

Mental disorders	Victim of any offence		
	n (%)	OR (95% CI)	AOR (95% CI)
No contact with public	222 (70.9)	1	1
mental health system			
Any mental disorder <sup>a</sup>	212 (78.8)	<b>1.53 (1.04, 2.23)</b>	1.34 (0.90, 1.99) <sup>b</sup>
Diagnostic categories			
Psychotic disorders	50 (70.4)	0.98 (0.56, 1.72)	0.75 (0.42, 1.36) <sup>d</sup>
Affective disorders	62 (83.8)	<b>2.12 (1.09, 4.12)</b>	1.84 (0.93, 3.63) <sup>d</sup>
Personality disorders	10 (76.9)	1.37 (0.37, 5.08)	1.30 (0.34, 4.94) <sup>d</sup>
Substance use disorders	31 (72.1)	1.06 (0.52, 2.15)	0.91 (0.43, 1.92) <sup>d</sup>
Residual category	59 (86.8)	<b>2.69 (1.28, 5.65)</b>	<b>2.50 (1.17, 5.31)<sup>d</sup></b>
No diagnosis	88 (72.1)	1.06 (0.67, 1.69)	0.98 (0.61, 1.58) <sup>d</sup>

(continued)

Table 1: Association between mental disorders and criminal victimisation among police cell detainees (continued)

Mental disorders	Victim of any violent offence		
	n (%)	OR (95% CI)	AOR (95% CI)
No contact with public mental health system	148 (47.3)	1	1
Any mental disorder <sup>a</sup>	158 (58.7)	<b>1.59 (1.14, 2.21)</b>	<b>1.56 (1.11, 2.17)<sup>c</sup></b>
Diagnostic categories			
Psychotic disorders	36 (50.7)	1.15 (0.69, 1.92)	1.14 (0.67, 1.92) <sup>e</sup>
Affective disorders	44 (59.5)	1.64 (0.98, 2.74)	1.49 (0.88, 2.53) <sup>e</sup>
Personality disorders	10 (76.9)	<b>3.72 (1.00, 13.76)</b>	<b>4.02 (1.07, 15.03)<sup>e</sup></b>
Substance use disorders	22 (51.2)	1.17 (0.62, 2.21)	1.32 (0.68, 2.53) <sup>e</sup>
Residual category	46 (67.6)	<b>2.33 (1.34, 4.06)</b>	<b>2.19 (1.25, 3.84)<sup>e</sup></b>
No diagnosis	65 (43.3)	1.27 (0.84, 1.93)	1.33 (0.87, 2.03) <sup>e</sup>

Note. OR = odds ratio; CI = confidence interval. 1 = referent category.

<sup>a</sup>Any mental disorder is comprised of psychotic, affective, personality, substance use disorders and residual diagnoses. <sup>b</sup>Adjusted for age (OR=0.99, p=0.355), gender (OR=3.23, p=0.015) and substance use problems (OR=1.83, p=0.007). <sup>c</sup>Adjusted for age (p=0.109) and gender (OR=3.09, p=0.001). <sup>d</sup>Adjusted for age (OR = 0.99, p=0.155), gender (OR=3.67, p=0.007) and substance use problems (OR=2.15, p<0.01). <sup>e</sup>Adjusted for age (p=0.068) and gender (OR=3.37, p<0.001).

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## **7. Chapter Seven: Integrated Discussion**

### **7.1. Overview of Main Findings**

The objective of this thesis was to determine the nature and extent of psychiatric symptoms and disorders in a sample of police cell detainees and to characterise their needs and vulnerabilities, and consider the implications of this for healthcare service providers in police custody. The overall findings from the four studies that comprise this thesis indicated that the prevalence of mental illness was high among people detained in police cells, indicating significant levels of psychiatric morbidity among this population. Those individuals who were diagnosed with a mental illness were also more likely to present with high levels of ongoing difficulties in broad life domains, such as in social and welfare domains. Findings from this thesis suggest that the high level of psychopathology among this population may be due to detainees bringing this into the criminal justice system. However, the police cell environment may also have a deleterious effect on the mental health status of detainees. While the police have recognised that there is a need to identify detainees with a mental illness to provide assistance to them, it was found that current police practices were not effective at identifying those with a mental illness. There was some suggestion that this may be improved with the use of standardised screening tools to identify individuals in need of further mental health evaluation and possible mental health treatment. Also, while those with a mental disorder were found to be over-represented among official police records as victims of crime, there were certain diagnostic sub-groups that were not over-represented, such as those with psychotic disorders. These findings are considered as they relate to the four studies of the thesis.

### **7.1.1. Paper one: To measure health-related burden among detainees.**

Paper one set out to investigate the health-related burden amongst a sample of police cell detainees. This was important to determine as there is currently a significant knowledge gap regarding those who have contacts with the front end of the criminal justice system, that is, police cells, through their criminal offending. Research to date has focussed primarily on individuals at other points of the system, such as prisons. Findings from paper one indicated that 1 in 4 individuals had previously been admitted to psychiatric services in the public sector, and that according to a standardised diagnostic clinical interview, 1 in 3 met diagnostic criteria for at least one Axis-I disorder. Also, the rates of common mental illnesses were found to be significantly more common than the rates of these disorders found in the general population. This was the case for mood, anxiety, psychotic, and substance use disorders. These findings are consistent with previous research (Blaauw et al., 1998; Butler et al., 2006). Indeed, it is arguably the case that the rates of disorders may be higher among police cell detainees compared to the latter parts of the criminal justice system, such as prisons, given the time lag between arrest and transfer to prison, diversion of some offenders into mental health services, the availability of treatment opportunities in police custody and the release of some offenders back into the community at this point of the criminal justice system. The one-month prevalence rate of psychotic disorders in the current thesis (7.3%) was similar to that of a recently published study by Ogloff and colleagues (2010) that reported 6.2% of police cell detainees had a current psychotic illness as determined by custodial nurses in consultation with the treating health practitioner of the detainee. Substance use disorders were also comparable between the present thesis

(58.7%) and Ogloff and colleagues (69.7%), though higher rates of 86% have been reported elsewhere (Heffernan et al., 2003). Other disorders, such as mood disorders, were strikingly under-represented in the study by Ogloff and colleagues (2010), with only 4.9% noted in this study compared to 40% in paper one. This may have arisen due to custodial nurses not asking every person admitted to the police cell regarding their mood in the study by Ogloff and colleagues (2010), as was done in a standardised manner using a diagnostic interview schedule in paper one. These findings suggest that the accurate assessment of mood disorders may be additionally important in police cell settings given that they are a strong predictor of suicide in prisoners (Fazel et al., 2008).

Moreover, it was found that those who met diagnostic criteria for a current (one-month) psychiatric disorder reported a higher number of ongoing difficulties in broad need domains of life, such as accommodation and money, but most pertinently in relation to psychological distress and suicidality, compared to those without a mental illness. These findings are consistent with previous research that found high levels of unmet needs among users of mental health services in a predominantly remand prison mental health setting (Thomas et al., 2008) and the community (Wiersma, 2006). The relatively high rates of mental disorders among police cell detainees, coupled with the ongoing difficulties experienced by detainees in their everyday lives, suggests that these individuals are a particularly at-risk group for adverse outcomes. This elevated risk is further complicated by the adverse effects of the police cell environment and the many and varied stressors present in the police cell context (Blaauw et al., 1998).

