

**A COMPARISON BETWEEN FORENSIC
OBSERVATION PATIENTS ADMITTED WITH
FIRST EPISODE MENTAL ILLNESS AND
THOSE WITH AN EXISTING MENTAL ILLNESS**

Dr. Reyanta Ramouthar

**A COMPARISON BETWEEN FORENSIC
OBSERVATION PATIENTS ADMITTED WITH FIRST
EPISODE MENTAL ILLNESS AND THOSE WITH AN
EXISTING MENTAL ILLNESS**

Dr. Reyanta Ramouthar

A research report submitted to the Faculty of Health Sciences,
University of the Witwatersrand, Johannesburg, in partial
fulfillment of the requirements for the degree
Of
Master of Medicine in the branch of Psychiatry.

Johannesburg 2015

CONTENTS

Declaration.....	iii
Dedication.....	iv
Abstract.....	v
Acknowledgements.....	vii
Table of Contents.....	viii
List of Diagrams	xii
List of Figures	xii
Abbreviations.....	xiv

Declaration

I, Reyanta Ramouthar, hereby declare that this research report is my own work. It is being submitted for the degree of Master of Medicine in the branch of Psychiatry, at the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination at any other University.

R. Ramouthar

_____ day of _____ 2015

Dedication

I dedicate this work to my husband and parents, who have always encouraged me to work hard and have motivated me to achieve my goals. They have provided me with an immense foundation of support and inspiration, as well as valued assistance with this project.

Abstract

Introduction

Psychiatric illness combined with criminal offending is an area that remains poorly understood. There is a perception of an increased association between psychiatric illness and criminal offending.

Objectives

The study aimed to compare the demographic and clinical profiles of individuals referred for forensic observation with first episode mental illness, to those with an existing mental illness. In addition, a comparison of these two groups with regards to the nature of the offence, type of offence, and outcome of the observation period, was conducted. Substance Use Disorders were specifically assessed.

Methods

All forensic observandi above 18 years, admitted to Sterkfontein Psychiatric Hospital between January 2011 and December 2012 with a positive finding of a psychiatric diagnosis at the end of the observation period, were included. The demographic and clinical profile, as well as the nature of the offence, type of offence, and outcome of the observation period, were obtained from the hospital records for each individual. This information was then assigned into two groups according to first episode or existing mental illness. A comparison was then piloted between these groups.

Results

Overall the sample included 436 observandi; 177 were in the first episode group and 259 were in the existing mental illness group. The principal findings from the study included

associations between first episode mental illness, and existing mental illness, with criminal offending. The majority of the offenders were male, and they were either single, divorced, widowed or separated. Most of the observandi were between 25 and 35 years old. Overall the most common diagnosis was a Substance Use Disorder, followed by Schizophrenia, Intellectual Disability and Bipolar Disorder. The most common violent offences included sexual offences, assault with intent to cause grievous bodily harm, murder, and malicious damage to property, whilst the most common non-violent offence was theft. The majority of the sample was recommended for admission as state patients and involuntary mental health care users. For the remainder of the sample, trial was to proceed.

Conclusion

Future research in forensic psychiatry is recommended to assist our understanding of these individuals, so that we can help to reduce the incidence of criminal offending in patients with mental illness.

Acknowledgements

I would like to acknowledge my heartfelt thanks and appreciation to my supervisors, Dr. D.C.J. Hoffman and Dr T. Schutte, for their patience, support, and guidance, with the development of my protocol as well as this project.

I am also thankful to Professor A.B.R. Janse van Rensburg for his time and effort in assisting me with this project.

Table of Contents

CHAPTER ONE	1
INTRODUCTION	1
1.0 INTRODUCTION	2
1.1 Background to Forensic Psychiatry	3
1.2 Importance of the study	4
CHAPTER TWO	6
LITERATURE REVIEW	6
2.0 LITERATURE REVIEW	7
2.1 First episode mental illness and criminal behaviour	7
2.2 The association between criminal behaviour and major psychiatric diagnoses	10
2.3 The association between psychiatric disorders with comorbid Substance Use Disorders and the risk of criminal behaviour	12
2.4 Conclusion	13
CHAPTER THREE.....	15
THE STUDY	15
3. 0 THE STUDY	16
3.1 Objectives	16
3.2 Design	17
3.3 Method.....	17
3.4 Statistical Analysis.....	18

3.5 Ethics.....	19
3.6 Funding	19
CHAPTER FOUR.....	20
RESULTS.....	20
4.0 RESULTS.....	21
4.1 Descriptive Results	22
4.1.1 Description and comparison of the demographic profile of the first episode mental illness and existing mental illness groups	22
4.1.1.1 Gender.....	22
4.1.1.2 Age.....	23
4.1.1.3 Marital Status.....	23
4.1.1.4 Level of Education.....	24
4.1.1.5 Occupational Functioning.....	25
4.1.1.6 Family Psychiatric History	25
4.1.2 Treatment of mental illness.....	26
4.1.3 A comparison of the diagnoses in the first episode mental illness and existing mental illness groups	27
4.2 Comparative Results	29
4.2.1 Type of offence and a comparison between each group.....	29
4.2.2 Number of offences.....	31
4.2.3 Nature of the offence	32

4.2.4 Comparison of Substance Use Disorders in first episode mental illness and existing mental illness groups.....	32
4.2.5 Comparison of the nature of the offence between patients with a single diagnosis and dual diagnosis (i.e. comorbid Substance Use Disorder)	33
4.2.6 Association between a specific offence and diagnosis	35
4.2.7 A comparison of the outcomes of the observation period	35
4.2.7.1 Fitness to stand trial	35
4.2.7.2 Responsibility	36
Responsible I.....	37
Responsible II	37
4.3 Recommendation of the observation period	37
CHAPTER FIVE.....	39
DISCUSSION	39
5.0 DISCUSSION	40
5.1 Summary of Key findings	40
5.2 Demographic Profile of the first episode mental illness and the existing mental illness groups.....	41
5.2.1 Age	41
5.2.2 Gender	42
5.2.3 Highest Level of Education obtained	43
5.2.4 Social and occupational functioning	43
5.2.5 Family Psychiatric History	44

5.3	Comparison of the first episode mental illness and existing mental illness groups.....	44
5.4	Treatment of mental illness.....	45
5.4.1	Previous treatment of mental illness	45
5.4.2	Current treatment of mental illness.....	45
5.5	A Comparison of the most common diagnoses found in the study	46
5.5.1	Substance Use disorder	46
5.5.2	Schizophrenia and Other Psychotic Disorders.....	47
5.5.3	Intellectual Disability.....	48
5.6	Comparison of the nature of the offences	48
5.7	Comparison of the type of offence and its association with each of the groups.....	49
5.8	The association between a specific diagnosis and type of offence committed.....	50
5.9	Outcome Variables.....	51
5.9.1	Fitness to stand trial	51
5.9.2	Responsibility	52
5.9.3	Recommendations of the outcome of the observation period.....	52
5.10	Limitations	54
CHAPTER SIX		56
CONCLUSION		56
6.0	CONCLUSION.....	57
6.1	Recommendations.....	58
REFERENCES.....		61

APPENDIX ONE	67
DATA COLLECTION SHEET	67
APPENDIX TWO	71
APPROVAL LETTER FROM STERKFORTEIN PSYCHIATRIC HOSPITAL	71
APPENDIX THREE	72
ETHICS CLEARANCE CERTIFICATE	72

List of Diagrams

Diagram 4.1 Summary of the sample constituents	22
--	----

List of Figures

Figure 4.1 Distribution of age across the first episode mental illness and existing mental illness groups of observandi admitted to Sterkfontein Hospital, 2011 - 2012.....	23
Figure 4.2 Highest level of education represented in the first episode mental illness and existing mental illness groups of observandi admitted to Sterkfontein Hospital, 2011 - 2012.....	25
Figure 4.3 A comparison of the history of psychiatric illness in the family of the sample constituents admitted to Sterkfontein Hospital for forensic observation, 2011 – 2012.....	26
Figure 4.4 Comparison of the diagnoses in the first episode mental illness and existing mental illness groups admitted to Sterkfontein Hospital for forensic observation, 2011 - 2012.....	29
Figure 4.5 Comparison of the offence between the first episode mental illness and existing mental illness groups admitted to Sterkfontein Hospital for forensic observation, 2011 - 2012.....	31

Figure 4.6 Comparing Substance Use Disorder in the first episode mental illness and existing mental illness groups admitted to Sterkfontein Hospital for forensic observation, 2011 – 2012.....	32
Figure 4.7 Profile of offences in observandi with a comorbid Substance Use Disorder admitted to Sterkfontein Hospital, 2011 - 2012.....	34
Figure 4.8 Profile of offences in observandi with no comorbid Substance Use Disorder admitted to Sterkfontein Hospital, 2011 - 2012.....	34
Figure 4.9 A comparison of the outcome of Fitness to Stand Trial in the first episode mental illness and existing mental illness groups of patients admitted to Sterkfontein Hospital for forensic observation, 2011 - 2012.....	36
Figure 4.10 A comparison of the overall recommendations for each group i.e first episode mental illness and existing mental illness admitted to Sterkfontein Hospital for forensic observation, 2011 - 2012	38

Abbreviations

Assault GBH: Assault with intent to cause grievous bodily harm

BD I: Bipolar I Disorder

BD II: Bipolar II Disorder

DSM IV-TR: Diagnostic and Statistical Manual of Mental Disorders Fourth Edition, Text Revision

DSM 5: Diagnostic and Statistical Manual of Mental Disorders Fifth Edition

EMI: Existing Mental Illness Group

FEMI: First Episode Mental Illness Group

GAD: Generalized Anxiety Disorder

Involuntary MHCU: Involuntary mental health care user

MDD: Major Depressive Disorder

MDP: Malicious damage to property

MI due to GMC: Mental illness due to a General Medical Condition

Observandi: This term is used to refer to individuals that are sent from the courts to forensic psychiatric hospitals for psychiatric observation

Responsible I: Refers to the ability of a person to appreciate the wrongfulness of his or her act or omission

Responsible II: Refers to the ability of a person to act in accordance with an appreciation of the wrongfulness of his or her act or omission

Robbery with aggr. circ.: Robbery with aggravating circumstances

PTSD: Post Traumatic Stress Disorder

SAD: Schizo-affective Disorder

SUD: Substance Use Disorder

SZP: Schizophrenia

CHAPTER ONE

INTRODUCTION

1.0 INTRODUCTION

Mentally unwell criminal offenders are becoming an increasing burden to Forensic Psychiatry. In studies conducted by Milton et al. (2001), Nielssen et al. (2011), as well as Simpson et al. (2004), there appears to be an increase in offences committed prior to diagnosis of psychiatric illness. This study compared the forensic observandi with first episode mental illness, to those with an existing mental illness. Clinical experience, in the forensic observation unit at Sterkfontein Hospital, shows offenders admitted with first episode mental illness are often found not responsible for the offence as a result of psychiatric illness, as pleaded under the insanity defence. The M’Naghten rule, otherwise known as the insanity defence, was devised in England in the year 1843. It is based on the exoneration of Daniel M’Naghten from the charge of murdering Edward Drummond, whom at the time he had mistaken to be the British Prime minister (Anonymous, 2010).

The M’Naghten rule, states that

a criminal defendant is not guilty by reason of insanity if at the time of the alleged criminal act the accused was labouring under such a defect of reason, from disease of the mind as to not know the nature or quality of the act he was doing was wrong, or, if he did know it, that he did not know he was doing what was wrong (Anonymous, 2013).

According to Lloyd Duhaime, lawyer of the Duhaime organisation, this rule implies that “at the time of the offence, the accused had a disease of the mind such that he was unable to know that his act was wrong” (Duhaime, 2013). The M’Naghten rule was recognised as the standard for the insanity defence in many geographical locations. The insanity defence in

South Africa, according to section 78 of Criminal Procedure Act (51 of 1977), remains centred on the M’Naghten rule:

A person who commits an act or makes an omission which constitutes an offence and who at the time of such commission or omission suffers from a mental illness or mental defect which makes him or her incapable –

a. of appreciating the wrongfulness of his or her act or omission;

or

b. of acting in accordance with an appreciation of the wrongfulness of his or her act or omission, shall not be criminally responsible for such act or omission.

1.1 Background to Forensic Psychiatry

Forensic psychiatry is a subspecialty of psychiatry. It is a field of psychiatry that incorporates the boundary between the criminal justice system and psychiatry. Trial awaiting detainees who are deemed by the courts to have a mental illness are referred to designated hospitals with forensic psychiatric units for psychiatric assessments according to section 79 of the Criminal Procedure Act (51 of 1977). These assessments involve thirty or sixty day periods of admission to the designated hospitals. The accused is primarily assessed by psychiatrists, however, other members of the multidisciplinary team such as psychologists, occupational therapists, and social workers, provide invaluable collateral information into the assessment of the accused (Kaliski, 2006). Assessments are made of the accused’s current mental state, collateral information is obtained on the accused’s mental state at the time of committing the offence as well as fitness to stand trial and criminal responsibility according to Section 77 and 78 of the Criminal Procedure Act (51 of 1977). The accused’s fitness to

stand trial refers to his / her ability to understand court proceedings as well as ability to make a proper defence. Criminal responsibility is a legal term and is determined according to Section 78 of the criminal procedure act which is based on the M’Naghten rule mentioned previously. The accused may be found not guilty for a criminal offence, if at the time of committing the alleged offence the accused was suffering from a mental illness or defect that impacted on his / her ability to appreciate the wrongfulness of their actions or ability to act in accordance with such an appreciation. After the observation period, these observandi are referred back to court.

A decision is made by the court according to the recommendations from the observation, as to whether the accused should be admitted as a state patient, involuntary mental health care user, or the trial should proceed as, i.e., there is no mental illness impacting on fitness or responsibility. The accused found not fit and not responsible, with serious offences, are referred back as state patients, whilst those with minor offences are referred back as involuntary mental health care users. However, if found not fit but criminally responsible, they are referred back as state patients in order to receive treatment for their psychiatric illness. Once psychiatrically stable and fit to stand trial, an application is made for these state patients to return to court for the trial to proceed.

