

**SELECTED PSYCHOMETRIC PROPERTIES OF THE ACTIVITY PARTICIPATION
OUTCOME MEASURE TO DESCRIBE TRENDS IN A FORENSIC POPULATION OF
MENTAL HEALTH CARE USERS**

Cassandra Ann Brooke

A research report submitted to the Faculty of Health Sciences, School of Therapeutic Sciences, University of the Witwatersrand, Johannesburg, in partial fulfilment of the requirements for the degree of Master of Science in Occupational Therapy

Johannesburg, 2015

DECLARATION

I, Cassandra Ann Brooke, declare that this research report is my own work. It is being submitted for the degree of Master of Science in Occupational Therapy at the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination at this or any other University.



.....
.....13th day of May, 2015

ABSTRACT

Minimal research on occupational therapy in forensic psychiatry is available. An outcome measure known as the Activity Participation Outcome Measure (APOM) was developed, yet it had not been applied specifically to Mental Health Care Users (MHCUs) with a criminal offence. Therefore, research on this topic was conducted at a South African forensic psychiatric institution. The aims of the study were to establish selected psychometric properties of the APOM and describe the trends in activity participation in a forensic population. Quantitative methods were employed with a sample size of 62 participating MHCUs for the most part of the study. The tool was found to be stable and suitable for use with forensic MHCUs. Institutionalisation seems to remain a problem in this population, accounting for there being no overall change noted in MHCUs' level of activity participation. A transitional phase of the explorative level of action was the general level that was maintained by the MHCUs.

ACKNOWLEDGEMENTS

I wish to acknowledge and thank my supervisor, Professor Daleen Casteleijn for exceptional guidance and support throughout the research process.

The opportunity to conduct this study largely depended on the participants, for whom I am truly grateful. Thank you to the occupational therapists, Mrs Liezel Hendricks and Mr Nicholas Erasmus as well as the occupational therapy technician, Mrs Kate Pule that invested their time into the study. A special thanks to Sterkfontein Psychiatric Hospital and the mental health care users who so willingly shared their information and experiences.

My sincere thanks are given to my family, especially my parents who encouraged me to pursue this degree and persevere through it all. I will forever appreciate your love, assistance, and guidance in balancing work and personal life.

This study was made possible with the support of the Faculty Research Committee grant, at the University of the Witwatersrand. The grant assisted with the licensing of the Activity Participation Outcome Measure (APOM) and necessary research equipment.

Table of Contents

DECLARATION.....	i
ABSTRACT.....	ii
ACKNOWLEDGEMENTS	iii
Table of Contents.....	iv
List of Tables	vii
List of Figures.....	viii
List of Abbreviations	ix
Nomenclature	x
Chapter 1: Introduction.....	1
1.1. Introduction/ Background.....	1
1.2. Statement of the Problem.....	2
1.3. Research Question	3
1.4. Purpose of the Study	3
1.5. Research Aims and Objectives.....	3
1.5.1 Aim 1	3
1.5.2 Objectives.....	3
1.5.3 Aim 2.....	4
1.5.4 Objectives.....	4
1.6. Justification for Research	4
1.7. Organisation of chapters	4
Chapter 2: Literature Review	6
2.1. Introduction	6
2.2. The forensic mental health care setting	6
2.3. Forensic mental health care users.....	8
2.3.1. Occupational Therapy Services.....	8
2.4. Outcome Measurement	10
2.4.1. Importance of patient outcome measurement.....	10
2.4.2. Facilitators and barriers of outcome measures	12
2.4.3. Activity Participation.....	12