### 7.1.2. Paper two: Accounting for mental illness in police cells.

Paper two set out to determine the predictive power of personal and situational factors, and their interactive effects, in explaining the occurrence of psychopathology in police custody. This was important to investigate as only one published study to date has sought to examine this in the police cell context, and a greater understanding of this may be instrumental in the development of effective strategies to manage the relatively high rates of psychiatric symptoms commonly found among detainees. Findings suggested that while the interaction between person and environment was not related to psychopathology, both personal factors, such as current psychiatric disorder and history of psychiatric hospitalisation, and situational factors, such as satisfaction with police cell conditions, were associated with an increased level of self-reported psychiatric symptomatology in police cells. These findings are in line with previous research that has shown that those with pre-existing vulnerabilities, such as having a prior history of psychiatric treatment and hospitalisation, and those who reported negative perceptions of the police cell environment (i.e., those who viewed the quality of the facilities provided in the police cell complex as being of low quality), reported more severe levels of psychiatric symptomatology (Blaauw et al., 1998). While the interactive effect of personal and situational effects was not found to be associated with psychiatric symptoms, the finding that both personal and situational factors accounted for psychiatric symptoms suggests that it is overly simplistic to consider that psychopathology in police custody arises ‘either’ from pre-existing psychopathology brought into the criminal justice system (i.e., importation model) ‘or’ that the psychiatric symptomatology arises as a result of the person’s experiences in police custody (i.e., deprivation model).



Rather, it is laudable that factors from both the importation and deprivation models have an integral role in accounting for the occurrence of psychopathology in police custody. It is reasonable to expect, for example, that the characteristics of a person entering the criminal justice system are likely to interplay with certain aspects of the environment and impact their mental health status while in police custody. Indeed, findings from the present thesis support this and previous findings (Blaauw et al., 1998), and suggest that while everyone suffers in police cells, it is those with a mental illness that are found to suffer the most; arguably because the conditions of custody exacerbate pre-existing vulnerabilities. That is, the presence of a current psychiatric disorder, in combination with not coping with the police cell conditions they were being held in, was associated with higher reported rates of psychiatric symptomatology. These findings have been replicated in other areas of the criminal justice system. For example, Wright (1991) found that individual factors, environmental factors, and their interactive effects were all important in explaining how inmates adjusted to prison. However, the environment presented in police custody is quite different to that in the broader prison system, with facilities lacking many of the basic human dignities and basic standards of living (Ombudsman Victoria and Office of Police Integrity, 2006). The challenge when detaining people in the police cell environment is therefore to further understand and delineate the elements of the particular environment that may adversely impact on the mental health status and general well-being of detainees and to determine how these environmental factors interact with characteristics that are brought into police cells. This may be important for healthcare personnel in designing and implementing specific healthcare strategies in the management of psychiatric distress among police cell detainees who present with such vulnerabilities.

Given the limited evidence base regarding the situational concerns of detainees while being held in police custody, the present thesis undertook a qualitative analysis of the major concerns reported by detainees. This was important as results have the potential to guide future attempts to delineate the environmental effects of police cells and to guide development of meaningful and robust measurement of these important elements. The most common concerns reported by detainees related to very basic and straightforward issues arising from the restrictions imposed by the deprivation of liberty; a basic human right counteracted by the necessity for the safety of the individual or the broader community. Other common concerns reported by detainees related to their needs for social support, knowledge, and basic human needs. These concerns noted by detainees may be quite different to the deprivations reported by inmates in prisons for example (Toch, 1977/1992), given the recency of the arrest and incarceration in police custody and the desire for a swift resolution to the criminal charges brought forward against the detainees.

The concerns raised by the detainees in relation to the deprivation of liberty in police cells and the desire for some basic human needs arguably contravenes internationally accepted human rights principles and legislations. Such resolutions, such as the 'Standard minimum rules for the treatment of prisoners' (United Nations, 1977) affirm the right of all prisoners to be provided with all necessary articles to maintain cleanliness and personal hygiene while in custody, to be provided with food of wholesome quality, and to be provided with sleeping arrangements that meet all health requirements, among others. However, the complication here is that detainees are not afforded the same rights as those who are detained in prison pending trial or serving a court imposed sentence. Even so, until recently, a number of police cells around the State of Victoria were housing detainees for extraordinary lengths of time

while awaiting court dates or a transfer to more specialist prison services (Office of Police Integrity, 2011). It is hoped that continued research in the police cell context will serve to highlight the treatment, support and care needs of detainees and the conditions of the police cells in which detainees must spend their time in while awaiting their court hearing, especially for those experiencing mental illness.

### **7.1.3. Paper three: Identifying people experiencing mental illness.**

Paper three set out to examine current police practices in identifying people experiencing mental illness, and to examine the predictive utility of two screening tools to identify mental illness among detainees in police cells. It is vitally important that there are valid and reliable means of early identification at the front end of the criminal justice system, as findings from papers one and two have shown that rates of mental illness are common in police cells and that these vulnerabilities are often exacerbated by the conditions in the police cell setting. Findings from paper three indicated, however, that current police practices were missing a considerable number of people who were experiencing mental illness. These findings are consistent with previous research. McKinnon and Grubin (2010) found that many detainees with drug and alcohol, physical and mental health problems had not been identified by police, suggesting again that existing health screening practices were missing substantial health-related morbidity. It is notable, however, in this thesis, that only one of the police stations included had such a locally determined process to identify people experiencing mental illness, with no such formalised processes in operation at the other police station. While the police officers at the former station had recognised that there was a problem with the number of people experiencing mental illness

being incarcerated, this process needed further improvements in its ability to accurately identify those with a mental illness.

Conversely, study findings suggested that standardised screening tools may be effective in identifying those with a mental illness and may potentially be applied to standard care by healthcare service providers in the police custody setting. As mentioned previously, there currently exists quite a large disparity in the procedures used by medical personnel to identify those with a mental illness across Australia, and even more so worldwide. While previous research has shown that standardised screening procedures can be effective in jails and prisons (Nicholls et al., 2004; Steadman et al., 2005), these study findings suggest that this may also be the case in police cells.

Of particular interest and contribution of the present thesis was a comparison of the predictive utility of the Brief Jail Mental Health Screen (BJMHS) (Steadman et al., 2005) and the Jail Screening Assessment Tool (JSAT) (Nicholls et al., 2005). Study findings indicated that while there was no difference between these tools in identifying those with a serious mental illness, the JSAT performed better at identifying those with any common mental illness, not including substance use disorders. This was perhaps due to a more semi-structured interview procedure that is required to complete the assessment and further information that is subsequently obtained from the detainee. Nonetheless, these findings suggest that police practices may be improved if a screening tool, such as the Brief Jail Mental Health Screen, was incorporated into routine screening procedures conducted by police officers for every newly admitted detainee. Those identified to be in need of further assessment and treatment may then be followed up by more in-depth assessments tools such as the JSAT. Such a procedure for screening and referral for in-depth assessment for

mental illness fits within the framework and recommendations made by organisations such as the American Psychiatric Association (2000b), regarding the organisation of healthcare service models in the criminal justice system. While the police cell context is not specifically dealt with in this report, as jails subsume this function in the United States of America, it is arguably critical that police cells consider themselves part of this model.

The practicalities of subscribing to such a model as seen in the broader criminal justice system by healthcare service providers in police custody will largely depend on the level of resources available in, and committed to, police custody and also the development of linkages with community health providers. Further, the adoption of a standardised screening tool as a standard component of routine custodial assessments may not present too much of an additional burden to the custody healthcare service initially, as custodial nurses in Victoria, Australia, already offer every newly admitted detainee a relatively thorough health screen. It is possible however that the greater detection of people experiencing mental illness via the use of a standardised screening tool may subsequently increase the level of work imposed on custodial healthcare personnel in regards to the crisis intervention, management and discharge planning that will be required for those identified as being at risk or in need. In addition, linkages with community support services will need to be identified and established for effective discharge planning and referral of detainees back to the community for those individuals who have been identified as potentially being in need of further assessment, treatment or general support. As such, local police custody services need to evaluate the level of service that they will be able to provide detainees based on their level of resources, as not all services will be able to provide the ideal set of healthcare arrangements.

#### **7.1.4. Paper four: Correlates of victimisation in police cells.**

Paper four set out to investigate the criminal victimisation experiences using official police records, and to identify common factors associated with criminal victimisation among police cell detainees. It was found that three quarters of the detainees had been a victim of a crime according to official police records, most commonly for theft, violent crimes, and property damage. Findings from paper four present a significant contribution to the criminal victimisation literature as only one published study to date, to the knowledge of the authors, has examined official police records to ascertain rates of criminal victimisation (Pandiani et al., 2007). Indeed, the majority of studies examining victimisation experiences among people experiencing mental illness have utilised self-report methods. While this has added valuable information to the evidence base pertaining to the commonality of victimisation experiences among people experiencing mental illness, it has nevertheless been limited as the extent to which such experiences are reported to the police has been relatively unexplored.