The above background provided to forensic psychiatry provides a brief summary of a complex process.

1.2 Importance of the study

Sterkfontein hospital is becoming over-burdened with the increasing number of referrals of forensic observandi from the courts. Many of these observandi are referred back to the hospital as state patients or involuntary mental health care users. This is having a significant

impact on the capacity of the hospital to cope with the admission of state patients and involuntary mental health care users.

Sterkfontein Hospital is a designated forensic psychiatric hospital located in Krugersdorp, in Gauteng, South Africa. It is a state psychiatric facility that cares for state psychiatric patients, involuntary mental health care users, as well as conducting forensic assessments for observandi that are referred by the South African Judicial system. The hospital was established in 1943 and is affiliated to the University of the Witwatersrand, Johannesburg. It uses a multidisciplinary team approach, to care for psychiatrically unwell patients and has an approximate population of 480 admitted involuntary mental health care users, state patients, and forensic observandi. The hospital has a large number of admitted state psychiatric patients and an increasing rate of admission of forensic observandi. It thus forms the most suitable location to compare the incidence of first episode mental illness in patients who have committed criminal offences to those with an existing mental illness.

Mullen (2000) describes the importance of the responsibility of forensic mental health care services to psychiatric patients who have an increased propensity for violent behaviour. He elucidates the importance of early identification, treatment and management to help reduce violent behaviours that are identified in this group of patients. The impossibility of reducing all violent behaviours in this group is recognised. The following study compared the group of individuals that presented for forensic observation to Sterkfontein hospital with first episode mental illness and with an existing mental illness. By identifying common variables in the forensic observandi it is hoped that this research will enable the early identification of psychiatric patients who are believed to have an increased risk of committing violent behaviour. Thereby reducing the number of individuals admitted for observation and subsequently the admission of state patients and involuntary mental health care users.

CHAPTER TWO

LITERATURE REVIEW

2.0 LITERATURE REVIEW

Psychiatric patients are frequently associated with violent and criminal behaviour; this belief is often propagated by the media (Gunn, 2000). Studies have been conducted that assess criminal offences committed prior to diagnosis or treatment of a psychiatric illness. The literature review entails an overview of some of these studies on criminal behaviour and first episode mental illness, criminal behaviour in relation to major psychiatric diagnoses as well as comorbid Substance Use Disorders.

2.1 First episode mental illness and criminal behaviour

Milton et al. (2001) conducted a study which examined the relationship between first episode psychosis and aggression in 168 patients between June 1992 and May 1994 in the United Kingdom. The relationship, between aggressive behaviour in patients with first presentation of psychosis to psychiatric facilities and when followed up three years later, was investigated. Information on aggressive behaviour was obtained from forensic and psychiatric records. Aggressive acts were categorised according to timing into three categories; the first evident change in behaviour attributed to illness but not the onset of psychotic symptoms, the point of first contact with psychiatric facilities and, the end of the study period i.e. the point of the three year follow up.

A comparison of the data obtained concluded that, approximately one third of the sample was responsible for 166 aggressive acts prior to first contact with a psychiatric facility. There was an association between having a longer period of untreated illness and the incidence of committing an aggressive act. The reliability of the study in reporting the incidence of aggressive acts is questionable as reported by the authors. This was as a result of the

unreliability of patients in reporting aggressive acts and the difficulties experienced by the researchers in obtaining confidential data from criminal records.

Criminal offenders are found not guilty for an offence due to mental illness, based on Section 77 and 78 of the criminal procedure act of South Africa. An interesting study by Nielssen et al. (2011), in New South Wales, compared first episode psychosis and previously treated persons with psychosis found not responsible for a violent offence because of mental illness. Demographic, clinical and criminological characteristics of the two groups of people were compared. Information for the study was obtained from court documents of all forensic patients found not responsible for a violent offence due to mental illness between 1992 and 2008. An increased incidence of homicides was found in patients who had not received prior treatment for a mental illness. The authors concluded that there is a significant association between criminal offences committed prior to diagnosis or treatment of mental illness and recommended that early diagnosis and treatment of psychiatric disorders may reduce some criminal behaviour in the mentally unwell.

Comparison of demographic data in the study found that the untreated group were younger and from non-English speaking countries, no differences were identified for gender, highest level of education, and employment status. It can be expected that in the South African setting differences in demographic variables may be greater as our population is considered to have far greater ethnic and socio-economic diversity.

Similar conclusions were found in a retrospective study by Simpson et al. (2004). An analysis of New Zealand government and hospital records between 1970 and 2000 was conducted. The study compared the incidence of homicides that were committed by the mentally well and mentally unwell, i.e., those found unfit to stand trial or not guilty by reason of insanity. Of the 1498 total homicides committed in the designated time period, 130 were

found to have been committed by the mentally unwell. Over a quarter of these mentally ill offenders were found not to have a previous diagnosis of psychiatric illness. This reflects a small but significant proportion of individuals. However, concerns must be raised over the accuracy of the data obtained for the study. Multiple sources of information had to be used to improve comprehensiveness and accuracy which, given the large sample size, may have resulted in more inaccuracies when obtaining the information. In addition most of the original sources of information were recorded by non-researchers and there may be a substantial amount of information that was incompletely recorded in these sources. As a result the proportion of criminal offenders without a previous diagnosis of mental illness may be much higher.

Nielssen et al. (2010) conducted a meta-analysis of ten studies assessing the incidence of homicides that occurred prior to treatment of first episode psychosis as compared to after treatment. It was concluded that the incidence of homicides prior to treatment of psychosis is greater than previously identified. This meta-analysis study shows that a significant number of offences occur prior to treatment of a psychiatric illness and the majority of offences are seen in patients with psychotic disorders.

The above mentioned studies indicate that a substantial proportion of undiagnosed psychiatric patients are responsible for violent criminal behaviour. The majority of these studies described, assess the relationship between psychotic disorders and criminal offending. The impact of other major psychiatric diagnoses on criminal behaviour is not often assessed.

2.2 The association between criminal behaviour and major psychiatric diagnoses

Tiihonen et al. (1997) carried out a prospective study in Northern Finland which assessed a birth cohort from 1966, in an attempt to establish if there is a quantifiable risk between a specific mental disorder and criminal behaviour. Demographic variables, psychiatric disorders, and criminal offences, were assessed at different points over a 26 year period. The study concluded that several specific mental disorders are associated with an elevated risk for criminal and violent behaviour as compared to subjects with no mental illness. They found an increase in violent offences in persons with Schizophrenia and comorbid substance use. Another finding was the increased association between patients diagnosed with Schizophrenia and criminal offences. The study was however unable to ascertain if schizophrenia alone is associated with a higher risk of violent behaviour as the majority of the sample had a comorbid Substance Use Disorder and only 3 cases had a diagnosis of Schizophrenia without substance use. The increased incidence of comorbid substance use in the majority of the cases impacted negatively on the study achieving its specified aims. Further research is recommended to determine if there is a specific increased risk of violent behaviour in Schizophrenia alone.

A Danish birth cohort study looked at individuals born between January 1944 and December 1947, and followed up these individuals 44 years later (Brennan et al., 2000). The aim was to determine the relationship between major mental disorders including; Schizophrenia, Affective Disorders, and Organic Brain Syndromes, and the risk of violence. The study compared demographic data which was obtained from Danish national registers and details of a criminal offence from the Danish criminal register. This study proved to be of greater value than the study by Tiihonen et al. (1997) because of the longer duration of follow up, i.e., 44 years as compared to only 26 years. This study by Brennan et al. (2000) concluded that there

is an association between having a major mental disorder and being arrested for a violent offence, which is a similar finding to other studies. When comparing the difference between each major mental disorder and the risk of committing an offence, a gender difference was identified. Males with Organic Brain Syndrome and females with Schizophrenia were associated with increased arrests for violence. The risk of violent offence was also shown to be increased in both males and females with Schizophrenia. Of note from the study, Schizophrenia was the only disorder that showed an independent association with an increased risk of violent offences in both males and females. Socio-economic status, marital status and concurrent disorders such as substance abuse were not shown to have a significant impact in the Schizophrenic group.

In the study by Nielssen et al. (2011) a comparison was done of the clinical diagnoses of the two patient groups with previously diagnosed and undiagnosed mental illness. The majority of the patients in the sample were found to have a diagnosis of Schizophrenia. The remaining patients had a diagnosis of Schizo-Affective Disorder, Substance Induced Psychosis, Psychosis due to Epilepsy, Psychotic Depression, Bipolar Disorder, Organic Psychosis and Cognitive Impairment. A significant proportion of the offenders had a diagnosis of a Psychotic Disorder with a comorbid diagnosis of a Substance Use Disorder. Interestingly this reflects a great diversity of disorders that are associated with violent behaviour. However, Psychotic Disorders remain the most common disorder found to be associated with violent behaviour.

It can be concluded that amongst the major psychiatric diagnoses, Psychotic Disorders have been identified as having the most significant association with criminal or violent behaviour. In addition, the above studies have found an association between major psychiatric diagnoses with comorbid Substance Use Disorders and criminal behaviour.

2.3 The association between psychiatric disorders with comorbid Substance Use Disorders and the risk of criminal behaviour

There has been a consistent finding in many studies of an association between violent criminal behaviour in psychiatric patients with a comorbid diagnosis of a Substance Use Disorder (Brennan et al. 2000; Milton et al. 2001; Nielssen et al. 2011; and Tiihonen et al. 1997). In some studies, such as the study by Tiihonen et al. (1997), as a result of the high incidence of comorbid substance use in the sample of patients with psychiatric disorders it was difficult to assess the impact of specific psychiatric disorders on criminal behaviour.

A meta-analysis study, conducted by Soyka (2000), investigated the association between Schizophrenia with comorbid Substance Use Disorder and the risk of violent behaviour. A comparison of the studies was conducted using clinical data, epidemiological studies and longitudinal prospective studies of birth cohorts. According to this meta-analysis, substance use in patients with Schizophrenia is increasing as well as substance use in patients with first episode mental illness. It was identified that there is an overall increase in aggressive and violent behaviour in patients with comorbid Substance Use Disorders. The impact of comorbid Substance Use Disorders in patients with Psychiatric Disorders has profound implications in terms of the risk of violence, the risk of recurrent violence and non-adherence to treatment. The impact of other variables such as demographic factors, socioeconomic factors, early onset illness, severity of illness, and non-adherence to treatment, in patients with major psychiatric disorders and comorbid Substance Use Disorders may too be implicated in increasing the risk of violent behaviour.

The incidence of Substance Use Disorders in South Africa is far greater than any other psychiatric disorder as concluded from the South African Stress and Health study (Stein et al., 2008). There is a scarcity of studies that look at the incidence of criminal offences in

persons diagnosed with first episode mental illness and comorbid Substance Use Disorders. It is thus important to identify in the South African setting where the incidence of substance use disorders is increasing, if there is an association between criminal offending and comorbid Substance Use Disorders.

2.4 Conclusion

There is a paucity of studies in South Africa that compare forensic observandi admitted with first episode mental illness and an existing mental illness. These comparisons are of clinical importance and relevance in psychiatry. There is a steady increase in the number of referrals from the courts to the forensic observation unit at Sterkfontein hospital. The capacity to cope with these observandi at Sterkfontein hospital is becoming increasingly difficult due to overcrowding and the diminishing availability of resources. Individuals who are referred for observation are put onto a waiting list, there was an average of 25 referrals per month in 2011 and 23 per month in 2012. The increase in referrals of mentally unstable observandi ultimately results in an increase in the number of admissions of state psychiatric patients and involuntary mental health care users. Admission of undiagnosed and untreated mentally unwell observandi results in an even greater increase in the admission of state patients and involuntary mental health care users, as the majority of these observation admissions are unstable. It is imperative to compare these two groups of individuals with previously undiagnosed and previously diagnosed mental illness in order to identify possible common factors that could assist in reducing the increasing rates of admissions and referrals. Differences in age, gender and ethnicity were identified in previous studies. It will be interesting to identify in the South African setting with its great diversity of cultures if any similarities can be drawn. In addition, by identifying an association with a specific psychiatric disorder and a criminal offence this will help increase awareness amongst families

and health care providers of psychiatric patients. Identification of a significant association between comorbid Substance Use Disorders and criminal offences could assist in increasing awareness of the impact of substance use. It is also expected that this information will filter out to the communities to help increase awareness of mental illness and improve diagnosis and treatment, thereby reducing the incidence of criminal offences in the mentally unwell. This information may assist the multi-disciplinary team in obtaining a better understanding of the impact of mental illness on criminal behaviour and may provide additional information on managing forensic patients.

CHAPTER THREE

THE STUDY

3.0 THE STUDY

3.1 Objectives

The primary aim of the study was to compare forensic observandi admitted with first episode mental illness to those with an existing mental illness.

Specific objectives that were assessed in the forensic observandi admitted to Sterkfontein hospital included:

1. To describe demographic characteristics, including: age at the time of the study, gender, highest level of education obtained, marital status, as well as employment status.
2. To compare diagnoses in previously diagnosed and undiagnosed observandi.
3. To compare these two groups of observandi with regard to demographic characteristics, as well as the nature of the criminal offence/s, and different psychiatric diagnostic groups.
4. Other assessed information included:
 - 4.1 The prevalence of Substance Use Disorders in observandi with first episode mental illness and those with an existing mental illness.
 - 4.2 The nature of the criminal offence/s, i.e. violent or non-violent, in observandi with only one psychiatric diagnosis as compared to those with dual diagnoses. The following offences were categorised as violent: murder, attempted murder, sexual offences, assault with intent to cause grievous bodily harm, common assault, malicious damage to property, arson and domestic violence. Whilst robbery with aggravating

circumstances, burglary, theft, bomb threat, and drug possession, were categorised as non-violent.

5. To compare the outcomes for the observandi in terms of fitness to stand trial and criminal responsibility.
6. To compare the outcomes for the observandi with regard to admission as a state patient, admission as an involuntary mental health care user, or to stand trial.

3.2 Design

This is a retrospective, cross sectional record review using archival data, which has descriptive and comparative components.