2.4.4	Types of outcome measures.....	13
2.4.5.	Trends in change after occupational therapy intervention	15
2.5.	Conclusion	17
Chapter 3: Research Methodology.....		18
3.1.	Research Design.....	19
3.2.	The Research Setting	19
3.3.	Aim 1: Intra- and inter-rater reliability, internal consistency and content validity of the APOM.....	20
3.3.1.	Population to be studied.....	20
3.3.2.	Sampling.....	20
3.3.3.	Measurement Tools	20
3.3.4.	Research Procedures.....	21
3.3.5.	Data Analysis	21
3.4.	Aim 2: Trends of change in activity participation in a Forensic Population	22
3.4.1	Population to be studied.....	22
3.4.2.	Sample Size	23
3.4.3.	Selection Criteria.....	23
3.4.4.	Selection of Participants.....	23
3.4.5.	Measurement Tool	24
3.4.6.	Research Procedure.....	24
3.4.6.1.	Control for Bias.....	26
3.4.7.	Data Analysis	26
3.5.	Ethics Clearance	27
Chapter 4: Results		29
4.1.	Aim 1: Intra- and inter-rater reliability, internal consistency and content validity of the APOM.....	29
4.1.1.	Demographics of the sample	29
4.1.1.	Intra-rater reliability	29
4.1.2.	Inter-rater reliability	30
4.1.3.	Internal consistency	31
4.1.4.	Content Validity	32
4.2.	Aim 2: Trends of change in activity participation in a Forensic Population	33

4.2.1 Demographics of the sample 33

4.2.2. Effect Size..... 34

4.2.3. Patterns of Change..... 37

4.3. Conclusion 42

Chapter 5: Discussion..... 43

5.1. Demographics of the sample 43

5.2. Aim 1 and Objectives 44

5.3. Aim 2 and Objectives 45

5.4. Recommendations 48

5.5. Limitations..... 49

5.6. Evaluation of the study 49

5.7. Conclusion 51

List of Tables

Table 1: Assessment Methods	25
Table 2: Demographics of Occupational Therapist Participants (n=3)	29
Table 3: ANOVA for inter-rater reliability.....	30
Table 4: Correlation coefficient of three raters assessing 5 MHCUs three times.....	30
Table 5: Internal consistency of the APOM.....	31
Table 6: Content Validity of the APOM	32
Table 7: Demographics of MHCU (n=62).....	33
Table 8: ANOVA for effect size of Time Period 1 vs Time Period 2.....	35
Table 9: ANOVA for effect size of Time Period 2 vs Time Period 3.....	36
Table 10: ANOVA for effect size of Time Period 1 vs Time Period 3.....	36
Table 11: Statistical significance of the effect size of the domains of the APOM.....	37

List of Figures

Figure 1: Aims and objectives of the study	18
Figure 2: The three time periods of the study	27
Figure 3: Change between three time periods	34
Figure 4: Patterns of change for diagnostic groups over 5 months: Domains 1 – 4.....	38
Figure 5: Patterns of change across diagnostic groups over 5 months for domains 5 – 8.....	39
Figure 6: Patterns of change across age groups over 5 months for domains 1 – 4.....	40
Figure 7: Patterns of change across age groups over 5 months for domains 5 - 8.....	40
Figure 8: Patterns of change across wards over 5 months for domains 1 - 4.....	41
Figure 9: Patterns of change across wards over 5 months for domains 5 - 8.....	41

List of Abbreviations

APOM	Activity Participation Outcome Measure
AusTOMs	Australian Therapy Outcome Measure
BMD	Bipolar Mood Disorder
GAF	Global Assessment of Functioning
MHCU	Mental Health Care User
MOHO	Model of Human Occupation
MOHOST	Model of Human Occupation Screening Tool
TOM	Therapy Outcome Measure
UK	United Kingdom
USA	United States of America
VdTMoCA	Vona du Toit Model of Creative Ability

Nomenclature

Activity Participation: Meaningful engagement in occupation that is productive. It is the preparedness to participate in everyday activities (Du Toit, 1991).

Content Validity Index: The degree to which the test items cover the necessary areas that they purport to measure and are representative of the issue at hand, is termed content validity (Kumar, 2011d). For this research, content validity index is defined as demonstrating agreement across items.