More importantly, however, it was found in paper four that while people experiencing mental illness were over-represented as victims among contacts with police, there were subgroups of individuals, such as those diagnosed with psychotic disorders, who were not found to be over-represented according to official police records. It therefore appears that there is a disparity in findings, where on the one hand self-report methods have shown that people experiencing mental illness are over-represented as victims of crime, and on the other, when it comes to a detailed examination of official police records, those same subgroups of people diagnosed with mental disorders are not found to be over-represented as compared to members of the general community. This is perhaps particularly pertinent in terms of

developing our understanding here because it represents a stark contradiction between the use of official records and self-report methods of ascertaining criminal victimisation experiences (Cantor & Lynch, 2000).

A number of factors might account for the disparity in findings. While the reasons for the potential under-reporting of victimisation experiences were not investigated in paper four, a number of explanations might be offered based on the general victimatology literature. This literature suggests that crimes may not be reported to the police by victims because: of a perception that the crime was too trivial for police attention, that they did not want to waste police resources in conducting an investigation into the matter (Tarling & Morris, 2010), that they were influenced by their family and friends' experiences of dealing with the police (Greenberg & Beach, 2004), or perhaps that they did not believe that the police service had their best interest at hand (Tyler, 2006). Investigating the reasons why people experiencing mental illness do not report crimes committed against them to the police is a critical step for future research as it is currently not known whether the decision making processes and factors influencing whether crime is reported or not differs between those with a mental disorder and those in the general population. Recent findings appear to suggest that issues around procedural justice (i.e., the perceived use of fair methods by police to achieve outcomes) might be an important factor in determining the level of trust confided by people in the police (Elliott, Thomas, & Ogloff, 2011; Thibaut & Walker, 1975), and may be particularly pertinent pronounced for people experiencing mental illness and those who have had previous contact with the police as suspects / offenders (Elliott et al., 2011).

## **7.2. Broader Implications for Police and Delivery of Health Services in the Police Cell Environment and in the Community**

### **7.2.1. Identification of mental illness in police cell environment.**

Findings from the present study have several implications regarding the identification of people experiencing mental illness in police cells. An overarching implication of the current thesis is the value of using a standardised measure to identify people experiencing mental illness in police cells. While only one of the two police stations that were visited had identified a problem with the number of people experiencing mental illness coming through the police cells, the detection process that they were using on a routine basis lacked sophistication and therefore utility. So while the current thesis has shown the clear value in using a standardised screening tool in police cells, there are a number of practical implications with the implementation of such a tool that will need to be considered.

Central to these implementation matters is who and how effective screening tools are delivered in police cells. Police may not be suited to this task, especially uniformed police, as it was a uniformed police member that would have arrested the person and brought them into the police cell. Thus, it may then be too difficult for the detainee to be asked about their mental status by a uniformed police officer as they may perceive this to be a role conflict to the law enforcement role of uniformed police members. Another reason that the detainee may not be forthcoming in disclosing personal information to a uniformed police member is if they have previously had a negative experience with the police as an offender, suspect or victim. So while an operational police officer may not be appropriate, it is nevertheless important that police play a role in assessing detainees in police cells as they have the most contact with them. They also have more opportunity to note the



behavioural manifestations of those detainees experiencing psychiatric distress and may inform health care personnel regarding this. To this end, it may be more appropriate for a plain clothes police officer to carry out the duty of the first-line assessment of detainees to ascertain the signs and symptoms of mental illness upon their entry into police custody.

It is healthcare professionals who should ultimately hold responsibility for the delivery of effective screening tools in police cells. This is because they are most able to build rapport with detainees due to their specific training in healthcare and their ability to assist detainees with their varied healthcare needs. However, as in most other points in the criminal justice system, there are a number of problems that healthcare professionals need to contend with in the assessment and management of detainees in police cells.

Healthcare professionals would have numerous assessments to complete due to the high flow-through of people into police cells, especially if they are also required to visit more than one site. Furthermore, more time will also be required to thoroughly assess the numerous presentations of those with a mental illness. Given the high rates of mental illnesses in police cells, knowledge and expertise with identifying mental illness is important. Therefore, it is recommended that nurses that conduct these assessments have psychiatric training in addition to general nurse training (Ogloff et al., 2007). Given that the nurses that work in police cells, like most areas of the criminal justice system, have limited time to complete their assessments, recommendations can be put forward to focus on particular questions to ascertain the correct amount and type of information in the limited time allocated to such assessments. In police cells, custodial nurses would typically be granted approximately 10 to 15 minutes to conduct a healthcare assessment with a detainee,

due to the many demands and tasks imposed on police. As such, given that mood disorders were common among detainees, specific questions could be formulated to identify individuals presenting with these disorders that focus on the pertinent symptom presentation as suggested by standard psychiatric nosology (American Psychiatric Association, 2000a). This is similar to the suggested guidelines of identifying inmates at high risk of suicide, such as pretrial inmates and those with poor social and family support (Konrad et al., 2007).

An overhaul of current police custody healthcare services will also be required with the introduction of a standardised screening tool as part of the routine healthcare assessments conducted with detainees. Such a tool might include the Jail Screening Assessment Tool, as it has now been empirically tested against a structured clinical interview and found to be quite promising for this task. Implementation of such a standardised screening tool as part of routine procedure will need to consider a number of practical matters, such as the resources available in dealing with the detainees identified via these screening procedures, having adequately trained and competent personnel in completing such assessments and the provision of training and ongoing support for staff.

Given that pre-existing conditions, especially acuity of psychiatric symptoms, that were brought into police cells primarily accounted for the high levels of psychopathology in police custody, health care provision should be targeted at those persons who are currently vulnerable and experiencing active symptomatology, and monitoring them to ensure that the deleterious effect of the police cell conditions and the loss of liberties does not result in further decompensation of mental status. While a history of psychiatric hospitalisation is important to consider, this does not necessarily mean that the detainee has active psychiatric symptomatology at the time

of detention in custody. Rather, it is the acuity of symptoms that are particularly important, and their interaction with the police cell environment, that are critical to monitor (Chariot, Martel, Penneau, & Debout, 2008; Kent & Gunasekaran, 2010). Attention to the acuity of symptoms, the broader health and social needs of detainees, and the effect of police cell conditions may be important aspects to consider when monitoring the welfare of detainees in police custody.

### **7.2.2. Management of mentally disordered offenders in the community.**

Findings from the present thesis also have significant implications for the management of mentally disordered offenders in the community and the need for functional interagency collaborations between the criminal justice system, community mental health services and other support networks and agencies. Given that detainees present with a complex range of ongoing difficulties in broad domains of life, there is a critical need for varied services to work together to meet the complex needs of mentally disordered offenders. Such an approach is critical as some of these difficulties have been highlighted as predictors for criminal offending (Bonta, Law, & Hanson, 1998). However, it seems that there is still substantial work to be done in this regard, as it is commonly observed that general mental health services harness the notion that they have nothing to do with managing risks of offending (Mullen & Ogloff, 2009). Indeed, while there are repeated calls for closer working relationships between services in the criminal justice system and the varied services in the community (Steadman, Osher, Robbins, Case, & Samuels, 2009), it may be that more practical and creative approaches are necessary to manage risks for offending among people experiencing mental illness. This may include embedding services and integrating them directly with the mental health treatment team. For

example, an evidence-based approach to improving employment prospects among those with mental illness is the Individual Placement and Support model (Becker & Drake, 2003). One of the tenets of this model is the integration of the employment program with the clinical team, meaning that the job specialist regularly participates in clinical team meetings and interacts with treatment team staff outside of these meetings on a regular basis (Bond, 2004). Such an approach has been shown to be successful in increasing employment outcomes among those experiencing mental illness compared to treatment as usual (i.e., collaboration between systems) (Killackey, Jackson, & McGorry, 2008), and might serve as a platform to stimulate the integration of various health and social workers into the mental health treating team setting.