3.3 Method

The study population comprised all adult (above 18 years) male and female forensic observandi admitted to Sterkfontein Hospital between 01 January 2011 and 31 December 2012. Exclusion criteria included patients under the age of 18 years, and those found not to have a psychiatric diagnosis at the end of their period of observation.

The observandi hospital records were accessed as the source of data to obtain the following (Appendix One):

1. Demographic details (including age, gender, highest level of education, marital status, as well as employment status at time of offence).
2. Clinical diagnoses of those observandi known with mental illness as well as those presenting for the first time with a psychiatric diagnosis.

3. The actual offence committed and the nature of this, i.e., violent / non-violent.
4. The nature of the criminal offence/s, i.e., violent or non-violent, in observandi with only one psychiatric diagnosis as compared to those with dual diagnoses.
5. Observandi found not to have a psychiatric diagnosis at the end of the observation period were identified.
6. The outcome of the observation period was recorded.

3.4 Statistical Analysis

The data was entered into an Excel spread sheet and analysed using SAS (SAS Institute Inc.). A summary of the demographic and clinical data was drawn up. Descriptive statistics included frequencies and percentages for categorical data and means and standard deviations for continuous data. Comparisons between the two groups (the previously undiagnosed group with the previously diagnosed group) with regard to the demographic data, diagnoses, nature of the offences, fitness to stand trial, criminal responsibility, and the recommendations, were conducted using the chi-squared test (or Fisher's exact test in the case of 2x2 tables).

Comparisons of the nature of the offence in each of the different categories of diagnoses, as well as whether there were single or dual diagnoses, were assessed to ascertain whether any parallels between the different diagnoses and the offences committed could be identified.

The association between the nature of the offence and substance use was also tested. These associations were also tested by using the chi-squared test. The outcomes of the observation period, fitness to stand trial, and the assessment of responsibility, was modelled by logistic regression in terms of the demographic variables as well as group (first episode or existing mental illness), diagnosis, single / dual diagnosis, treatment status, offence type, and

substance abuse. Similarly, offence type (violent / non-violent) was modelled by logistic regression in terms of the demographic variables, as well as group (first episode or existing mental illness) diagnosis, single / dual diagnosis, treatment status and substance abuse.

Between-group tests were conducted as follows:

The X^2 test was used to assess the relationships between categorical variables. Fisher's exact test was used for 2 x 2 tables or where the requirements for the X^2 test could not be met. The strength of the associations was measured by Cramer's V and the phi coefficient respectively.

The 5% significance level was used throughout, unless specified otherwise. In other words, p-values <0.05 indicate significant results.

3.5 Ethics

Authorisation to conduct the study was obtained from the Clinical Head of Sterkfontein Hospital (Appendix Two) and ethics approval was obtained from the University of the Witwatersrand Human Research Ethics committee (Appendix Three). Observandi's personal demographic details such as names and surnames remained confidential and anonymous. Each observandi's file was allocated a number and a separate register was kept of their name and surname as well as the corresponding hospital number. Consent was obtained from the 16 patients who were admitted to Sterkfontein Hospital at the time of data collection.

3.6 Funding

The project was financed by the investigator.

CHAPTER FOUR

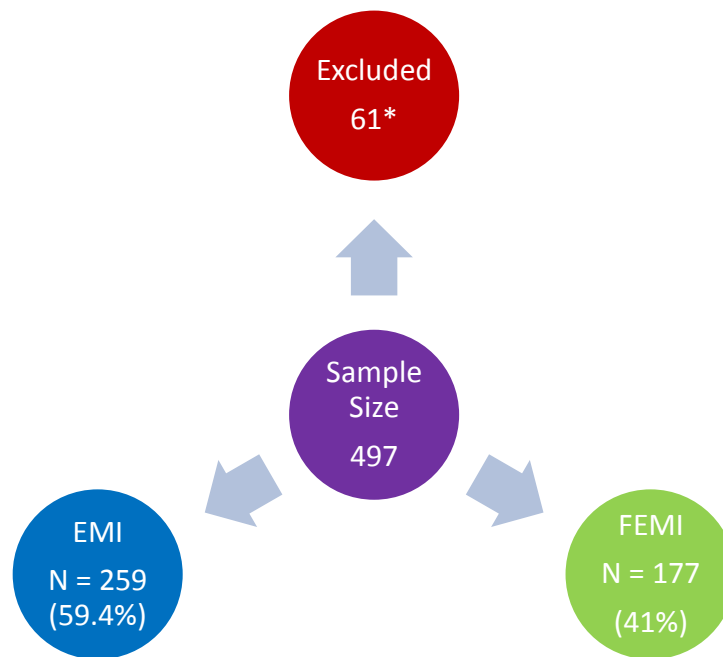
RESULTS

4.0 RESULTS

Records of all adult observandi admitted to Sterkfontein Hospital between January 2011 and December 2012 were accessed. A total of 599 observandi were admitted for this period. Of these 29 were adolescents (i.e. younger than 18 years) and, as a result, they were excluded from the study. In addition, 73 observandi were excluded because their files were missing. This left a sample of 497 observandi. However, a further 59 were excluded as they were found to have no diagnosis at the end of the observation period. Two observandi had to be excluded at the conclusion as a diagnosis, or previous diagnosis, was unknown.

The remainder of the sample, consisted of 436 observandi who were divided into two groups: A total of 41% of the obdervandi (N = 177) had a new diagnosis of mental illness and this then comprised the first episode mental illness group (EMI); while 59.4% (N = 259) had a previous diagnosis of mental illness and they formed the existing mental illness group (FEMI).

Diagram 4.1 Summary of the sample constituents



EMI: Existing mental illness

FEMI: First episode mental illness

*The Excluded group included 59 observandi found to have no mental illness at the end of the observation period and 2 for which data was missing

4.1 Descriptive Results

4.1.1 Description and comparison of the demographic profile of the first episode mental illness and existing mental illness groups

4.1.1.1 Gender

Of the total sample of observation patients 89.9% (N = 392) were male, and 10.1% (N = 44) female. The existing mental illness group consisted of 12.4% (N = 32) females, and 87.6% (N = 227) males. The first episode mental illness group consisted of 6.8% (N = 12) females and 93.2% (N = 165) males.

4.1.1.2 Age

The average age of the observandi was 33.8 years. The first episode mental illness group consisted of younger individuals, in the 18 to 30 year category, and the majority of the existing mental illness group patients were in the 41+ category.

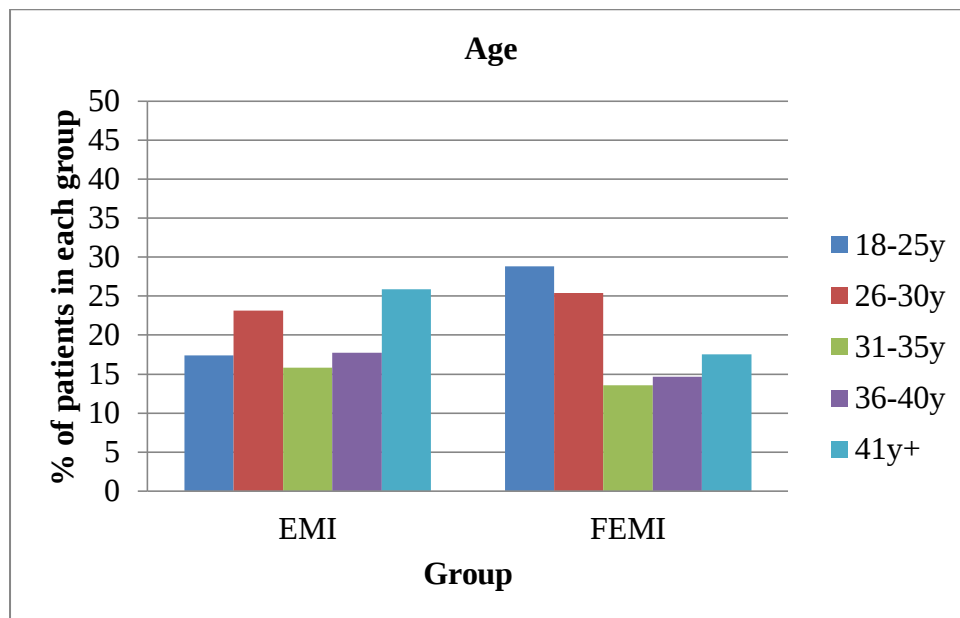


Figure 4.1: Distribution of age across the first episode mental illness and existing mental illness groups of observandi admitted to Sterkfontein Hospital, 2011 - 2012
EMI: existing mental illness, FEMI: first episode mental illness

4.1.1.3 Marital Status

The majority of the sample was single. For the analysis the following was grouped as a category; single, divorced, widowed or separated, were all referred to as “single”. This category included 86.7% (N = 378) of the total sample, 88.4% (N = 229) of the existing mental illness group and 84.2% (N = 149) of the first episode mental illness group. The total sample of those either married or attached comprised 11% (N = 48), which was 10.8% (N = 28) of the existing mental illness group and 11.3% (N = 20) of the first episode mental illness

group. In 2.3% (N = 10) of this study sample the information pertaining to marital status was missing.

4.1.1.4 Level of Education

Of the observandi from the study period 64.9% (N = 283) had a secondary level of education: 67.2% (N = 174) of these were in the existing mental illness group, and 61.6% (N = 109) were from the first episode mental illness group. Overall, 19.5% (N = 85) had either never attended school or had a primary level of education, 5.5% (N = 24) had attended remedial or special school, and for 6.2% (N = 27) the data was missing. Of the existing mental illness group 17% (N = 44) never attended school or had a primary level of education, 6.2% (N = 16) had received tertiary education, 5.4% (N = 14) attended special or remedial school, and for 4.2% (N = 11) the data was missing. The level of education of observandi in the first episode mental illness group included 23.2% (N = 41) that received no or primary level of education, 0.6% (N = 1) who received tertiary education, 5.6% (N = 10) that had attended special or remedial school, and 9% (N = 16) for whom the data was missing.

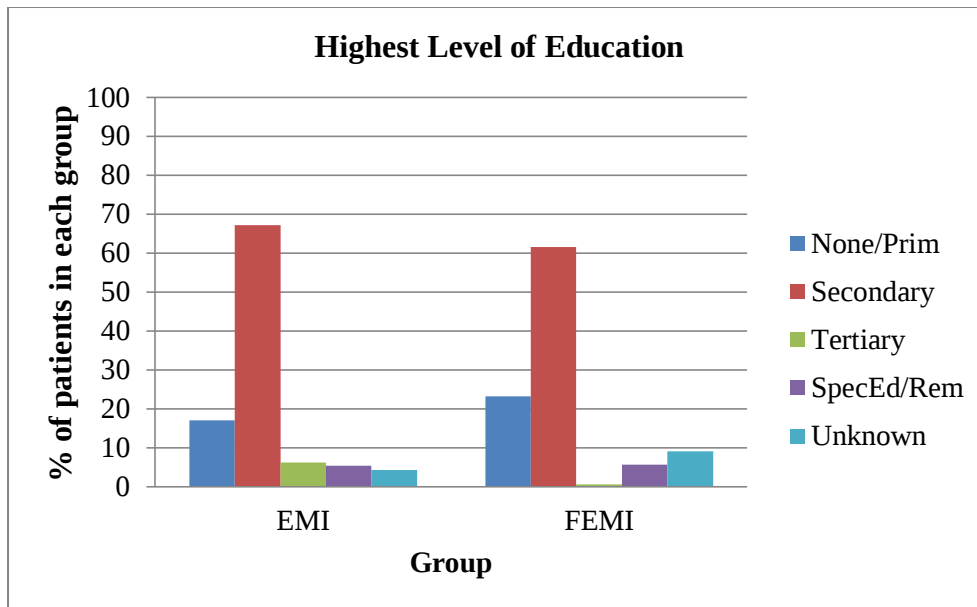


Figure 4.2: Highest level of education represented in the first episode mental illness and existing mental illness groups of observandi admitted to Sterkfontein Hospital, 2011 - 2012

EMI: existing mental illness, FEMI: first episode mental illness

SpecED/Rem: Special Education/Remedial

4.1.1.5 Occupational Functioning

The greater part of the sample was unemployed 76.1% (N = 332): this included 76.4% (N = 198) from the existing mental illness group, and 61.6% (N = 134) from the first episode mental illness group. In the remainder of the sample 19.5% (N = 85) were employed, while for 4.4% (N = 19) the employment status was unknown.

4.1.1.6 Family Psychiatric History

Of the total sample, including both first episode and existing mental illness groups, 16.7% (N = 73) had a positive family history of mental illness, 58.7% (N = 256) had no family history of mental illness, and for 24.5% (N = 107) of the sample this information was unknown.

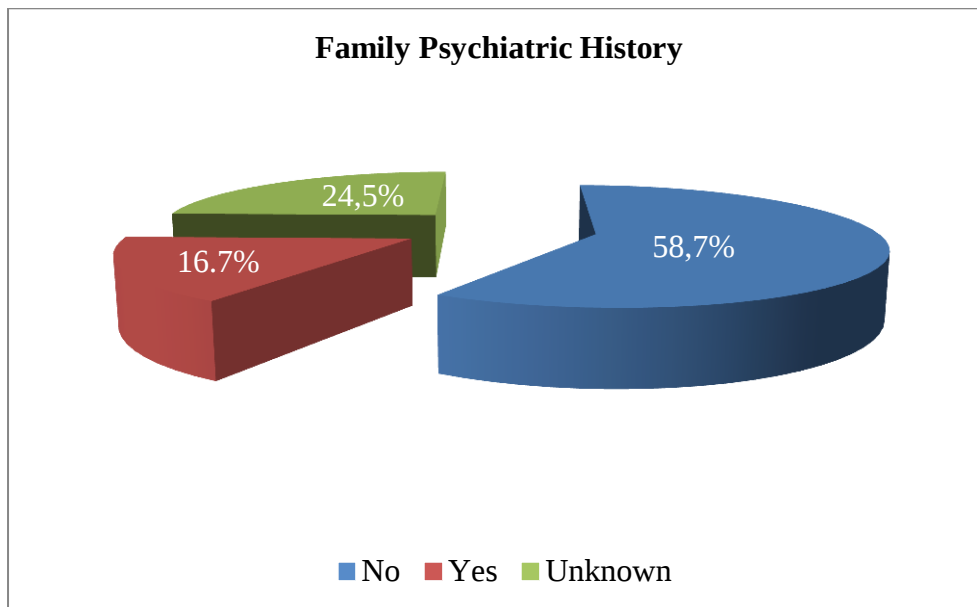


Figure 4.3: A comparison of the history of psychiatric illness in the family of the sample constituents admitted to Sterkfontein Hospital for forensic observation, 2011 – 2012

4.1.2 Treatment of mental illness

Of the existing mental illness group, 96.1% (N = 249) had received previous treatment for a mental illness, 3.5% (N = 9) had no prior treatment for mental illness, and for 0.4% (N = 1) this was unknown. This was the index presentation to psychiatric services for individuals in the first episode mental illness group and as a result none of them had a prior history of treatment for a mental illness.