Effect Size: A responsiveness measure used in detecting change in a population, to establish the effects of intervention (Terwee et al., 2003).

Forensic mental health care user: A forensic patient refers to an individual with a criminal history who receives intervention for mental illness in a correctional facility (Farnworth and Munoz, 2009). For this study, the term forensic mental health care user refers to mentally ill persons who also committed an offence and are thus admitted to a psychiatric institution. The legal term for this, according to the Mental Health Care Act 17 of 2002, is state patient (Republic of South Africa, 2002).

Outcome measure: An instrument used to measure and record change in a client, after their involvement in therapy (Unsworth et al., 2004). An evaluation that measures a number of items, in order to establish change in a client and that is attributed to therapeutic treatment (Casteleijn, 2012).

Parole: The privilege granted to forensic MHCUs, to leave the ward and walk the grounds of the health care institution for a specified time period with or without an escort (Moore, 2005).

Patterns of change: The difference in functioning as shown on the APOM using particular categories.

Reliability: The concept of reliability is used in research to describe the stability of tools. It refers to the fact that an instrument is predictable and consistent in nature (Kumar, 2011d).

Reclassification: The change in the forensic status of an individual, from a state MHCU to that of an involuntary MHCU.

Routine outcome measurement: The regular collection of data pertaining to the functional level and health of a client (Bilsker and Goldner, 2002).

Trends: Studies concerned with trends are a means of tracking change between data collection points (Kumar, 2011b). This is with reference to activity participation of different groups of MHCUs involved in this study.

Chapter 1: Introduction

1.1. Introduction/ Background

Psychiatric illnesses are prevalent worldwide, as is crime. Although these might be considered separate problems, there is also the possibility for their co-occurrence. Forensic psychiatry is concerned with the intervention of those offenders requiring mental health care (O'Connell and Farnworth, 2007). Mental health care users (MHCUs) with a criminal history are detained in a psychiatric hospital on commission of an offence. This group of MHCUs present with various difficulties of a social and psychological nature. It is probable that these problematic areas compromise daily occupation (Lindstedt et al., 2005). Occupational therapists working in the field of forensic psychiatry should aim to improve MHCUs ability to participate in occupations (Lindstedt et al., 2005). This seems relatively simple; however literature to support this statement remains scarce.

Due to the limited research in providing an evidence base for occupational therapy in mental health, the profession has experienced difficulty justifying the value of assessing and facilitating participation in various activities used as a means of intervention in this field of practice (Casteleijn, 2012). According to the Occupational Therapy Practice Framework II (OTPF II), the outcome of occupational therapy is "supporting health and participation in life through engagement in occupation" (American Occupational Therapy Association, 2008:626). Thus, activity participation outcome measures are required to substantiate the outcomes of intervention in this field of practice.

Currently, there are limited outcome measures that assess activity participation in the field of mental health. From those that are available, self-report measures do not correlate well with other commonly used scales that measure functioning, such as the Global Assessment of Functioning (GAF) score when measuring change in clients with mental health problems (Samsonraj et al., 2012). The GAF was designed to quantify the seriousness of mental health issues. It forms part of Axis V in the *Diagnostic and Statistical Manual of Mental Disorders, fourth edition text revision* (DSM-IV-TR) (Aas, 2010). This was in practice at the time of commencement of this research and was thus applicable to consider. However, a number of authors questioned the reliability and validity of the GAF itself (Aas, 2010). It is interesting to

note that the GAF is no longer part of the DSM-5 that was introduced in 2014 (American Psychiatric Association, 2013).

The Activity Participation Outcome Measure (APOM) based on the Vona du Toit Model of Creative Ability (VdTMoCA), which consists of therapists observed and reported activity participation levels for MHCUs. The APOM was developed in South Africa by Casteleijn. This tool is considered a valuable outcome measure in occupational therapy. It has been validated together with several occupational therapists working in psychiatric hospitals and clinics in Gauteng (Casteleijn, 2011). Thus, the APOM is applicable for use in the South African context in occupational therapy in various fields of mental health.