The high rates of mental illness in the criminal justice system further highlight the importance of mental health courts in Victoria, Australia. Indeed, a three-year pilot study began in Victoria in April 2010. Mental health courts are based on the concept of therapeutic jurisprudence, the study of the extent to which legal procedures and the role of lawyers and judges in producing therapeutic or anti-therapeutic outcomes for people involved in legal procedures (Hora, from Watson 01). Mental health courts have also been modelled on drug courts, which were developed by the court and the community in response to the over-whelming number of drug-related cases, and seek to provide treatment to reduce recidivism (Steadman, Davidson, & Brown, 2001). The potential benefits of mental health courts is that they attempt to prevent the criminalisation of mentally disordered offenders and aim to reduce recidivism by linking offenders with varied services, such as housing, substance abuse and other services, and also provide crucial mental health services (Watson, Hanrahan, Luchins, & Lurigio, 2001), with recent studies internationally

supporting their effectiveness. For example, McNiel and Binder (2007) found that people who entered a mental health court program after arrest were not charged with new offences for a longer period compared to individuals with mental illness who were detained in a county jail after arrest.

### **7.2.3. Police training and practice.**

Findings from the present thesis have implications for police training and practice. In regards to police training, study findings provide invaluable information about the characteristics of individuals that make their way into police cells and their presenting difficulties. This valuable information can be used as part of training procedures for members of the police force who are to be assigned duties in police custody. Such a training module would seek to advance professional skills in the management of police cell detainees. Training might include practical and theoretical aspects regarding the characteristics of individuals that present to police cells to assist in the management of such individuals in custody. It might be emphasized that levels of mental illness are higher among police cell detainees compared to levels of mental illness in the general population. It might also be emphasised that detainees might make numerous requests for assistance in police cells as they present with ongoing and complex needs in everyday life, such as psychological distress and suicidal thoughts. Therefore, in addition to the administrative operational policing tasks required of police officers in custody, it might also be beneficial to alert police officers that they will be required to provide additional support to detainees held in custody. It might also be crucial to note that the police cell environment has a further compounding effect on the suffering experienced by detainees, particularly those experiencing mental illness. One strategy that may assist detainees in their adjustment to the police cell environment is for police officers to be mindful of and

address the basic, real life, everyday concerns of detainees, such as explaining what detainees might expect at court hearings and the typical processes that may take place. Furthermore, it might be emphasised that being held in police custody is a particularly difficult time for detainees. The frustration of detainees and likelihood of engaging in disruptive behaviour might be reduced if police officers are mindful of their approach and communicative style with detainees in this difficult time. For example, police officers might be well placed to show compassion and understanding to detainees, similar to the attributes and skills of a psychiatric nurse in de-escalating potentially volatile situations (Cowin et al., 2003).

Such information provided to police officers may also be beneficial by providing recommendations to police in establishing models of good practice in managing such individuals in custody and their often difficult behaviour. For example, it was found that current police practices were not effective in identifying those with a mental illness. Given the high rates of false negatives, it is worth considering this in more detail. At the time of the study, it was current practice for a police officer, typically the Custody Sergeant, to complete the Custody Risk Assessment Form upon entry of the detainee into the police cell. However, this may be problematic for a number of reasons. It is possible that many detainees are reluctant to disclose such personal information, given that they were just arrested and may still have been affected by the circumstances of their arrest. Detainees may also be affected by the events that led to their arrest or withdrawing from substances, angry with police officers for having just arrested them or because of past negative experiences with the police. Furthermore, the questions on the Custody Risk Assessment Form may appear to be quite direct, and may sound derogatory and offensive to a detainee. As reliance on the self-report methods used by police was

found to be ineffective in the present thesis, a strategy that may be useful in circumventing these difficulties is for police officers to utilise subtle questions to elicit the mental health status of detainees. In addition to this, police officers may also note down their own observations regarding the signs and symptoms of possible mental illness. One possible measure that could be implemented in the routine screening procedures used by police in custody is the Brief Jail Mental Health Screen. This screening tool utilises indirect questions to ascertain possible mental illness, and has been shown to be a practical and effective tool for use by jail correctional officers (Steadman et al., 2005). Such an alternative approach will however require the need for additional training of police officers to build rapport with detainees and increase the knowledge to observe the signs and symptoms of mental illness. While consideration will need to be given to who completes these assessments as outlined above, that is, whether it be uniformed or plain clothes police officers, individuals screened positive on the Brief Jail Mental Health Screen could then be noted as requiring more immediate attention by custodial nurses for further in-depth assessment of mental illness.

### **7.3. Strengths and Limitations**

Limitations of the studies have been discussed throughout the respective papers presented in this thesis and will not be repeated here. However, there are a few limitations that require more detailed consideration in this context. The first limitation was the practical challenge in recruiting a representative sample of police cell detainees. Given the comparatively low consent rate in the current thesis as compared to other police cell studies (Gaffney et al., 2010; Heffernan et al., 2003), it must be considered that the generalisability of study findings may be limited. A large proportion of those who were not approached were determined according to police

officer decision-making and a concern that those detainees creating a disturbance in the cells may be aggravated further if approached. Similar challenges have been noted by researchers in recruiting vulnerable populations for research, such as palliative care patients (Jordhøy et al., 1999) and pregnant adolescents (Kaiser & Hays, 2006). Some of the reasons for this might be due to a lack of trust between participants and researchers (Chiang, Keatinge, & K. Williams, 2001) or the disordered lives of participants (Kaiser & Hays, 2006). The challenge of participant recruitment may have been due to the many uncertainties that faced detainees in this difficult time or the time commitment needed to participate in research.

Nevertheless, difficulty in recruiting a vulnerable population should not exclude them from the opportunity of participating and gaining from the benefits of research, but rather, more novel approaches in recruitment should be sought. For instance, the author of this thesis began recruiting participants for the pilot study by waiting for referrals from custodial nurses. As this was not effective, the author began making regular visits to police cells and integrated into the normal procedures of police custody. This showed a corresponding increase in participant recruitment. Clearly, further improvements in recruitment strategies are needed in future studies in police custody.

A comparison of key characteristics between the sample of this thesis and other studies revealed remarkable similarities with respect to gender, age, substance use problems, psychiatric symptoms and contact with the mental health system (Blaauw et al., 1998; Gaffney et al., 2010; Heffernan et al., 2003). Given that the demographic composition of the current thesis was similar to those of other studies with higher consent rates, it might be argued that the sample of the present thesis might also be largely representative of the detainee population.



A further limitation that must be considered was that participants were only recruited from two of the busiest inner city sites, thus introducing a selection bias whereby differences and similarities with police cell detainees from more remote and rural areas of the state of Victoria, Australia were unable to be examined. Also, given that more remote areas are arguably less resourced compared to the busier inner city sites, differences may also have emerged in the rate at which police officers were able to identify those with mental illness. That is, police officers from more remote areas may have less time to observe police cell detainees and assist medical services in identifying and managing detainees with mental illness. These questions however, were unable to be answered in the current thesis.

A further limitation of the current thesis was that a limited array of psychiatric conditions were assessed as part of the interview protocol. Limits due to the time available to conduct assessments, and the constant demand from other professionals for use of the secure interview room prevented a more thorough assessment. For example, it is known that personality disorders are highly prevalent among prisoners (Fazel & Danesh, 2002), and is likely to be the case among police cell detainees as personality disorders, in particular antisocial personality disorder, are commonly associated with offending behaviours (Roberts & Coid, 2010). Knowledge of the characteristics of personality disorders and traits among those entering police cells may also lead to better management of detainees by reducing disruptive behaviour commonly seen among individuals in the criminal justice system (Coid, 2002). There is also emerging evidence that acquired brain injuries might be significantly over-represented among the offender population (Schofield et al., 2006). This might be additionally important to consider in the police cell context as it has been speculated that brain injuries are also associated with offending

behaviours (Turkstra, Jones, & Toler, 2003) and may be important to consider when characterising the police cell detainee population. This, however, was not investigated in the present thesis.