In this study, 18.3% (N = 79) were on treatment during the observation period. For the observation period studied, 30.5% (N = 79) of the existing mental illness group were continued on treatment, and 0.6% (N = 1) of the first episode mental illness group was commenced on treatment.

4.1.3 A comparison of the diagnoses in the first episode mental illness and existing mental illness groups

The prevalence of the individual conditions is shown below. Note that the percentages do not sum to 100% since some observation patients had more than one diagnosis. Generally, the most common diagnosis, 49.1% (N = 214), was of Substance Use Disorder.

There were significant, weak, associations in the study sample for these conditions:

- Schizophrenia ($p=0.017$; phi coefficient=0.11): A higher proportion of FEMI had this diagnosis, compared to EMI.
- Intellectual disability ($p=0.041$; phi coefficient=0.10): A higher proportion of FEMI had this diagnosis, compared to EMI.
- Bipolar Type I ($p<0.0001$; phi coefficient=0.19): A higher proportion of EMI had this diagnosis, compared to FEMI.

There was no significant association between the other diagnoses and the two groups.

Overall, 49.1% (N = 214) of the sample had a diagnoses of Substance Use Disorder; of these 47.1% (N = 122) belonged to the existing mental illness group and 52% (N = 92) to the first episode group.

A diagnosis of Schizophrenia was found in 27.8% (N = 121) of the observandi. A higher percentage of Schizophrenia was found in the existing mental illness group 32% (N = 83), as compared to the first episode mental illness group 21.5% (N = 38). A total of 22.7% (N = 99) of the sample had a diagnosis of Other Psychotic disorder: this included Catatonia, Substance / Alcohol Induced Psychotic Disorder, and an Unspecified Psychotic Disorder. A

marginally greater number of these obsevani were found in the first episode mental illness group 23.2% (N = 41) as compared to the existing mental illness group 22.4% (N = 58).

Bipolar I was the diagnosis given to 6% (N = 20) of the total sample: 9.7% (N = 25) of the existing mental illness group, and 0.6% (N = 1) of the first episode group.

A diagnosis of Major Depressive Disorder was found in 4.6% (N = 20) of the sample: 6.2% (N = 16) from the existing mental illness group and 2.3% (N = 4) from the first episode group.

Personality disorders comprised 8% (N = 35) of the total sample: 8.9% (N = 23) from the existing mental illness group and 6.8% (N = 12) from the first episode group. Mental illness due to a general medical condition was found in 12.2% (N = 53) of the sample: 12.7% (N = 33) from the existing mental illness group and 11.3% (N = 20) from the first episode group. Only the existing mental illness group contained obsevani with Post-Traumatic Stress Disorder and Impulse Control Disorder, which comprised 1.9% (N = 5) and 0.4% (N = 1) of the group respectively.

None of the observandi were found to have a diagnosis of Delusional Disorder, Bipolar II Disorder, Dysthymia, Generalized Anxiety Disorder, Panic Disorder, Factitious Disorder, Dissociative Disorder, or a Sleep Disorder. Of the total sample, 2.3% (N = 10) were found to be Malingering: 1.2% (N = 3) from the existing mental illness group, and 4% (N = 7) from the first episode group.

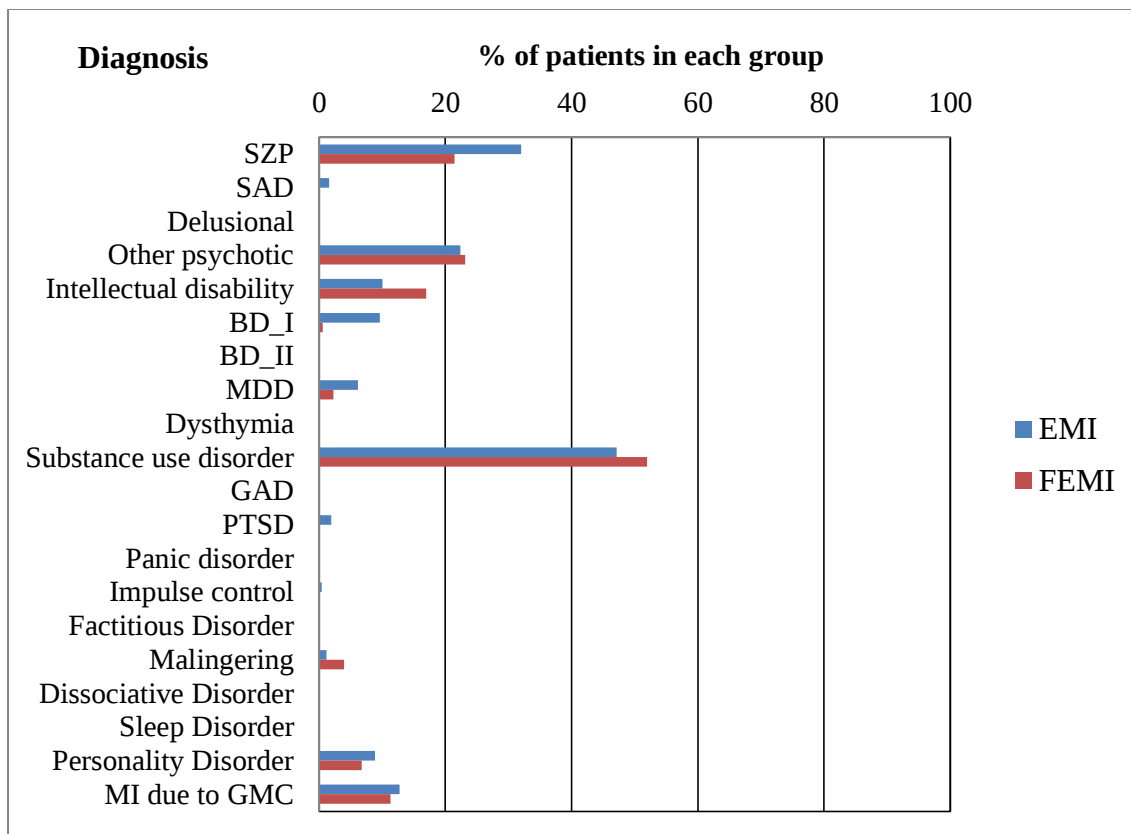


Figure 4.4: Comparison of the diagnoses in the first episode mental illness and existing mental illness groups admitted to Sterkfontein Hospital for forensic observation, 2011 - 2012

EMI: existing mental illness,

FEMI: first episode mental illness

4.2 Comparative Results

4.2.1 Type of offence compared by group

The proportions of observandi with individual offence types are shown below. Note that the percentages do not sum to 100%, since some observandi had more than one offence. Overall, sexual offence was the most common type of offence (25.9%)(N = 113).

Records of the observandi in the existing mental illness group showed arrests for the following offences: 8.1% (N = 21) murder, 3.9% (N = 10) attempted murder, 26.3% (N = 68) sexual offences, 3.1% (N = 8) kidnapping, 22% (N = 57) assault with intent to commit

grievous bodily harm, 5.4% (N = 14) common assault, 1.2% (N = 3) domestic violence, 7.7% (N = 20) malicious damage to property, 4.2% (N = 11) robbery with aggravating circumstances, 3.9% (N = 10) burglary, 19.7% (N = 51) theft, 0.8% (N = 2) arson, 0.4% (N = 1) bomb threat, 1.9% (N = 5) drug possession, 1.2% (N = 3) crimen injuria, and 0.4% (N = 1) cruelty to animals.

Findings in the first episode group include arrests for the following offences: 13.6% (N = 24) murder, 6.8% (N = 12) attempted murder, 25.4% (N = 45) sexual offences, 13% (N = 23) assault with intent to commit grievous bodily harm, 4.5% (N = 8) common assault, 9% (N = 16) malicious damage to property, 5.6% (N = 10) robbery with aggravating circumstances, 7.3% (N = 13) burglary, 18.1% (N = 32) theft, 1.1% (N = 2) arson, 2.8% (N = 5) drug possession, and 2.8% (N = 5) crimen injuria. According to the records, none of the observandi in the first episode group was arrested for kidnapping, domestic violence, a bomb threat, or cruelty to animals.

There were significant, weak, associations with each group for these conditions:

- Kidnapping ($p=0.024$; phi coefficient=0.11): A higher proportion of EMI committed this offence, compared to FEMI.
- Assault with intent to cause grievous bodily harm ($p=0.017$; phi coefficient=0.11): A higher proportion of EMI committed this offence, compared to FEMI.

However, for the other offence types there were no significant differences between the two groups.

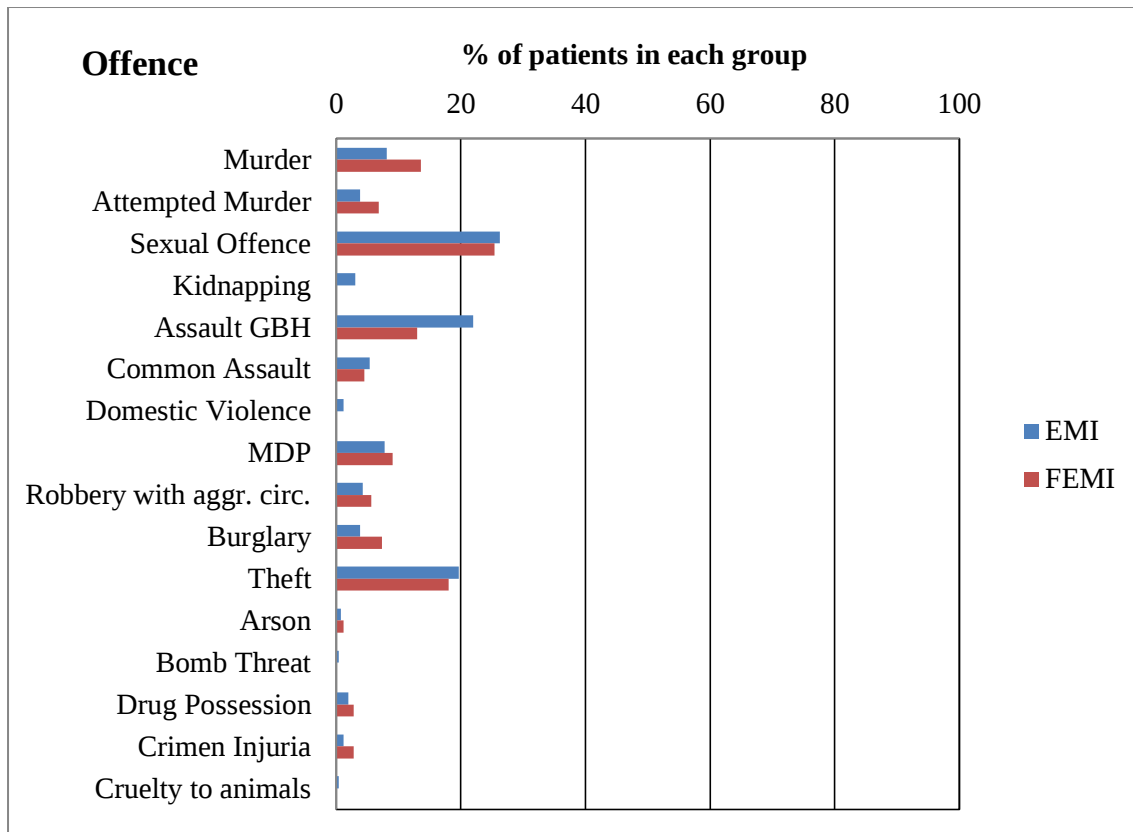


Figure 4.5: Comparison of the offence committed by the first episode mental illness group, to that of the existing mental illness group admitted to Sterkfontein Hospital for forensic observation, 2011 - 2012

EMI: existing mental illness,

FEMI: first episode mental illness

4.2.2 Number of offences

Overall, 21.1% (N = 92) of the observandi had committed two offences, while the rest, 78.9% (N = 344), had committed one offence. There was no significant association between the number of offences committed and the group to which observandi belonged. Of the existing mental illness group 20.5% (N = 53) committed two offences and 22% (N = 39) of the first episode mental illness group.

4.2.3 Nature of the offence

Overall, 72.2% (N = 315) of the observandi had committed violent offences. There was no significant association between violent or non-violent offence and group. Of the existing mental illness group 73.4% (N = 190) committed a violent offence, which was, a similar finding in the first episode mental illness group 70.6% (N = 125).

4.2.4 Comparison of substance use disorders in first episode mental illness and existing mental illness groups

As mentioned previously, the majority of the observandi were diagnosed with Substance Use Disorder: 49.1% (N = 214). A larger proportion of these belonged to the existing mental illness group, 57% (N = 122), as compared to the first episode mental illness group, 43% (N = 92).