In forensic psychiatry, as O'Connell and Farnworth (2007) indicate, there is an even greater "lack of published evidence relating to occupational therapy" with minimal research reporting outcomes for this very specific population of forensic MHCUs (O'Connell and Farnworth, 2007:187). These are "offenders receiving psychiatric treatment in correctional institutions" (Farnworth and Munoz, 2009:193). Among the minimal evidence available, a detailed case highlighted the importance of occupational therapy interventions with the offenders in psychiatric forensic units (O'Connell and Farnworth, 2007). The investigation revealed that the typical evaluations by the psychiatrist and psychologist concerning the structured performance of the individuals involved were insufficient. Occupational therapy is able to overcome such an inadequacy. This is achieved as occupational therapy permits a non-threatening, task-centred environment in which characteristics of clinical significance can be discovered. The occupational therapist is able to provide insight into underlying pathology, reasoning, and personality traits, indicative of a particular diagnosis (O'Connell and Farnworth, 2007). This is important since interventions with forensic psychiatric clients should aim to afford them sufficient abilities to transition into their community on discharge from a hospital with secure wards (O'Connell and Farnworth, 2007). The process of transition within the hospital and on discharge should be monitored by means of an outcome measure. This is necessary to track change in performance on a routine basis.

1.2. Statement of the Problem

There is a definite lack of evidence in the literature that describes or measures the changes in the functioning of MHCUs, whether it is positive or negative. Tracking change in activity participation of MHCUs in a forensic setting is not a routine occurrence. If activity participation is

not measured, evidence of the effect of intervention programmes will not be available for health care professionals. In addition, the specific type of outcome measure that is most relevant for a forensic setting was also unknown.

1.3. Research Question

Is the APOM an appropriate and relevant tool to use as a routine outcome measure in a psychiatric forensic setting to track change and describe trends in activity participation patterns?

1.4. Purpose of the Study

There are a number of additional constraints in the population of MHCUs in secure forensic settings, involving aspects such as long term admissions, parole, and legal proceedings. As a result, a priority for research to validate observable and measurable outcomes of activity that can be associated with positive results has been indicated. The purpose of this study was, therefore, to determine if the APOM is a reliable and relevant tool that can be utilised with MHCUs in the forensic units at Sterkfontein Psychiatric Hospital by occupational therapists trained in its use.

1.5. Research Aims and Objectives

The study consisted of two aims with corresponding objectives for each aim.

1.5.1 Aim 1

- To establish selected psychometric properties of the APOM with a forensic population.

1.5.2 Objectives

- Determining the intra- and inter-rater reliability of the APOM administration among the occupational therapists working in the forensic units at Sterkfontein Psychiatric Hospital.
- Establishing the internal consistency of the APOM when used with MHCUs in a forensic psychiatric setting.
- Investigating the content validity of the APOM through expert clinical judgement to identify which of the items in the APOM are considered most relevant in a forensic setting.

1.5.3 Aim 2

- To describe the trends in activity participation in a forensic population.

1.5.4 Objectives

- Determining if effect size (specific change) and trends in activity participation can be captured by the APOM that will assist in the decision for appropriate intervention for MHCUs in a forensic psychiatric setting.
- Describing patterns of change in each domain of the APOM across different diagnoses, age groups, and wards.

1.6. Justification for Research

Literature suggests that research is required to identify those interventions linked to optimistic outcomes on discharge (Farnworth and Munoz, 2009). Essentially, there is a significant need for evidence of the effect of therapy on a MHCUs functional ability and adaptation within the community thereof (Farnworth and Munoz, 2009). This is particularly important for individuals with a psychiatric illness who commit an offence. In addition, it is essential for further studies to be undertaken to validate assessment instruments that consider outcomes measures of activities, those that track change and determine the expectations for adequate daily living within the community (Farnworth and Munoz, 2009). Therefore, this research contributed to the psychiatric field of occupational therapy with respect to the use of a South African standardised outcome measure in a forensic setting. This, in turn, may guide occupational therapists in their contribution in decisions regarding the parole of a MHCU and their focus of intervention.