#### **7.4. Future Research Directions**

There are a number of directions that future research can take from this thesis. Future research may consider adopting a longitudinal design to assess the impact of incarceration in police cells on levels of psychopathology. For example, a study could interview people about psychiatric symptomatology on entry into police cells, and then on release from custody. Such research may add to the existing body of knowledge about the effects of incarceration on psychiatric symptoms, and may further extend the knowledge regarding the environmental effects of police cells and the effects of the transition from the street to the police cell in accounting for the high rates of psychopathology in custody. Such a longitudinal design may also incorporate a follow-up of individuals that are both released back to the community and also those who progress further down the criminal justice system into prison. Following those individuals released to the community may highlight the extent to which services and agencies are used if referral pathways were enacted on discharge from police custody, and elucidate factors involved in people's decision making process of whether or not they proceed with these referrals. Following individuals transferred to prison may reveal the extent to which information is shared between healthcare service providers at different stages of the criminal justice system, as it has been noted that there is a lack of continuity in service provision between police cells and prisons, such that healthcare workers located in prisons were unable to access the medical notes that were written by police-employed custodial nurses (Ombudsman Victoria and Office of Police Integrity, 2006).

While the current state of the literature suggests that there are high rates of psychiatric symptoms found among people detained in police cells, there have been a limited number of studies that have examined the origins of such phenomena. Findings from the present thesis suggest that it may be an interplay between factors that are brought into the criminal justice system and the conditions in the police cell environment that give rise to the high levels of psychopathology in police custody. This is entirely plausible, given that persons enter the criminal justice system and bring in with them their own personal history and the recent events of their lives. Having entered the criminal justice system, individuals interact with the conditions of the police cells and also need to adjust to the loss of liberty as a result of their incarceration. To this end, future research would be well placed to further examine the interaction between personal and situational factors in accounting for the high rates of psychiatric symptoms in police cells. This may be done by building on the research of Gibbs (1991) by developing a measure that assesses the congruence between the needs of people and the environmental fit in police cells, giving due consideration to the major themes that detainees reported in this thesis. While the Prison Environment Inventory (Wright, 1985) may be a suitable tool for use in prison settings, it was found to be unsuitable for use in police cells during the pilot study of the present thesis. Findings from this line of research may provide further targets of treatment interventions to be utilised by healthcare service providers to reduce psychopathology among detainees.

Future research could also investigate the optimal timing of administering screening tools by police officers to newly arrived detainees. A possible reason why low detection rates were found in this thesis may have been because questions were asked too early on arrival into the cells or the fact that it was uniformed police

officers who asked the questions. Detainees may also have either been affected by the circumstances that brought them into the cells, anxious at the prospect of spending time in the cells, or affected by substances. Further considerations that need to be taken into account when investigating the timing of screening tool administration by police officers is that psychiatric symptoms may get worse if it is left until later, with a compounding effect of police cell environmental conditions on levels of distress. Thus, the timing of screening tool administration may need to take into account a number of other variables, such as level of drug and alcohol intoxication, in addition to how long ago the detainee was brought into the police cells. Future research could also investigate the utility of the Brief Jail Mental Health Screen as used by police officers and the Jail Screening Assessment Tool as completed by custodial nurses, in comparison to an independent assessment of psychopathology. It may be that the use of these screening tools as completed by police officers and custodial nurses may be beneficial in ensuring that persons experiencing mental illness are accurately identified for timely in-depth assessment and treatment to prevent decompensation in the cells. This will also have the added benefit of multiple view points, such that police may have more interaction with the detainees and have more opportunity to observe behaviour and identify the symptoms of mental illness which they could pass on to the healthcare professionals. It is important however, that healthcare workers retain ultimate responsibility of the health of police cell detainees as they are specifically trained for this task.

### **7.5. Conclusions**

In conclusion, the current state of the literature suggests that there are high levels of psychiatric symptoms and substance use disorders among police cell detainees, and that screening procedures to identify people experiencing mental

illness are quite variable. The current thesis has made significant advances to the literature regarding people detained at the front end of the criminal justice system, in police cells. It was demonstrated that rates of common mental disorders are over-represented among this population compared to the general population, and that these disorders are often associated with numerous ongoing difficulties in broad domains of life. In addition, while current police practices were not altogether effective at identifying those with a mental illness, detection rates of people experiencing mental illness may be improved with the use of standardised screening tools in police custody. Further contributions to the existing literature were made by demonstrating that detainees with pre-existing vulnerabilities and who were also unsatisfied with the conditions in police cells reported higher levels of psychopathology, and that there were subgroups of individuals, such as those with psychotic disorders, who were not over-represented among official police records as victims of crime. Practical implications from these findings might include greater detection of presenting psychiatric distress for detainees, development of innovative service provision strategies for custody healthcare personnel, and a greater awareness of the characteristics of detainees for policing services. In addition to the contributions made to the scientific literature, it is hoped that this thesis, more importantly, has made significant advances in addressing the real-life burden of the many detainees entering police custody.

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## **Appendices**

**Appendix 1: Consent Form**

**Appendix 2: Explanatory Statement**

**Appendix 3: Letters of Ethical Approval**

**Appendix 4: Questionnaires**

**Appendix 5: Data linkage procedures**

**Appendix 1: Consent Form**

## Consent Form

Project Title: Symptoms and Diagnosis in Police Holding Cells

**NOTE:** *This consent form will remain with the Monash University researcher for their records*

**Chief Investigators:** James Ogloff, Stuart Thomas

Participants Name: \_\_\_\_\_

I **consent/ do not consent** (please circle) to participate in the Monash University research project specified above. I have had the project explained to me, and the Explanatory Statement read to me, which I will keep for my records.

In participating, I understand that:

- I agree to be interviewed by a researcher about potentially sensitive and personal material (e.g., depression, psychotic symptoms, substance abuse and anxiety disorders) and to complete some questionnaires
- I give permission to the researchers to:

Access my mental health records on the Client Management Interface Database (CMI-ODS) Yes  No  Initial: \_\_

Access my files on the police Law Enforcement Assistance Program (LEAP) database Yes  No  Initial: \_\_

Access my police files in the Prisoner Information Record (PIR) Yes  No  Initial: \_\_

Ask a police officer to complete a Police Officer Rating Form Yes  No  Initial: \_\_

- Police observations from my time in the police cells will be made available to the researchers
- My participation is of my free choice, and that I can withdraw my consent at any stage of the interview without being disadvantaged in any way
- Any data that the researcher collects for use in reports or published findings will not contain names or identifying information
- Any information I provide is confidential, and that no identifying information will be disclosed in any reports on the project, or to any other party
- Confidentiality will be broken if illegal activities are revealed
- Information given to the researchers is not covered by privilege in the legal sense
- The data collected is for research purposes

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
(Participant)

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
(Researcher)

### Revocation of Consent Form

Project Title: Symptoms and Diagnosis in Police Holding Cells

I hereby wish to WITHDRAW my consent to participate in the research project described above and understand that such withdrawal WILL NOT jeopardise any treatment currently or my relationship with Monash University.

Participant's Name (printed) \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**Appendix 2: Explanatory Statement**



## Explanatory Statement

Project Title: Symptoms and Diagnosis in Police Holding Cells

This information sheet is for you to keep.

My name is Gennady Baksheev and I am conducting a research project under the supervision of Dr Stuart Thomas and Professor James Ogloff at the School of Psychology, Psychiatry and Psychological Medicine, Monash University. This research is towards a PhD degree. This means that I will be writing a thesis which is the equivalent of a 300 page book. We have funding from the Australian Research Council (ARC) and Victoria Police (VP) to conduct a study looking at the people that come through police holding cells in Victoria.

In carrying out this research, we will be inviting everyone that comes through these police cells to take part in the project. We are hoping that a total of 220 people will take part in this project. There are some conditions that people will need to meet in order to be able to take part in the project. You will not be asked if you come from prison to attend court or come into the police cell a second time during the project.