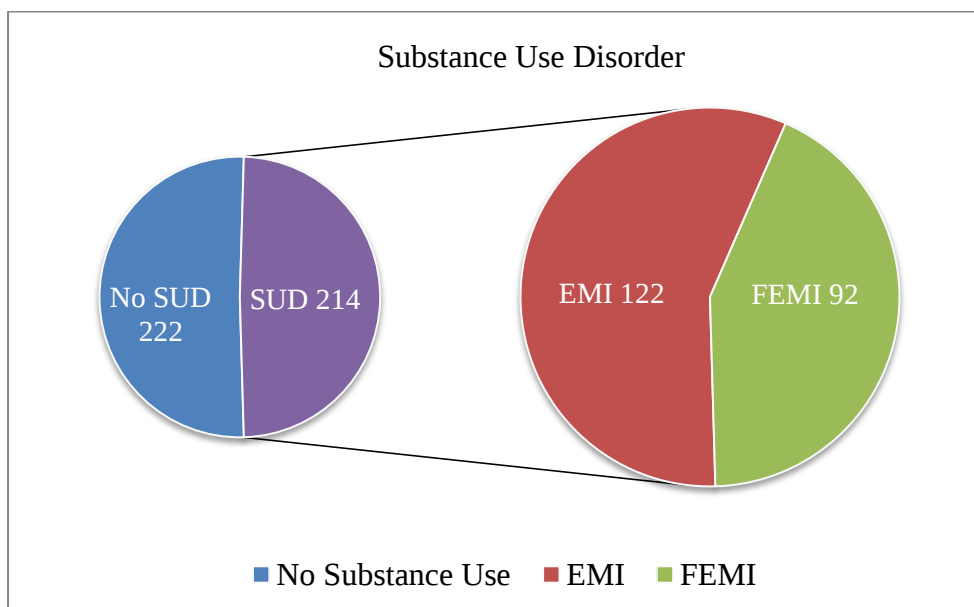


Figure 4.6: Comparing Substance Use Disorder in the first episode mental illness and existing mental illness groups admitted to Sterkfontein Hospital for forensic observation, 2011 – 2012.

EMI: existing mental illness,

FEMI: first episode mental illness

No SUD: No substance use disorder

SUD: Substance use disorder

4.2.5 Comparison of the nature of the offence between observandi with a single diagnosis and those with a dual diagnosis (i.e., comorbid Substance Use Disorder)

The most significant primary psychiatric diagnoses linked to comorbid Substance Use Disorder were Bipolar I 12.56% (N = 53), Schizophrenia 12.32% (N = 52), Intellectual Disability 7.35% (N = 31), Other Psychotic Disorder 3.79% (N = 16), and Major Depressive Disorder 11.14% (N = 47).

- Malicious Injury to Property: A higher percentage of those with Schizophrenia and comorbid Substance Use Disorder 66.7% (N = 24) committed this offence, as compared to those without a comorbid Substance Use Disorder.
- Attempted Murder: A higher proportion of those with Other Psychotic Disorders and comorbid Substance Use Disorders 40.9% (N = 9) committed this offence, as compared to those without a comorbid Substance Use Disorder.
- Murder: A higher proportion of those with Intellectual Disability and comorbid Substance Use Disorders 53.3% (N = 24) committed this offence, as compared to those without a comorbid Substance Use Disorder.
- Sexual Offences: A higher proportion of those with Bipolar I and comorbid Substance Use Disorders 42.5% (N = 48) committed this offence, as compared to those without a comorbid Substance Use Disorder.
- Assault with intent to cause grievous bodily harm: A higher proportion of those with Major Depressive Disorder and comorbid Substance Use Disorders 48.1% (N = 39) committed this offence, as compared to those without a comorbid Substance Use Disorder.

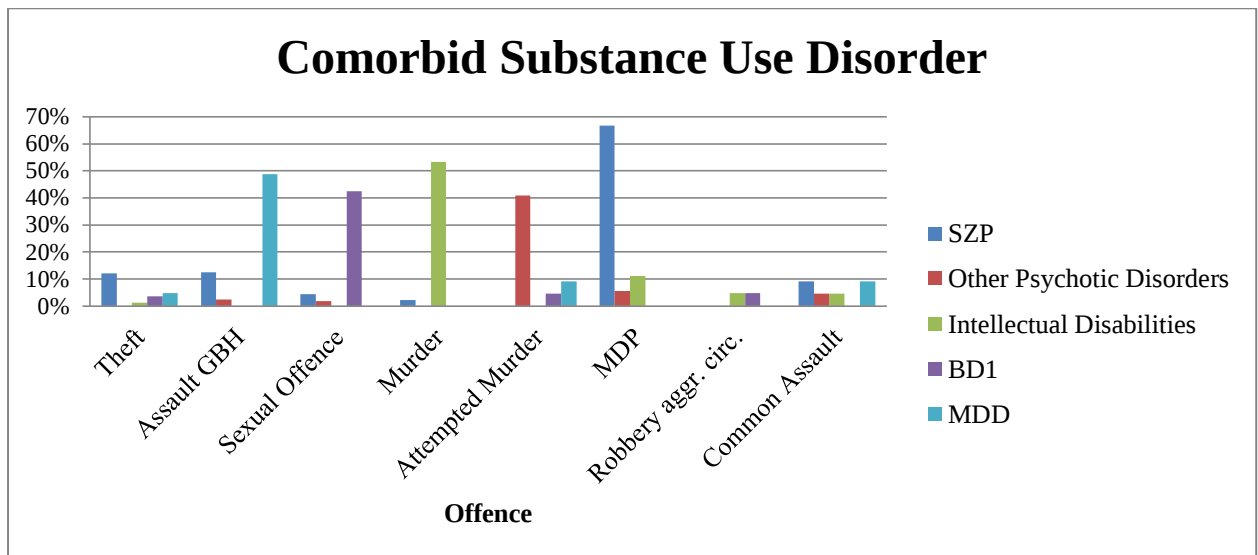


Figure 4.7: Profile of offences in observandi with a comorbid Substance Use Disorder admitted to Sterkfontein Hospital, 2011 - 2012

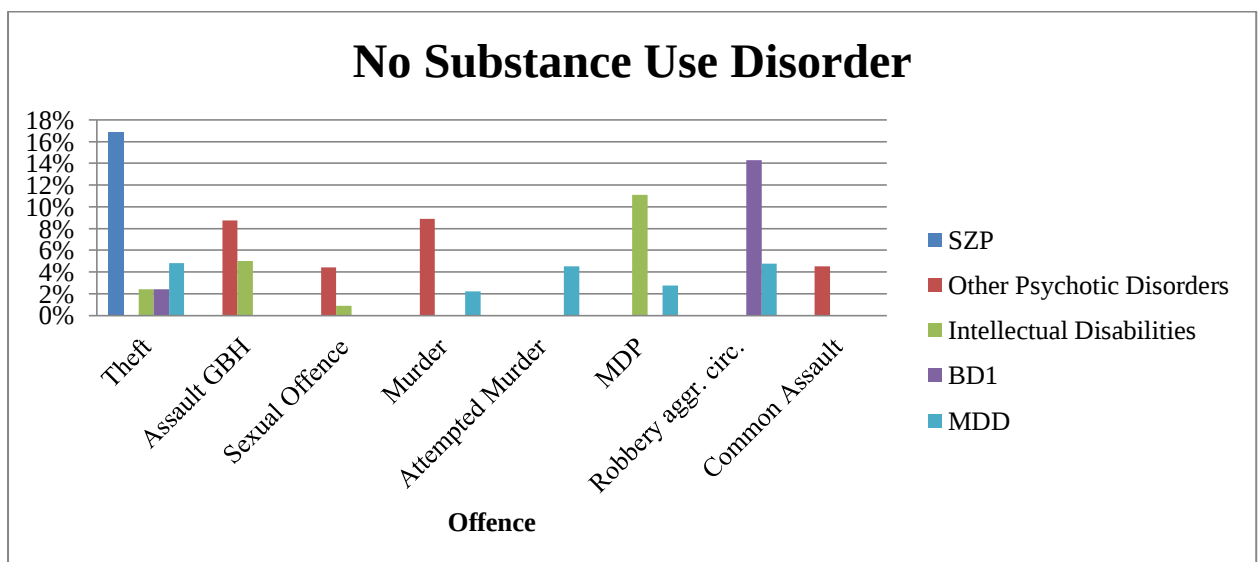


Figure 4.8: Profile of offences in observandi with no comorbid Substance Use Disorder admitted to Sterkfontein Hospital, 2011 - 2012

4.2.6 Association between a specific offence and diagnosis

The following was concluded by comparing the different categories of offences to the diagnoses at the end of the observation period, controlling for each of the groups. A 95% confidence level was used throughout.

- Attempted Murder is associated with a diagnosis of Major Depressive Disorder, controlling for group (OR 0.84).
- Sexual Offence is associated with a diagnosis of Intellectual Disability, controlling for group (OR 3.1).
- Assault with intent to cause grievous bodily harm is associated with diagnosis of Schizophrenia, controlling for group (OR 1.29).
- Malicious injury to property is associated with diagnosis of Other Psychotic disorder controlling for group (OR 1).
- Theft is associated with not having a diagnosis of Intellectual Disability, Major Depressive Disorder (OR 1.18), Malingering (OR 1.31) or Personality Disorder (OR 1.55), controlling for group.

4.2.7 A comparison of the outcomes of the observation period

4.2.7.1 Fitness to stand trial

The majority of the sample were found fit to stand trial: 55.7% (N = 243). This was compared to the rest of the sample who were found not fit to stand trial: 44% (N = 192). For one individual this was unknown. There was a significant, weak association between fitness to stand trial and group ($p=0.024$; phi coefficient=0.11).

This included, in the existing mental illness group, 60.2% (N = 156) of the observandi who were found to be fit to stand trial; in comparison to 39.4% (N = 102) who were found not fit. In addition, 49.2% (N = 87) of the first episode mental illness group observandi were found fit to stand trial, while 50.8% (N = 90) of this group were not fit to stand trial.

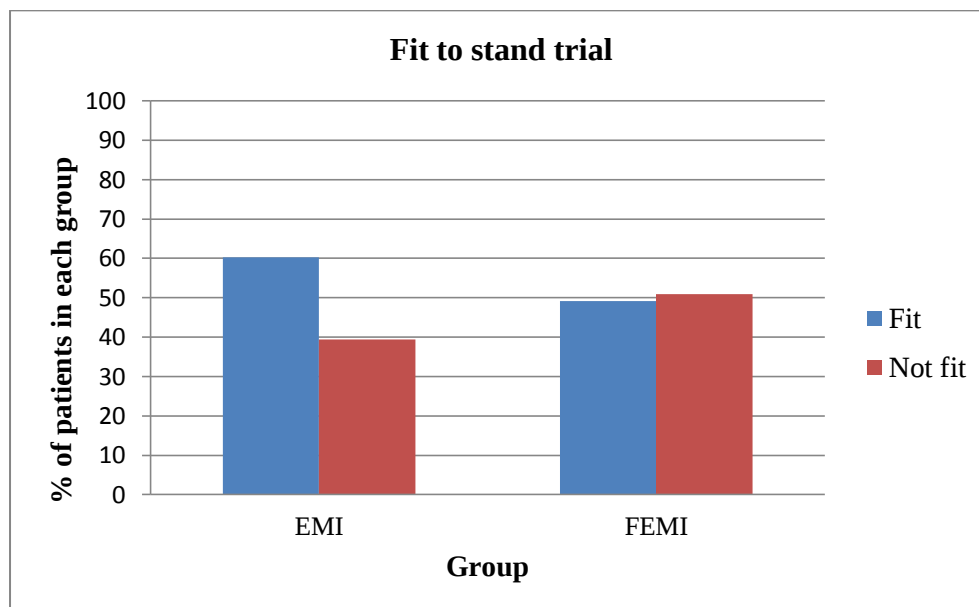


Figure 4.9: A comparison of the outcome of Fitness to Stand Trial in the first episode mental illness and existing mental illness groups of observandi admitted to Sterkfontein Hospital for forensic observation, 2011 – 2012

EMI: existing mental illness, FEMI: first episode mental illness

4.2.7.2 Responsibility

For the study sample, responsibility could not be commented on for a total of 7.1% (N =31) observandi. This was as a result of insufficient information provided to the multidisciplinary team conducting the observation. There was no significant association between responsibility and group.

Responsible I

A significant portion of the sample was found to be Responsible I: 61% (N = 266). Of the existing mental illness group as compared to the first episode mental illness group 62.2% (N = 161) and 59.3% (N = 105) respectively were found to be Responsible I ($p = 0.45$). A total of 31.9% (N = 139) of the sample was found Not Responsible I. A comparison of the two groups showed 32% (N = 83) of the existing mental illness group and 31.6% (N = 56) first mental illness group to be Not Responsible I.

Responsible II

Of the existing mental illness group 51% (N = 132) compared to the first episode mental illness group 42.4% (N = 75) were found to be Not Responsible II, ($p = 0.14$). For the remainder of the sample for which responsibility was commented on, 45.4% (N = 198) were found Responsible II. Of these 43.2% (N = 112) and 48.6% (N = 86) were from the existing mental illness and first episode mental illness groups respectively.

4.3 Recommendation of the observation period

The major outcome from the observation period was for the observandi to return to court for the trial to proceed; 46.8% (N = 204) for the alleged offence committed. Of these, 49% (N = 127) belonged to the existing mental illness group and 43.5% (N = 77) to the first episode mental illness group. There was no significant association between outcome of the observation and group.

The remainder of the sample was recommended for admission as state patients 29.6% (N = 129) and for involuntary mental health care 23.4% (N = 102). In the first episode mental illness group 27.7% (N = 49) were recommended for further involuntary care, as compared to

the existing mental illness group of 20.5% (N = 53). The state patients comprised of 30.1% (N = 78) of the existing mental illness group and 28.8% (N = 51) of the first episode mental illness group. The outcome for one observandi remained unknown, as this was not documented in the file.