### **The aim and purpose of the research**

The aim of this study is to gain a greater understanding of the needs of people in police holding cells. The project will assess psychiatric symptoms, diagnoses and needs in police holding cells. This research is important as we need to be able to better identify mental health issues in police holding cells in order to provide timely treatment and to better meet your needs. The project will also look at how well police officers can identify mental illness and the impact of the police cell environment on people in the holding cells.

### **Possible benefits**

We cannot guarantee any direct benefits for you by taking part. We hope that the information that we collect will help us to better identify people in need of help in the future and also the improvement of services.

### **What does the research involve?**

Participation will involve an interview with a researcher, in which you will be asked about symptoms you may or may not have had recently, and in the past. This will include potentially sensitive and personal material (e.g., depression, anxiety, psychotic symptoms and problems with substances). You will then be asked further questions about the impact of the police cell environment on your mental health.

We will also ask you to give us permission to access your mental health records, police files and also for the Custody Sergeant to fill out a Police Officer Ratings Form. This reduces the time that we will need to spend with you.

**How much time will the research take?**

The interview will take 1 - 2 hours to complete, and there will be chances to stop for breaks if and when you would like. Most of the interviews will take place in the evenings and also on weekends as that is the best time to use the interview rooms. In this way, we will have plenty of time to get through the interview.

**Inconvenience/discomfort**

There are no risks that you will experience any significant distress or harm from participating in this study. The materials used in this project have been used in many other research projects in the past and no negative effects have been reported.

There is a possibility that some of the questions may cause you some slight discomfort in the short-term (none identified in the long-term) beyond the normal experience of everyday life. Some of these questions can be potentially personal and sensitive in nature. If you do start feeling anxious or upset, then please let the researcher know and they can stop the interview and help you if need be. However, the likelihood of this occurring is quite low. The more likely risk is that you may experience some level of inconvenience (e.g., giving up time to participate in the project). However, this discomfort will be minimal to non-existent, including its consequences, both in the short and long-term.

**Payment**

Unfortunately there will be no payment offered on completion of the interview.

**Can I withdraw from the research?**

Being in this study is entirely voluntary (that is, your own free choice) and you are under no obligation to participate (that is, you do not have to take part in this study if you do not want to). Also, if you do agree to participate but later change your mind, you are free to withdraw from the project at any stage of the interview. You can also request that any information you supplied as part of the interview is destroyed or erased. If you refuse to participate in the project, you will not be disadvantaged in any way and you will still receive normal treatment as provided by the custodial nurses in the police cells.

**Confidentiality**

The information you provide to us will remain confidential and will not be given to others. There are some cases where we will have to break confidentiality, however. Examples of this would be if you told us that you wanted to hurt yourself, hurt another named person or if you were involved in illegal activity that was not brought to the attention of the police. In these cases we are obliged to tell the Custody Sergeant about this to make sure that you and/or other people are kept safe.

Information that we collect from you will be labelled with an ID number, instead of your name. Any identifying information will be stored separately to the data we collect. Only members of the research team will have access to the data. The documents will be stored in a locked filing cabinet in a locked office at Monash University and electronic information will be stored on a password protected computer. Storage of the data collected will adhere to the University regulations and kept on University premises in a locked cupboard/filing cabinet for 5 years; after that it will be disposed of in a confidential manner.



We plan to present the findings from this project in written articles in scientific journals, in presentations at scientific conferences and also as a thesis. There will be no way of identifying any individual in the project and the privacy of individuals will be protected in any publications by summarising the results.

### Counselling Services

There are a number of counselling services that are available to you if you are released back into the community and need to talk to someone. These are Lifeline (13 11 14) and also Grief Line (9596-7799).

### Results

If you would like to be informed of the general research findings, please contact Gennady Baksheev on 9495-9309 or [Gennady.Baksheev@med.monash.edu.au](mailto:Gennady.Baksheev@med.monash.edu.au). The findings are accessible for a period of 2 years.

<p>If you would like to contact the <b>researchers</b> about any aspect of this study, please contact the Chief Investigator:</p>	<p>If you have a <b>complaint</b> concerning the manner in which this research <b>2007/1864 (92/07)</b> is being conducted, please contact one of the following:</p>
<p>Dr Stuart Thomas          Locked Bag 10 Fairfield 3078          Email :  <a href="mailto:Stuart.Thomas@med.monash.edu.au">Stuart.Thomas@med.monash.edu.au</a>          Tel: 9495-9162          Fax: 9495-9195</p>	<p>Human Ethics Officer          Standing Committee on Ethics in          Research Involving Humans (SCERH)          Building 3e Room 111          Research Office          Monash University VIC 3800          Tel: +61 3 9905 2052 Fax: +61 3          9905 1420          Email: <a href="mailto:scerh@adm.monash.edu.au">scerh@adm.monash.edu.au</a></p> <p>Ms Vicki Xafis          Executive Officer          DHS Human Research Ethics          Committee          50 Lonsdale Street          Melbourne 3000          Phone: (03) 9096 5239          Fax: (03) 9096 9176  <a href="http://www.health.vic.gov.au/ethics">www.health.vic.gov.au/ethics</a></p>

Thank you  
 Gennady Baksheev

**Appendix 3: Letters of Ethical Approval**



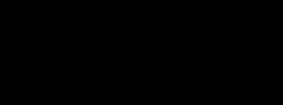
## Human Ethics Certificate of Approval

<b>Date</b>	22 November 2007
<b>Project Number</b>	2007001864 - CF07/4072
<b>Project Title</b>	Symptoms and diagnosis in police holding cells
<b>Chief Investigator</b>	Prof James Ogloff
<b>Approved</b>	From 22 November 2007 to 22 November 2012

---

### Terms of approval

1. Approval is only valid whilst you hold a position at Monash University.
2. It is the responsibility of the Chief Investigator to ensure that all pending information (such as permission letters from organisations) is forwarded to SCERH. Research cannot begin at an organisation until SCERH receives a permission letter from that organisation.
3. It is the responsibility of the Chief Investigator to ensure that all investigators are aware of the terms of approval and to ensure the project is conducted as approved by SCERH.
4. You should notify SCERH immediately of any serious or unexpected adverse effects on participants or unforeseen events affecting the ethical acceptability of the project.
5. The Explanatory Statement must be on Monash University letterhead and the Monash University complaints clause must contain your project number.
6. **Amendments to the approved project:** Requires the submission of a Request for Amendment form to SCERH and must not begin without written approval from SCERH. Substantial variations may require a new application.
7. **Future correspondence:** Please quote the project number and project title above in any further correspondence.
8. **Annual reports:** Continued approval of this project is dependent on the submission of an Annual Report. This is determined by the date of your letter of approval.
9. **Final report:** A Final Report should be provided at the conclusion of the project. SCERH should be notified if the project is discontinued before the expected date of completion.
10. **Monitoring:** Projects may be subject to an audit or any other form of monitoring by SCERH at any time.
11. **Retention and storage of data:** The Chief Investigator is responsible for the storage and retention of original data pertaining to a project for a minimum period of five years.

  
Dr Souheir Houssami  
Executive Officer, Human Research Ethics (on behalf of SCERH)

Cc: Dr Stuart David Michael Thomas; Mr Gennady Baksheev



## Department of Human Services

Incorporating: Health, Children, Community Services, Aged Care and Housing

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### HUMAN RESEARCH ETHICS COMMITTEE

**92/07**

**Ethics Committee Secretariat**  
**Telephone: (03) 9096 5239 Fax: (03) 9096 9176**  
**50 Lonsdale Street**  
**MELBOURNE 3000**  
**Email: [research.ethics@dhs.vic.gov.au](mailto:research.ethics@dhs.vic.gov.au)**

Our Ref:  
Your Ref:

8 November 2007

Professor James R P Ogloff  
School of Psychology, Psychiatry and Psychological Medicine  
Monash University  
Locked Bag 10  
Fairfield 3078

Dear Professor Ogloff,

**Re: 92/07 - Symptoms and Diagnosis in Police Holding Cells**

The Department of Human Services Human Research Ethics Committee, at its meeting on 7 November 2007, ratified the approval of the response for the above project, dated 8 October 2007.

Yours sincerely,



 **ELENA WILSON**  
**ACTING DEPUTY CHAIR**



VICTORIA POLICE

**RESEARCH & PROJECT GOVERNANCE**  
Corporate Strategy and Performance

Level 6, Building C, 637 Flinders Street  
Melbourne 3005  
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Telephone 9247 3690  
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Dr Kathy Avent  
Monash University  
Locked Bag 10  
Fairfield 3078

29 November, 2007

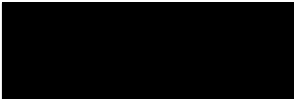
Dear Dr Avent

**RE: Application re Symptoms and Diagnosis in Police Holding Cells**

I write to advise you that I have considered all of the material that has been supplied to me regarding the application for ethical approval in relation to the above research project.

Having due regard to (a) the manner in which Victoria Police members will be participants within the study, (b) the approval of the Monash University Standing Committee on Ethics in Research Involving Humans dated 22<sup>nd</sup> November 2007 and (c) the approval of the Department of Human Services Human Research Ethics Committee dated 8<sup>th</sup> November 2007, I do not believe that is necessary for this application to be further considered by the Victoria Police Human Research Ethics Committee.

If you have any queries or require any further clarification please contact Simon Foster, Secretary to the VPHREC, on telephone 9247 3690 or at e-mail address: [simon.foster@police.vic.gov.au](mailto:simon.foster@police.vic.gov.au)

  
Simon Foster  
Secretary to the Victoria Police Human Research Ethics Committee

**Appendix 4: Questionnaires**



- Prescribed medication:
- 0 None
  - 1 Anti-depressants
    - a. Specify: \_\_\_\_\_
    - b. Dosage: \_\_\_\_\_ (mg)
    - c. Method: \_\_\_\_\_
    - d. Duration of prescription: \_\_\_(wks)
  - 2 Anxiolytics
    - a. Specify: \_\_\_\_\_
    - b. Dosage: \_\_\_\_\_ (mg)
    - c. Method: \_\_\_\_\_
    - d. Duration of prescription: \_\_\_\_\_(wks)
  - 3 Anti-psychotics
    - a. Specify: \_\_\_\_\_
    - b. Dosage: \_\_\_\_\_ (mg)
    - c. Method: \_\_\_\_\_
  - 4 Other
    - a. Specify: \_\_\_\_\_
    - b. Dosage: \_\_\_\_\_ (mg)
    - c. Method: \_\_\_\_\_
    - d. Duration of prescription: \_\_ (wks)
- Education Level:
- 0 Less than high school (Grade: \_\_\_\_\_)
  - 1 High school or equivalent (Year: \_\_\_\_\_)
  - 2 Trades certificate / diploma
  - 3 Some College / University
  - 4 Completed College / University
- English:
- 0 None (First Language: \_\_\_\_\_)
  - 1 Poor
  - 2 Moderate
  - 3 Fluent
- Marital status:
- 0 Single
  - 1 Married / Defacto
  - 2 Current boyfriend / girlfriend
  - 3 Separated / Divorced
  - 4 Widowed
- Country of your birth:
- 0 Australia
  - 1 New Zealand
  - 2 Other \_\_\_\_\_
- Nationality: \_\_\_\_\_
- Time spent in the cell at time of interview: \_\_\_\_\_ (hours)
- What motivated your participation? Response: \_\_\_\_\_
-



Have you ever been in a hospital for emotional or mental health problems?

a: Yes (1) / No (0)

b. General Comments (How long and tx received):

1. Have you ever received any kind of mental health treatment for emotional problems? 1 = Yes 0 = No

2. What kind of service did you attend?

3. What kind of treatment did you receive?

4. For what period of time were you involved with the service?

5. How often did you attend?

Previous police lockups: Yes (1) / No (0)

Previous jail detentions: Yes (1) / No (0)

Previous prison detentions: Yes (1) / No (0)

Brief Jail Mental Health Screen

**Section 1**

Name: \_\_\_\_\_ Detainee No: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ (AM/PM)

**Section 2**

Questions	No	Yes	Comments
1. Do you <i>currently</i> believe that someone can control your mind by putting thoughts into your head or taking thoughts out of your head?			
2. Do you <i>currently</i> feel that other people know your thoughts and can read your mind?			
3. Have you <i>currently</i> lost or gained as much as two pounds a week for several weeks without even trying?			
4. Have you or your family or friends noticed that you are <i>currently</i> much more active than you usually are?			
5. Do you <i>currently</i> feel like you have to talk or move more slowly than you usually do?			
6. Have there <i>currently</i> been a few weeks when you felt like you were useless or sinful?			
7. Are you <i>currently</i> taking any medication prescribed for you by a physician for any emotional or mental health problems?			
8. Have you <u>ever</u> been in a hospital for emotional or mental health problems?			

**Section 3 (Optional)**

**Officer's comments / impressions (check *all* that apply):**

Language barrier    Under the influence of drugs / alcohol    Non-cooperative  
 Difficulty understanding questions    Other, specify \_\_\_\_\_

**Referral instructions: This person should be referred for further mental health evaluation if he / she answered:**

**YES to item 7; OR**

**YES to item 8; OR**

**YES to at least 2 items 1 through 6; OR**

**If you feel that it is necessary for any other reason**

Not Referred

Referred on \_\_\_\_\_ to \_\_\_\_\_

Person completing screen \_\_\_\_\_

## Instructions for completing the Brief Jail Mental Health Screen

### General Information:

This Brief Jail Mental Health Screen (BJMHS) was developed by Policy Research Associates, Inc., with a grant from the National Institute of Justice. The BJMHS is an efficient mental health screen that will aid in the early identification of severe mental illnesses and other acute psychiatric problems during the intake process. This screen should be administered by Correctional Officers during the jail's intake / booking process.

### Instructions for Section 1:

Name: Enter detainees name – first, middle initial, and last

Detainee No: Enter detainee number

Date: Enter today's month, day and year.

Time: Enter the current time and circle AM or PM.

### Instructions for Section 2:

Items 1-6:

Please check a mark in the appropriate column (for 'No' or 'Yes' response).

If the detainee REFUSES to answer the question or says that he / she DOES NOT KNOW the answer to the question, do not check 'No' or 'Yes.' Instead, in the General Comments section, indicate REFUSED or DON'T KNOW and include information explaining why the detainee did not answer the question.

Items 7-8:

Item 7: this refers to any *prescribed* medication for any emotional or mental health problems.

Item 8: include any stay of one night or longer. Do NOT include contact with an Emergency Room if it did not lead to an admission to the hospital.

If the detainee REFUSES to answer the question or says that he / she DOES NOT KNOW the answer to the question, do not check 'No' or 'Yes.' Instead, in the General Comments section, indicate REFUSED or DON'T KNOW and include information explaining why the detainee did not answer the question.

### General Comments column:

As indicated above, if the detainee REFUSES to answer the question or says that he / she DOES NOT KNOW the answer to the question, do not check 'No' or 'Yes.'

Instead, in the General Comments section, indicate REFUSED or DON'T KNOW and include information explaining why the detainee did not answer the question.

All 'Yes' responses require a note in the General Comments section to document:

- (1) Information about the detainee that the officer feels relevant and important
- (2) Information specifically requested in the question

If at any point during administration of the BJMHS the detainee experiences distress, he / she should follow the jails procedure for referral services.

### Instructions for section 3:

Officer's comments: check any one or more of the four problems listed if applicable to this screening. If any other problem(s) occurred, please check 'Other,' and note what it was.

### Referral instructions:

Any detainee answering YES to Item 7 or YES to Item 8 or YES to at least two of Items 1-6 should be referred for further mental health evaluation. If there is any other information or reason why the officer feels it is necessary for the detainee to have a mental health evaluation, the detainee should be referred. Please indicate whether or not the detainee was referred.

Participant ID Number: \_\_\_\_\_

Checklist of Physical Conditions of Police Cells

**Instructions:** Listed below are a number of statements about the physical conditions, services and amenities of police cells. Please indicate how you feel about each statement.