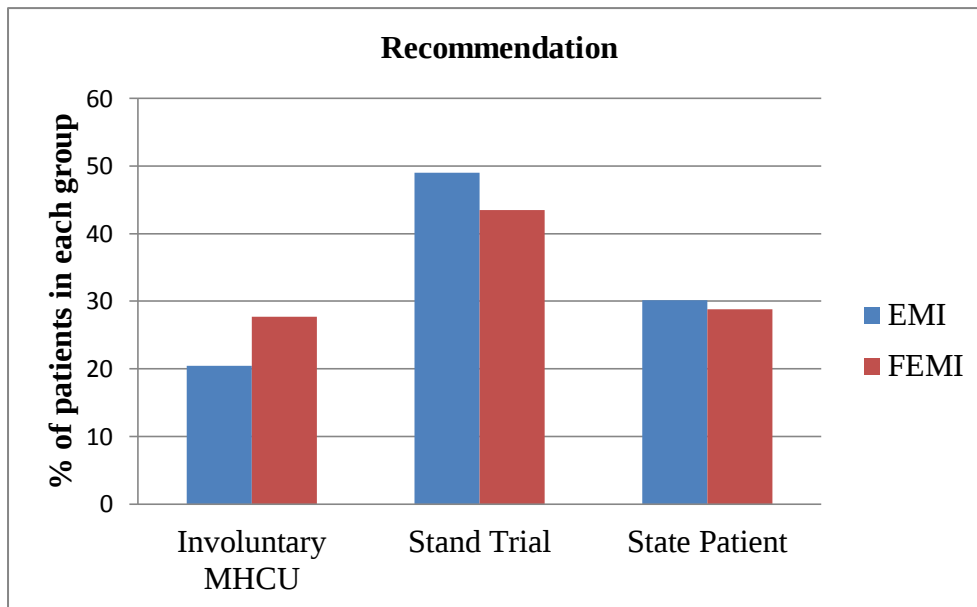


Figure 4.10: A comparison of the overall recommendations for the first episode mental illness, and the existing mental illness groups admitted to Sterkfontein Hospital for forensic observation, 2011 - 2012

EMI: existing mental illness,

FEMI: first episode mental illness

CHAPTER FIVE

DISCUSSION

5.0 DISCUSSION

The core aim of this study was to compare forensic observandi at Sterkfontein Hospital who presented with first episode mental illness, to those with an existing mental illness. The following is a summary of the key findings that have emerged from the study together with a detailed discussion of the results.

5.1 Summary of key findings

The study showed that the majority of those individuals with first episode mental illnesses were between 18 and 25 years of age, and in the existing mental illness group older than 41 years. There was a higher proportion of less educated individuals in the first episode mental illness group when compared to the existing mental illness group. In the existing mental illness group the majority had a secondary level of education. There were no significant differences between gender, marital status, or employment status in either group. Overall 59.4% (N = 259) had a previous diagnosis of mental illness and they formed the existing mental illness group, while 40.6% (N = 177) had a new diagnosis of mental illness at the time of the observation. Some of the individuals in the sample had more than one diagnosis at the end of the observation. The majority of the observandi in the existing mental illness group continued pharmacological treatment, whilst one individual in the first episode mental illness group had to be commenced on treatment during the observation period. The most significant diagnoses in both groups included; Substance Use Disorder followed by, Schizophrenia, Other Psychotic Disorders (which included Catatonia, Substance/Alcohol Induced Psychotic Disorder, and an Unspecified Psychotic Disorder) and Intellectual Disability. The most common types of offences included sexual offences, theft, assault with

intent to cause grievous bodily harm, and murder. The majority of the observandi from the existing mental illness group were found fit to stand trial. The majority of the sample were referred back to court for the trial to proceed $N = 204$, this comprised 127 individuals from the existing mental illness group and 77 from the first episode mental illness group.

5.2 Demographic Profile of the first episode mental illness and the existing mental illness groups

The relationship between psychiatric illness and criminal offending is complex. Non modifiable demographic risk factors such as age, socioeconomic status, and race, were linked in some studies to mental illness (Beckett et al., 2005; and Brownfield et al., 2000) and to arrest in a study by Costello et al. (1998). Other similar studies have proven that mental illness and violence share some of the same risk factors, including; gender, age, race, ethnicity, individual and neighbourhood socioeconomic status, physical and sexual abuse, and stressful life events (Aneshensel, 1992; Hiday, 2006; and Silver and Teasdale, 2005). This study compared epidemiological variables of age, gender, highest level of education, marital, and employment status between the first episode mental illness and existing mental illness groups.

5.2.1 Age

The results of this study show the mean average age recorded in the sample to be 33.8 years. The first episode mental illness group consisted of younger individuals, i.e. between 18 and 30 years, whilst in the existing mental illness group the majority of individuals were greater than 41 years of age. This corresponds with the expected age of onset of most psychiatric illnesses (Sadock and Sadock, 2007). Also, findings from the South African Stress and Health study (Stein et al., 2008) showed a mean age of onset of Substance Use Disorders to

be 24 years, anxiety disorders 32 years, and mood disorders 37 years. This is similar to the findings by Silver et al. (2008) who studied mentally unwell prisoners and found the mean age of the patients in the study sample to be 30.6 years.

Research by Scott et al. (1998), however, showed a slightly older mean age of patients (37.9 years) who were diagnosed with mental illness with comorbid Substance Use Disorder and who were aggressive or committed an offence. Those identified with Schizophrenia in the study had an average age of 46.1 years.

5.2.2 Gender

This study comprised of a significantly larger proportion of male observandi 89.9% (N = 392) compared to females 10.1% (N = 44). There was no significant association between gender and group.

This was in keeping with a study by Wallace et al. (1998) which reported 92% of their patient sample in a case linkage study to be male. Similarly, Silver et al. (2008) found the majority of prisoners with mental illness in their sample to be male. Moffit (1993), with further consistent findings, report that being young and male were two important risk factors for violence.

Contrary to the findings in this study and the studies mentioned above, however, Fazel et al. (2006) concluded from their Swedish based study, and Arsenault et al. (2000) from the Dunedin Study, that there is a higher relative risk of violent offending in females with severe mental illness as compared to males.

5.2.3 Highest Level of Education obtained

The predominant finding in this study was a secondary level of education. The first episode mental illness group showed a slightly higher proportion of observandi with no education or a primary level of education when compared to the existing mental illness group. Whilst the existing mental illness group showed a higher percentage of persons with a secondary level of education when compared to the first episode mental illness group. This lower level of education in the first episode group may reflect a higher proportion of observandi with Intellectual Disability.

The above findings are similar to those from the study by Silver et al. (1998) where the average level of education was found to be secondary level. Mental disorders, such as Bipolar and Schizophrenia, are found to have an age of onset in the late teenage years (Sadock and Sadock, 2007). This supports the findings of this study, where the majority of the observandi completed only a secondary level of education: the onset of mental illness at this level of schooling results in individuals being unable to obtain further education.

5.2.4 Social and occupational functioning

In this study, the majority of the observandi were single and unemployed. There was no significant association between marital and employment status in either the first episode mental illness or existing mental illness groups. These findings reflect that the majority of the observandi experience poor social and occupational functioning. This is in keeping with conclusions from other studies that found an increased association between criminal offending, mental illness and poor socio-economic status (Aneshensel, 1992; Hiday, 2006; and Silver and Teasdale, 2005).

5.2.5 Family Psychiatric History

Of the 436 observandi recorded in this study, 16.7% (N = 73) had a family history of psychiatric illness. However, for 24.5% (N = 107) of the sample this information was missing. As a result, this information was interpreted with caution and could thus not be analysed further to assess if there was a difference between the two groups. As psychiatric illnesses are known to be inherited, the possibility of having a family psychiatric history may have been far greater than presented in this study.

5.3 Comparison of the first episode mental illness and existing mental illness groups

The total sample of the study group comprised of 436 observandi. The existing mental illness group contained 259 (59.4%) of the above sample, in comparison to the group of 177 (40.6%) from the same sample who presented with first episode mental illness during the observation period. This is in contrast to other studies, discussed below, which found an increase in criminal offenses committed prior to the diagnosis of psychiatric illness.

The studies that assess first episode psychiatric illness tend to evaluate Psychosis and Schizophrenia specifically. A study by Wallace et al. (2004) assessed criminal offending in the Schizophrenic population. They found a larger proportion of the patients in their sample to have been convicted for an offence prior to first contact with psychiatric services. In addition, the majority (63.8%) had been convicted for a violent offence.

Similarly, studies by Nielssen et al. (2011), Nielssen and Large (2010), and Simpson et al. (2004), found an association between first episode psychosis and violent offences, although not as significant as the Wallace et al. (2004) study. Nielssen et al. (2011) concluded that earlier treatment of psychosis might prevent some homicides and serious non-lethal assaults.

5.4 Treatment of mental illness

5.4.1 Previous treatment of mental illness

The majority of the existing mental illness group had received previous medical treatment for a mental illness, whilst 9 individuals of the existing mental illness group had no prior treatment for mental illness, and for one individual this was unknown. None of the individuals in the first episode group had received medical treatment for a mental as this was their first presentation to psychiatry. This was an expected finding as the first episode group included observandi with no previous contact with psychiatric services whilst the existing mental illness group included those who have had contact.

5.4.2 Current treatment of mental illness

In this study a fifth of the observandi were on treatment during the observation period. Approximately 30% of the existing mental illness group continued their treatment and 0.6% of the first episode mental illness group was commenced on treatment. There is no current consensus on treating mentally unwell observandi. Treating severely unwell observandi who are a risk to themselves and others may be imperative during the observation period, but they may not be willing to take treatment. This potential conflict of interest has a direct impact on their autonomy. Administering treatment also influences the outcome of their fitness to stand trial. If an observandi is commenced on treatment during the observation and this results in them becoming fit to stand trial, which they might not have been able to if not treated, this needs to be explicitly stated in the recommendations of the panel of psychiatrists that are involved in assessing the observandi in terms of Section 79 of the Criminal Procedure Act.

5.5 A Comparison of the most common diagnoses found in the study

5.5.1 Substance Use Disorder

The most common diagnosis in both groups was Substance Use Disorder. Overall 49.1% of the sample had a diagnosis of Substance Use Disorder, of these 47.1% belonged to the existing mental illness group and 52% to the first episode group.

There is a high prevalence of Substance Use Disorders in South Africa as concluded from the South African Stress and Health study (Stein et al., 2008). The majority of studies that compare mental illness and criminal offences found a significant increase in criminal offending in those diagnosed with a Substance Use Disorder, as well as in those with a psychiatric disorder and a comorbid Substance Use Disorder (Fazel et al., 2009; Scott et al., 1998; Tiihonen et al., 1997; Wallace et al., 1998; and Wallace et al., 2004).

Substance Use Disorders have been found to be the most constant predictor of criminal offending or violence among individuals with psychiatric illness as concluded by Bonta et al. (1998) and Corrigan and Watson (2005).

In this study, comorbid Substance Use Disorder was the most prevalent finding in those with Bipolar I. In the sample, more than a quarter had a diagnosis of Schizophrenia, while approximately half had Schizophrenia with a comorbid Substance Use Disorder. The diagnosis of comorbid Substance Use Disorder was also significant for those with Intellectual Disability and those with Major Depressive Disorder.

A comparison between the offences in observandi with and without a comorbid Substance Use Disorder found an increase in the following offences in observandi with comorbid

Substance Use Disorders: malicious injury to property, murder, attempted murder, sexual offences, and assault with intent to cause grievous bodily harm.

This is in keeping with the majority of studies which have found an increase in the prevalence of violent offences in those with a comorbid Substance Use Disorder (Brennan et al., 2000; Milton et al., 2001; Nielssen et al., 2011; Tiihonen et al., 1997; and Wallace et al. 1998).

In the study by Wallace et al. (1998) an association was found between criminal offending in males with a diagnosis of Schizophrenia with a comorbid Substance Use Disorder. In addition, there was a significant correlation between arson and drug related offences and Schizophrenia with substance misuse. They concluded further in the study, a relation between affective disorders and substance misuse with increased offending. This was similar to their findings in the Schizophrenic population with comorbid substance misuse; however, they also indicated an association with property offences in those with affective disorders.

In this study, besides Substance Use Disorder, other significant diagnoses include Schizophrenia and Other Psychotic Disorders, as well as Intellectual Disability.

5.5.2 Schizophrenia and Other Psychotic Disorders

Schizophrenia and Other Psychotic Disorders (which included Unspecified Schizophrenia and Substance Induced Psychotic Disorder) were the second most common diagnoses found in the observandi. A higher percentage was found in the existing mental illness group when compared to the first episode mental illness group.

The majority of studies conducted in relation to psychiatric illness and criminal offending assess Schizophrenia and Psychotic disorders, which are considered to be severe mental

illness (Fazel et al., 2009; Fazel et al., 2006; Nielssen et al. 2011; Nielssen and Large 2010; and Wallace et al., 2009).

Wallace et al. (2004) concluded from their study that subjects with Schizophrenia compared to community subjects, with no diagnosis of mental illness, were significantly more likely to have committed at least one offence. In the study by Fazel et al. (2009), subjects with Schizophrenia and Other Psychotic disorders were associated with an increased risk of violence when compared to the general population.

Research conducted to assess the relationship of specific mental disorders to criminal offending found Schizophrenia to be most prevalent after Substance Use Disorders (Wallace et al., 1998). There were similar but cautious findings in the study by Tiihonen et al. (1997), of an association between Schizophrenia without substance use and offending.

5.5.3 Intellectual Disability

This study found 12.8% of the total sample had a diagnosis of Intellectual Disability. A slightly higher percentage belonged to the first episode mental illness group when compared to the existing mental illness group.

Hodgins (1992) concluded that men with Intellectual Disability were three times more likely to offend than men without Intellectual Disability.

5.6 Comparison of the nature of the offences

In this study, a significant proportion of the observandi committed a violent offence. This included murder, attempted murder, sexual offence, assault with intent to cause grievous bodily harm, common assault, arson, malicious damage to property, and robbery with

aggravating circumstances. However, there was no significant association between the first episode mental illness group and the existing mental illness group and the nature of the offence committed. Further comparison found insignificant differences between the existing mental illness group and the first episode mental illness group and violent offences. Overall in this study 21.1% of the individuals in the sample committed two offences, but there was no significant association between offences and each of the groups.

5.7 Comparison of the type of offence and its association with each of the groups

The results of the study showed a large number of categories of offences; murder, sexual assault, assault with intent to cause grievous bodily harm, and theft, represented a significant portion of the sample. These were analysed to ascertain if there is a significant association with the type of offence and either of the two groups, i.e., the existing mental illness and first episode mental illness groups.

The most common type of offence found in this study was sexual offending. This is in keeping with the criminal statistics from Gauteng, South Africa, which was shown to have the highest records of sexual offending (South African Police Service, 2013). There were no significant differences in the incidence of sexual offences in the existing mental illness group and the first episode mental illness group. This is in keeping with a study by Silver et al. (2008) that showed twice the number of sexual offences committed by prisoners with serious mental illness, as compared to prisoners with no mental illness.

Assault with intent to cause grievous bodily harm, within each group, was shown to have a significant association in this study. The total number of the sample reported to have committed assault with intent to cause grievous bodily harm was 18.3%. Of these, the

majority belonged to the existing mental illness group as compared to the first episode mental illness group. The study by Nielssen et al. (2011) found an association between persons with first episode mental illness and existing mental illness and violent offences, which included homicides. This study also showed a significant association between those in the first episode mental illness group committing murder as compared to the existing mental illness group.

5.8 The association between a specific diagnosis and type of offence committed

Offence categories that were identified as being significantly linked to diagnoses included: murder, sexual offences, assault with intent to cause grievous bodily harm, common assault, and malicious damage to property, robbery, burglary and theft.

Murder was found to be associated with not having a previous diagnosis of mental illness, but there was no significant association with a specific diagnosis. Attempted murder and theft were associated with having a diagnosis of Major Depressive Disorder. Sexual offences, which were slightly more significant in the existing mental illness group, were associated with having a diagnosis of Intellectual Disability. Assault with intent to cause grievous bodily harm was associated with the existing mental illness group as well as those with Schizophrenia. Finally, malicious damage to property was associated with having a diagnosis of Other Psychotic disorder.

There is a paucity of studies that assess specific psychiatric disorders and the type of offence committed. Studies by Brennan et al. (2000), Fazel et al. (2009), and Richardson (2009) focus on psychoses and violent offending, categorizing the violent offences into a single group. Brennan et al. (2000) in their study assessed the incidence of murder, attempted

murder, rape, violence against authority, assault, domestic violence, and robbery, as violent offences. They found a significant association with these offences and having a diagnosis of Schizophrenia. Similarly, Tiihonen et al. (1997) found that males with Schizophrenia had a moderately high risk of violent offences which included; assault, homicide, robbery, arson, and violation of domestic peace. Fazel et al. (2006) established a significantly higher proportion of those with Schizophrenia to have committed a violent crime which included; homicide, attempted homicide, aggravated assault, common assault, robbery, threatening behaviour, harassment, arson, and sexual crimes.

In this study, there was a correlation between sexual offences and Intellectual Disability. In the study by Hodgins (1992) it was reported that men with Intellectual Disability were five times more likely to commit a violent offence which included; rape, assault, robbery, and molestation. The study by Barron et al. (2004) found sexual offences to be the most prevalent offence in those with Intellectual Disability. These findings were in contrast to the study by Hayes (1991) which did not find a significant association between sexual offences and those with Intellectual Disability.

Gibbens et al. (1971) found an association between females diagnosed with Major Depressive Disorder and shoplifting. This is similar to our study which found an association with Major Depressive Disorder and theft.

5.9 Outcome Variables

5.9.1 Fitness to stand trial

In this study, more than half of the individuals were found fit to stand trial. Of these, the majority represented the existing mental illness group as compared to the first episode mental

illness group. In the existing mental illness group 30.5% were on treatment, which could explain their fitness to stand trial. This is further confirmed by the finding of a significantly higher proportion of patients, 50.8%, from the first episode mental illness group being not fit to stand trial as compared to 39.4% in the existing mental illness group.

5.9.2 Responsibility

Over half of this study sample were found to be Responsible I. This implies that they were able to appreciate the wrongfulness of their actions according to Section 77 and 78 of the Criminal Procedure Act (51 of 1977). However, less than half were found Responsible II which according to the act implies that they were able to act with an appreciation of this wrongfulness. A higher proportion were found Not Responsible II, implying that they were unable to act in accordance with this appreciation as a result of mental illness. There was no significant association between responsibility and group, i.e., between the first episode and existing mental illness groups. Although, in the first episode mental illness group, not being on treatment may have impacted on their responsibility. This also applies to the existing mental illness group who might not have been compliant on treatment, which may have a negative impact on their mental illness and hence responsibility.

5.9.3 Recommendations of the outcome of the observation period

Overall, 23.4% of the observandi from this study were recommended for admission as involuntary mental health care users. This implies that these individuals were not fit to stand trial and found not responsible for the alleged offences committed, as a result of mental illness. A larger percentage of the first episode mental illness group as compared to the existing mental illness group were recommended for involuntary care. This is a reflection of

the possibility that those who were untreated were found not fit and not responsible as a result of mental illness.

The majority of observandi were referred back to court for the trial to proceed, a higher proportion of which belonged to the existing mental illness group compared to the first episode group. These individuals were found fit to stand trial and capable of being held responsible for the offence committed. This is in contrast to the above findings on those recommended for involuntary care, i.e., a higher percentage of the first episode group was referred for involuntary care. However, this is a possible reflection of the impact of treatment of mental illness on fitness and responsibility, as those individuals in the existing mental illness group should ideally be on treatment.

The remainder of the sample were recommended for admission as state patients which included individuals from both the existing mental illness and the first episode mental illness groups. This implies that these individuals were found not fit to stand trial. They may have been guilty for the offence, but found not fit to stand trial and Not Responsible I and II. However, due either to the heinous nature of the offence or risk of recidivism these individuals are made state patients.

There is much controversy that surrounds these recommendations. Trying to ascertain the best possible outcome both for the offender and the public is important. Some of these offenders may be considered high risk as a result of the type and nature of the offence committed, as well as the number of previous convictions. According to Edgely (2014), the offender's moral culpability is a factor relevant to the assessment of a proportionate sentence. As described by Ashworth et al. (1984) proportionality involves two dimensions, the objective seriousness of the offence and the moral culpability of the offender. Moral

culpability, as described by Ashworth et al. (1984), refers to mental state that should be taken into account when assessing a proper sentence.

The courts are often left to decide the appropriate outcome based on the protection of the community and the most humane method of punishment of the mentally unwell offender.

There has been a shift away from incarceration as punishment for mental illness to an increased emphasis on deinstitutionalisation and treatment in Australia (Traynor, 2002).

Offenders who do not receive appropriate care, treatment, and rehabilitation, are a risk for recidivism.

5.10 Limitations

This study has many limitations. The use of a retrospective record review is not always suitable as there is the possibility of missing information and the results are dependent on the quality of the information from these records. There was a significant number of missing files, 79 of the 599 files from the sample period. Some of the data collected for specific individuals was missing from the records, as reflected in the results. There is a possibility of unreliability in the information obtained from the observandus. In addition, some of the information received from the courts was insufficient to make a comment on responsibility.

The sample included a large number of independent variables and categories of diagnoses and offences, which all impacted on the results of the study. Furthermore, in comparison to other similar studies the sample size may not have been adequate.

The diagnoses given to the observandi at the end of the observation period is generally based on the Diagnostic and Statistical Manual of Mental Disorders Fourth edition Text Revision (DSM IV-TR) which was in use at the time of the study period. However, the DSM IV-TR advises caution when using these criteria for legal assessments. According to the DSM IV-

TR the diagnostic categories should not be used to assess responsibility, competency, and disability, in the forensic setting.

In addition the diagnostic categories of the DSM IV-TR are largely based on the American population; therefore extrapolating this information to the South African setting may pose difficulties as a result of the ethnic diversity.

There is also the possibility of inconsistencies in the diagnoses, which makes comparisons of these diagnostic categories difficult. Standardised scales are not generally implemented in diagnosing the observandi. In addition, some are given multiple differential diagnoses and this creates further difficulties in drawing lines of association through to other studies.

CHAPTER SIX

CONCLUSION

6.0 CONCLUSION

Overall, this study did not find a significant difference between the demographic variables and clinical diagnoses in the existing mental illness and first episode mental illness groups. There was a significantly higher proportion of patients in the existing mental illness group as compared to the first episode mental illness group. This study highlighted that there is an association between mental illness and violent offending, which is supported by Brennan et al. (2000), Fazel et al. (2009), and Richardson (2009), who all found an increase in violent offending in individuals with psychosis. The impact of first episode mental illness on criminal offending is not greater than in the existing mental illness group in this study. This counters the studies by Nielssen et al. (2011), Nielssen and Large (2010), and Simpson et al. (2004), who showed a significant increase in offending from those in the first episode mental illness group.

The findings in this study is comparable to other studies that showed an increased prevalence of Substance Use Disorders, as well as other major psychiatric disorders with comorbid Substance Use Disorders, and violent offending (Fazel et al., 2009; Scott et al., 1998; Tiihonen et al., 1997; Wallace et al., 2004; and Wallace et al., 1998). This increase in substance use is consistent with and may reflect the increased prevalence of Substance Use Disorders found in the South African Stress and Health Study (Stein, 2008).

Similarly, the increased prevalence of Schizophrenia and Other Psychotic Disorders found in this study complements the results found in studies by Fazel et al. (2009); Fazel et al. (2006); Nielssen et al. (2011); Nielssen and Large (2010); and Wallace et al. (2009). This gives a possible indication as to the increased prevalence of Schizophrenia and Other Psychotic Disorders as compared to other major mental illness in criminal offenders.

There are many difficulties in collating data from different studies on violence and mental illness, as discussed by Sirotich (2008). These include differences in methodologies used, the societal contexts that studies are conducted in, as well as clinical differences. Clinically, diagnoses may not be made using a standardised measure, and there could be differences in the measurement of violence and criminality. These inconsistencies lead to difficulties in drawing accurate conclusions from different studies. In this study the diagnoses at the end of the observation period was used as the final diagnoses, but there is no confirmation of a specific diagnostic tool being used. As mentioned previously this is generally a period of time in which clinicians diagnosed according to The Diagnostic and Statistical Manual of Mental Disorders Fourth edition Text Revision (DSM IV-TR).

The Diagnostic and Statistical Manual of Mental Disorders Fifth edition (DSM 5) recommends its use as a reference tool for the courts and attorneys in assessing the forensic consequences of mental disorders. This is in contrast to the DSM IV-TR that cautioned against its use in the forensic setting. Using DSM 5 may prove beneficial in future assessments of observandi and assist in coming to consistent diagnoses and recommendations to the courts.

6.1 Recommendations

Increasing research in the forensic setting is imperative as this will further assist in improving our knowledge of these individuals. The information may prove invaluable in addressing the difficulties we experience with the high prevalence of individuals with psychiatric illness committing criminal offences. By providing this information to the court system this may help improve their knowledge of the impact of psychiatric illness on criminal offending and thereby assist in addressing the increase in referrals of forensic observation patients. In

addition, this information will be valuable in assisting the multidisciplinary team involved in the assessments and care of these individuals and in the future training of such members of the team. Ultimately, this will lead to a reduction in the number of involuntary mental health care users and state patient admissions.

There is a need in the health care system to improve diagnoses and mental health awareness. In so doing we may be able to improve early diagnosis and treatment of mental illness, thereby reducing criminal offending in the psychiatrically unwell.

Potentially modifiable factors, such as medication compliance, were identified in the studies by Moran et al. (2003) and Swartz et al. (1998), as well as substance abuse and Personality Disorder by Wallace et al. (2004). Other modifiable factors such as substance abuse and impaired social support were also identified in studies by Aneshensel (1992), Hiday (2006), and Silver and Teasdale (2005). Addressing the increase in substance use in the South African setting may prove beneficial in reducing the incidence of violent offences. Creating community substance awareness programs and appropriate rehabilitation and referral systems may assist in improving this awareness. Perhaps more stringent laws need to be implemented by the courts to assist in curbing the increasing problem with substance use. In addition, addressing comorbid personality disorders in, and adding psychosocial support for, psychiatrically unwell criminal offenders may help curb the increased offences in this group of people.

Other studies used a longer duration and hence had a larger sample size. Possibly increasing the sample size of future similar studies may assist in providing more information on these individuals. Increasing the sample size, similar to other studies that assessed first episode mental illness and criminal offending, may result in a greater sample size in the first episode group.

Using more consistent and international diagnostic tools in assessing observandi, may provide more reliable diagnoses and allow for better comparison with other such studies.

Studies by Moran et al. (2003) and Swartz et al. (1998) identified an association between previous criminal offending, and criminal offending and mental illness. It will be interesting to conduct further studies in the South African setting comparing the incidence of previous offending in mentally unwell offenders. This may provide valuable information on the trend with regard to the nature of offences in these psychiatrically unwell offenders.

REFERENCES

- American Psychiatric Association. 2000. Diagnostic and statistical manual of mental disorders: DSM-IV-TR, Washington, American Psychiatric Association.
- American Psychiatric Association. 2013. Diagnostic and statistical manual of mental disorders: DSM 5, Washington, American Psychiatric Association.
- Aneshensel, C.S. 1992, "Social Stress: theory and research", Annual Review of Sociology, vol. 18, pp. 15-38.
- Anonymous 2010. The Criminal Procedure Act (51 of 1977). Available: www.justice.gov.za/legislation/acts/1977-051.pdf [4 December 2013].
- Anonymous 2010. The M'Naghten Rule, Insanity Defence and Diminished Capacity (May 26, June 19, 1843). Available: www.law.cornell.edu/wex/insanity_defense [12 January 2013].
- Anonymous. The M'Naghten Rule. Available: www.criminal.findlaw.com/criminal-procedure/the-m-naghten-rule.html [21 January 2013].
- Arseneault, L., Moffitt, T.E., Caspi, A., Taylor, P.J. & and Silva, P.A. 2000, "Mental Disorders and Violence in a Total Birth Cohort, Results from the Dunedin Study", Archives of General Psychiatry, vol. 57, pp. 979-986.
- Ashworth, A. and Gostin, L. 1984, "Mentally disordered offenders and the sentencing process", Criminal Law Review, pp. 195-212.
- Barron, P. & Hassiotis, A. and Banes, J. 2004, "Offenders with intellectual disability: a prospective comparative study", Journal of Intellectual Disability Research, vol. 48, pp. 69-76.
- Beckett, K., Nyrop, K., Pflingst, L., and Bowen, M. 2005, "Drug use, drug arrests and the question of race: Lessons from Seattle". Social Problems, vol. 52, pp.419-441.