Scoring:

- 1 = Very Unsatisfied
- 2 = Moderately Unsatisfied
- 3 = Slightly Unsatisfied
- 4 = Slightly Satisfied
- 5 = Moderately Satisfied
- 6 = Very Satisfied

Physical conditions

Item		Score					
1	Overcrowding	1	2	3	4	5	6
2	Sleeping accommodation	1	2	3	4	5	6
3	Cleanliness of cells	1	2	3	4	5	6
4	Cleanliness of showers	1	2	3	4	5	6
5	Cleanliness of toilets	1	2	3	4	5	6
6	Internal exercise yard	1	2	3	4	5	6
7	Heating	1	2	3	4	5	6
8	Condition of cell walls and floors	1	2	3	4	5	6
9	Floor space	1	2	3	4	5	6
10	Lighting	1	2	3	4	5	6
11	Ventilation	1	2	3	4	5	6
12	Overall standard of the physical conditions of the cells	1	2	3	4	5	6

Services and amenities

Item		Score					
13	Food	1	2	3	4	5	6
14	Access to drinking water	1	2	3	4	5	6
15	Access to health care	1	2	3	4	5	6
16	Personal hygiene (cleaning teeth, shaving)	1	2	3	4	5	6
17	Smoking	1	2	3	4	5	6
18	Use of showers	1	2	3	4	5	6
19	Access to internal exercise yard	1	2	3	4	5	6
20	Access to fresh air and sunlight	1	2	3	4	5	6
21	Privacy	1	2	3	4	5	6
22	Safety and security of the environment	1	2	3	4	5	6
23	Knowledge of the rules of the cells	1	2	3	4	5	6
24	Purposeful Activity	1	2	3	4	5	6

Participant ID Number: \_\_\_\_\_

## Marlowe-Crowne Social Desirability Scale

Listed below are a number of statements concerning personal attitudes and traits. Read each item and decide whether the statement is *true* or *false* as it pertains to you personally.

No.	Item	Response
3	It is sometimes hard for me to go on with my work if I am not encouraged.	0 (T) / 1 (F)
6	I sometimes feel resentful when I don't get my way.	0 (T) / 1 (F)
10	On a few occasions, I have given up doing something because I thought too little of my ability.	0 (T) / 1 (F)
12	There have been times when I felt like rebelling against people in authority even though I knew they were right.	0 (T) / 1 (F)
13	No matter who I'm talking to, I'm always a good listener.	0 (T) / 1 (F)
15	There have been occasions when I took advantage of someone.	0 (T) / 1 (F)
16	I'm always willing to admit it when I make a mistake.	0 (T) / 1 (F)
19	I sometimes try to get even rather than forgive and forget.	0 (T) / 1 (F)
21	I am always courteous, even to people who are disagreeable.	0 (T) / 1 (F)
26	I have never been irked when people expressed ideas very different from my own.	0 (T) / 1 (F)
28	There have been times when I was quite jealous of the good fortune of others.	0 (T) / 1 (F)
30	I am sometimes irritated by people who ask favors of me.	0 (T) / 1 (F)
33	I have never deliberately said something that hurt someone's feelings.	0 (T) / 1 (F)

Participant ID number: \_\_\_\_\_

### Major Concerns of Being in Police Cells

The following questionnaire will ask you about the major concerns that you have whilst being here in the police cells. These concerns can be about anything that is related to your stay in the police cell.

This questionnaire will ask you for about 5 concerns. However, it does not have to be exactly five, it can be more or less, depending on the amount of concerns that you would like to share with us. Also, the concerns that you tell us don't have to be in any particular order of importance.

What is a major concern for you whilst staying here in the police cell?

Further probes to be used for each concern:

Could you tell me more about that?

What do you mean by that?

Do you have any other comments about this concern?

How does this concern impact on your stay in the police cells?

Do you think that this concern has impacted on your mood in the cells?

What kind of an impact has it had on you?

Concern 1:

Concern 2:

Concern 3:

Concern 4:

Concern 5:

Participant ID Number: \_\_\_\_\_

GP Treatment / Medications

1. Do you have a regular doctor (GP)?
  
2. If no, where do you go if you need medical care?
  
3. Did you ever see the doctor for mental health problems (e.g., depression, anxiety, or stress)? Query: doctor (GP), psychiatrist, psychologist, counsellor or other?
  
4. If so, when?
  
5. What sorts of problems?
  
6. What were the treatments / medications?

GP name:

Address:

Telephone:

Participant ID Number: \_\_\_\_\_

Referral from JSAT

Item	No	Yes	Comments
Self-harm / Suicide:			
• Self-harm ideation			
• Suicide ideation			
• Suicide intent			
• Specific plan			
• Recent suicide attempt(s)			
• Previous suicide attempt(s)			
Mental disorder:			
• Currently on psychiatric medication(s)			
• Chronic psychiatric history			
• Current mental health issues			
• Recent or previous psychiatric hospitalisations			
• Recent or previous disorders of thought, affect or perception			
Violence:			
• Violent ideation (high risk of violence)			
Victimization:			
• At risk for victimization			
Other:			
• Inmate requesting treatment			
• Significant stressors (e.g., family death)			
• Specify: _____			

If any item is ticked yes, they are to be referred to the mental health team.



Custody Risk Assessment

Prisoner:	
D.O.B:	
Date Lodged:	CUST NO:

Checklist – LEAP to be checked for the following:

NNI CHECKED	Y/N
DANGER FLAGS	Y/N
WANTED	Y/N

**Prisoner Medical / Risk Information**

(Prisoner must be asked questions in addition to LEAP . CRB Information)

<b>CUSTODY RISK</b>		<b>Details / 47 by:</b>
Suffering any injury or illness?	Yes / No	
Infectious / Communicable Disease?	Yes / No	
Ever inflicted self-injury?	Yes / No	
Depressed or suicidal?	Yes / No	
Security risk / escapee?	Yes / No	
Violent?	Yes / No	
To be kept separated?	Yes / No	
Aboriginal / Torres Strait Islander?	Yes / No	
Mentally ill or been diagnosed with any mental illness?	Yes / No	
Currently on medication?	Yes / No	Details
Currently on the: <ul style="list-style-type: none"> <li>• Methadone</li> <li>• Suboxone</li> <li>• Buprenorphine</li> </ul> program?	Yes / No	Last dose: ____ / ____ / 2007 Amount: ____ mg/ml Prescr. Dr: _____ Dosing pharmacy: _____ Address: _____
Any other matters requiring attention?	Yes / No	

This form MUST remain in the P.I.R. and accompany the prisoner.  
 (Not required for drunks...however, all LEAP checks etc MUST be completed).

Members signature ..... Rank / no .....

**Appendix 5: Data linkage procedures**

### **Data linkage procedure with the public mental health database**

Each of the participants in this thesis was manually linked with the public mental health database using a deterministic matching procedure initially, and then a probabilistic matching procedure. In the deterministic matching procedure, an exact match to full name, age, and gender was sought. If an exact match could not be identified, then a probabilistic matching procedure was utilised using the SOUNDEX program. This program utilises a phonetic algorithm that is commonly used to match names by their phonetic pronunciation, so that names were matched despite minor differences in spelling. A probabilistic match was made if the gender and age matched exactly, and the full name matched phonetically using SOUNDEX. A full psychiatric history was extracted from the public mental health database for 69 participants, including details of all admissions, diagnoses and clinical contacts.

### **Data linkage procedure with police records database**

Participants who consented to accessing their police records, the author of this thesis recorded the Master Name Id (MNI) from the police file. The MNI is a uniquely assigned identification number for individuals recorded in the police records database. For cases when the MNI was unable to be recorded, SOUNDEX was used to phonetically match similar names with different spellings. A deterministic match was then conducted that was based on an exact match of gender, date of birth, and full name. If this process did not reveal a match, a subsequent State driver's licence check was performed to provide further information to assist with the matching procedure (e.g. date of driving offence). This information was then used to identify a match, in addition to the personal identifiers of name, age/date of birth, and gender. A total of 126 cases were identified on the LEAP database and had their full police history extracted. Twenty four cases were not extracted as these participants did not provide consent for the researchers to access their records.