- Bonta, J., Law, M. & and Hanson, K. 1998, "The prediction of criminal and violent recidivism among mentally disordered offenders: A meta - analysis", *Psychological Bulletin*, pp. 123-142.
- Brennan, P.A., Mednick, S.A. & Hodgins, S. 2000, "Major mental disorders and criminal violence in a Danish birth cohort", *Archives of General Psychiatry*, vol. 57, no. 5, pp. 494-500.
- Brownfield, D., Sorenson, A.M. & and Thompson, K.M. 2000, "Gang membership, race, and social class: A test of the group hazard and master status hypotheses." *Deviant Behaviour*, vol. 22, pp. 73-89.
- Corrigan, P.W. and Watson, A. 2005, "Findings from the National Comorbidity Survey on the frequency of violent behaviour in individuals with psychiatric disorders", *Psychiatry Research*, vol. 136, pp. 153-162.
- Costello, J.E., Messer, S.C., Bird, H.R., Cohen, P. & and Reinherz, H.Z. 1998, "The prevalence of serious emotional disturbance: A re - analysis of community studies", *Journal of Child and Family Studies*, vol. 7, pp. 411-423.
- Duhaime, L. M'Naghten Rule Definition. Legal Definitions. Available: www.duhaime.org/LegalDictionary/M/MNaghtenRules.aspx [21 January 2013].
- Edgely, M. Common Law Sentencing of Mentally Impaired Offenders in Australian Courts: A call for coherence and consistency. Available: www98.griffith.edu.au/dspace/bitstream/handle/10072/25996/56629_1.pdf. [6 June 2014].
- Fazel, S. & Grann, M. 2006, "The Population Impact of Severe Mental Illness on Violent Crime", *The American Journal of Psychiatry*, vol. 163, no. 8, pp. 1397-403.
- Fazel, S., Gulati, G., Linsell, L., Geddes, J.R. & Grann, M. 2009, "Schizophrenia and Violence: Systematic Review and Meta-Analysis", *PLoS Med*, vol. 6, no. 8, pp. e1000120.

- Gibbens, T.C.N., Palmer, C. & Prince, J. 1971, "Mental health aspects of shoplifting", British Medical Journal, vol. iii, pp. 612-615.
- Gunn, J. 2000, "Future directions for treatment in forensic psychiatry", The British Journal of Psychiatry, vol. 176, pp. 332-338.
- Hayes, S. 1991, "Sex offenders", Journal of Intellectual and Developmental Disabilities, vol. 17, pp. 220-227.
- Hiday, V.A. 2006, "Putting community risk in perspective: A look at correlations, causes and controls." International Journal of Law and Psychiatry, vol. 29, pp. 316-331.
- Hodgins, S. 1992, "Mental disorder, intellectual deficiency, and crime. Evidence from a birth cohort", Archives of General Psychiatry, vol. 49, pp. 476-482.
- Kaliski, S. (ed) 2006, Psycholegal Assessment in South Africa, First Edition, Oxford University Press Southern Africa, South Africa.
- Milton J., Amin, S., Singh, S.P., Harrison, G., Jones, P., Croudace, T., Medley, I. & Brewin, J. 2001, "Aggressive incidents in first-episode psychosis", The British Journal of Psychiatry, vol. 178, pp. 433-445.
- Moffit, T. 1993, "Adolescence – limited and life course persistent antisocial behaviour: a developmental taxonomy". Psychology Review, vol. 100, pp. 674-701.
- Moran, P., Walsh, E., Tyrer, P., Burns, T., Creed, F. & Fahy, T. 2003, "Impact of comorbid personality disorder on violence in psychosis: Report from the UK700 trial", The British Journal of Psychiatry, vol. 182, pp. 129-134.
- Mullen, P. "A review of the relationship between mental disorders and offending behaviors and on the management of mentally abnormal offenders in the health and criminal justice services". Available: www.aic.gov.au/crc/reports/mullen.html [6 June 2014].
- Mullen, P.E. 2000, "Forensic mental health", The British Journal of Psychiatry, vol. 176, pp. 307-311.

- Nielssen, O. & Large, M. 2010, "Rates of homicide during the first episode of psychosis and after treatment: a systematic review and meta-analysis", *Schizophrenia bulletin*, vol. 36, no. 4, pp. 702-712.
- Nielssen, O.B., Yee, N.L., Millard, M.M. & Large, M.M. 2011, "Comparison of First-Episode and Previously Treated Persons With Psychosis Found NGMI for a Violent Offense", *Psychiatric Services*, vol. 62, no. 7, pp. 759-764.
- Peduzzi, P., Concato, J., Kemper, E., Holford, T.R. & Feinstein, A.R. 1996, "A simulation study of the number of events per variable in logistic regression analysis", *Journal of Clinical Epidemiology*, vol. 49, pp. 1373-1379.
- Richardson, T.H. 2009, "Conceptual and methodological challenges in examining the relationship between mental illness and violent behaviour and crime." Available: www.internetjournalofcriminology.com [6 June 2014].
- Sadock, B.J. and Sadock, V.A. (ed) 2007, *Kaplan and Sadock Synopsis of Psychiatry Behavioral Sciences / Clinical Psychiatry*, 10th Edition. Lippincott Williams and Wilkins, Philadelphia.
- SAS Institute Inc., SAS Software, version 9.3 for Windows, Cary, NC, USA: SAS Institute Inc. (2002-2010).
- Scott, H., Johnson, S., Menezes, P., Thornicroft, G., Marshall, J., Bindman, J., Bebbington, P. & Kuipers, E. 1998, "Substance misuse and risk of aggression and offending among the severely mentally ill", *The British Journal of Psychiatry*, vol. 172, no. 4, pp. 345-350.
- Silver, E. & Teasdale, B. 2005, "Mental Disorder and Violence: An Examination of Stressful Life Events and Impaired Social Support", *Social Problems*, vol. 52, no. 1, pp. 62-78.

Silver, E., Felson, R. B., and Vaneseltine, M. 2008, "The relationship between mental health problems and violence among criminal offenders". *Criminal Justice and Behaviour*, vol. 35, pp. 405-425.

Simpson, A.I.F., McKenna, B., Moskowitz, A., Skipworth, J. & Barry-Walsh, J. 2004, "Homicide and mental illness in New Zealand 1970-2000", *The British Journal of Psychiatry*, vol. 185, no. 5, pp. 394-398.

South African Police Service, Crime Statistics. Available:

www.saps.gov.za/resource_centre/publications/s [1 August 2013].

Soyka, M. 2000, "Substance misuse, psychiatric disorders and violent and disturbed behaviour", *British Journal of Psychiatry*, vol. 176, pp. 345-350.

Stein J. D., Seedat S., Allen H., Moomlal H., Heering G. S., Kessler R. C. and Williams R.D. 2008, "Lifetime prevalence of psychiatric disorders in South Africa", *British Journal of Psychiatry*, vol. 192, no. 2, pp. 112 – 117.

Swartz, M.S., Swanson, J., Hiday, V., Borum, R. & Wagner, R. and Burns B. 1998, "Violence and severe mental illness: the effects of substance abuse and nonadherence to medication", *The American Journal of Psychiatry*, vol. 155, pp. 226-231.

Tiihonen, J., Isohanni, M., Rasanen, P., Koiranen, M. & Moring, J. 1997, "Specific major mental disorders and criminality: a 26-year prospective study of the 1966 northern Finland birth cohort", *The American Journal of Psychiatry*, vol. 154, no. 6, pp. 840-845.

Traynor, S. *Sentencing Mentally Disordered Offenders: The Causal Link*.

© Judicial Commission of New South Wales. Available:

www.judcom.nsw.gov.au/publications/st/st23 [1 August 2014].

Wallace, C., Mullen, P., Burgess, P., Palmer, S., Ruschena, D. & Browne, C. 1998, "Serious criminal offending and mental disorder. Case linkage study", *The British Journal of Psychiatry*, vol. 172, no. 6, pp. 477-484.

Wallace, C., Mullen, P.E. & Burgess, P. 2004, "Criminal Offending in Schizophrenia Over a 25-Year Period Marked by Deinstitutionalization and Increasing Prevalence of Comorbid Substance Use Disorders", *The American Journal of Psychiatry*, vol. 161, no. 4, pp. 716-727.

APPENDIX ONE

DATA COLLECTION SHEET

Patient identification number: _____

1. Demographic details

1.1. Age In years: _____

1.2. Gender:

Male	Female	Unknown

1.3. Marital Status:

Single	Attached	Married	Divorced	Unknown

1.4. Highest level of education obtained:

Primary	Secondary	Tertiary	Unknown

1.5. Employment:

Yes	No	Unknown

2. CLINICAL CHARACTERISTICS

2.1. Family history of mental illness:

Yes	No	Unknown

2.2. Previous diagnosis of mental illness:

Yes	No	Unknown

2.3. Previous treatment of mental illness:

Yes	No	Unknown

2.4. Currently on treatment for mental illness:

Yes	No	Unknown

2.5. New diagnosis of mental illness:

Yes	No	Unknown

2.6. Diagnosis

2.6.1. Diagnosis of Axis one or two Psychiatric disorder:

Yes	No	Unknown

If yes (in 2.6.1), specify diagnosis from the following:

Schizophrenia or other Psychotic Disorder	
Specify type: Schizophrenia	
Schizo – affective Disorder	
Delusional Disorder	
Other	

Mood disorder	
Specify Type: Bipolar I	
Bipolar II	
Major Depressive Disorder	
Dysthymia	
Cyclothymia	

Substance Use Disorder	
Specify Type: Substance Dependence	
Substance Abuse	
Specify Substance: Alcohol	
Cannabis	
Heroin	
Cocaine	
Other	

Anxiety Disorder	
Specify Type: Generalised Anxiety Disorder	
Post-Traumatic Stress Disorder	
Panic disorder	
Other	

Impulse Control Disorder	
Specify Type: Kleptomania	
Pyromania	
Compulsive Gambling	
Intermittent Explosive disorder	
Trichotillomania	
Factitious Disorder	
Malingering	

Dissociative Disorder	
-----------------------	--

Sleep Disorder	
----------------	--

Personality Disorder	
Specify Type:	

Mental Illness Secondary to a General Medical condition	
Specify type of Mental Illness	
Specify Medical condition	

3. NATURE OF THE OFFENCE

Murder	
Sexual assault / rape of an adult	
Sexual assault / rape of a minor	
Attempted rape	
Assault with intent to inflict grievous bodily harm	
Common assault	
Theft	
Housebreaking	
Malicious damage to property	
Other (Specify)	

4. OUTCOME OF THE OBSERVATION PERIOD:

Fit to stand trial	
Not fit to stand trial as a result of mental illness	
Responsible	
Not responsible	

5. RECOMMENDATION FROM OBSERVATION PERIOD:

State patient	
Involuntary mental health care user	
Stand trial	

APPENDIX TWO

APPROVAL LETTER FROM STERKFONTein PSYCHIATRIC HOSPITAL



health and social development

Department: Health and Social Development
GAUTENG PROVINCE

STERKFONTein HOSPITAL

CLINICAL DEPARTMENT

Enquiries: Dr. Subramaney

Telephone : (011)951-8341

Facsimile : (011) 951-8391

e-Mail: Hannie.Smith@gauteng.gov.za

Dr. M.R. Billa
Chief Executive Officer
Sterkfontein Hospital
KRUGERSDORP

Dear Dr. Billa

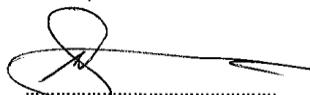
STUDY : A COMPARISON BETWEEN FORENSIC OBSERVATION PATIENTS ADMITTED WITH FIRST EPISODE MENTAL ILLNESS AND THOSE WITH AN EXISTING MENTAL ILLNESS.
RESEARCHER: DR. R. RAMOUTHAR

The above study was discussed at the Research Committee meeting. We recommend that permission be granted that Sterkfontein Hospital be used as a site for the above research subject to the following:-

Consent must be obtained from State Patients who are currently in-patients and whose records have been accessed. In the case of intellectual impairment, consent will have to be obtained by proxy / family member.

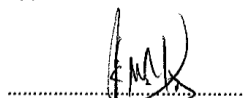
Upon completion of the study, a copy thereof should be submitted to Sterkfontein Hospital

Thank you.



PROF. U. SUBRAMANEY
PRINCIPAL PSYCHIATRIST / CLINICAL HEAD
11/03/2013

Approved.



DR. M.R. BILLA
CHIEF EXECUTIVE OFFICER

APPENDIX THREE

ETHICS CLEARANCE CERTIFICATE



M130633

R14/49 Dr Reyanta Ramouthar

HUMAN RESEARCH ETHICS COMMITTEE (MEDICAL)

CLEARANCE CERTIFICATE NO. M130633

NAME: Dr Reyanta Ramouthar
(Principal Investigator)

DEPARTMENT: Neurosciences/Psychiatry
Sterkfontein Hospital

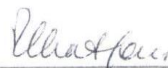
PROJECT TITLE: A Comparison between Forensic Observation
Patients Admitted with First Episode Mental
Illness and those with an existing Mental
Illness

DATE CONSIDERED: 28/06/2013

DECISION: Approved unconditionally

CONDITIONS:

SUPERVISOR: Dr DCJ Hoffman

APPROVED BY: 
Professor PE Cleaton-Jones, Chairperson, HREC (Medical)

DATE OF APPROVAL: 28/06/2013

This clearance certificate is valid for 5 years from date of approval. Extension may be applied for.

DECLARATION OF INVESTIGATORS

To be completed in duplicate and **ONE COPY** returned to the Secretary in Room 10004, 10th floor, Senate House University.

I/we fully understand the conditions under which I am/we are authorized to carry out the above-mentioned research and I/we undertake to ensure compliance with these conditions. Should any departure be contemplated, from the research protocol as approved, I/we undertake to resubmit the application to the Committee. **I agree to submit yearly progress report**

Principal Investigator Signature

Date

PLEASE QUOTE THE PROTOCOL NUMBER IN ALL ENQUIRIES