1.7. Organisation of chapters

Chapter 1 describes the introduction or background to the problem as well as the statement of the problem. The research question is proposed, and the purpose of the study explained. The aims and objectives of this study together with the justification for the study are also presented.

Chapter 2 provides an introduction to the literature review. Recent literature was reviewed and the following areas explained to provide background on research concerning topics inherent in this study. These include the forensic mental health care setting, occupational therapy services offered to forensic MHCUs, and outcome measurement. An introduction to the latter concept,

activity participation, trends in changes, facilitators and barriers, as well as types of outcome measurement is covered in the chapter.

Chapter 3 includes the research methodology and refers to the research design and setting. The population studied, sampling, measurement tools used, research procedure, and an outline of the data analysis is discussed for both aim 1 and aim 2. Ethical clearance procedures are also described.

Chapter 4 covers the results of the research, such as the demographics of the sample, intra- as well as inter-rater reliability, internal consistency, and content validity of the APOM. In addition, effect size and trends in terms of patterns of change are discussed in chapter 4.

Chapter 5 contains the discussion regarding the research and comprises the recommendations, limitations, and evaluation of the study together with the conclusion.

Chapter 2: Literature Review

2.1. Introduction

Literature regarding forensic MHCUs and outcome measurement was reviewed using the search engine Pubmed, OT Seeker and Ebsco Host that includes CINAHL, MEDLINE, SocINDEX and Psychology and Behavioural Sciences Collection. The search was not profession specific but rather only included mental health. The date range was that of the past 20 years and key words used were forensic, offenders in mental health, outcome measurement, routine outcome measurement, and change after intervention. The setting, general and occupational therapy specific services for forensic MHCUs as well as activity participation and trends in changes are reported on in this chapter.

2.2. The forensic mental health care setting

Services related to forensic psychiatry might comprise a court of law, the prison system, secure settings, mental health care units, as well as the community (O'Connell and Farnworth, 2007). The country of interest in this research is that of South Africa and therefore particular attention to the requirements in this area are of importance. The Mental Health Care, Criminal Procedure, and Correctional Services Acts are pertinent to the South African context. The aforementioned documents consider the competence of a suspected criminal to appreciate court proceedings together with accountability for their actions and to acknowledge psychiatric disorders (Moore, 2005).

One is admitted to a mental health care institution if viewed as unfit to appear in court and not liable (Moore, 2005). The individual is then referred as a state patient who is managed in a ward by a multidisciplinary team that usually comprises a consultant psychiatrist, registrar in the psychiatric field, social worker, occupational therapist, psychologist as well as nurses (Moore, 2005). Persons with a psychiatric diagnosis who are able to stand trial and responsible for their actions are not dealt with at Sterkfontein Psychiatric Hospital. Occupational therapists working in forensic psychiatric units should constantly review and improve their knowledge of the legal system (Moore, 2005). The wards are usually that of secure, medium-secure, or open (Moore, 2005). The United Kingdom (UK) classes forensic units as high-, medium-, or low-secure (Craik et al., 2010). Literature from this area equates the term medium-secure unit and regional secure unit (Heap, 2003).

In a secure setting, the MHCUs are not permitted the benefits of any form of parole that is to exit the ward, as is allowed in the other two types of wards. Their whereabouts are closely monitored and privileges restricted (Moore, 2005). Care in a medium-secure unit also operates on an inpatient basis as MHCUs remain in hospital according to the relevant Mental Health Care Act (Heap, 2003). These MHCUs are housed in such a way as their risk to others and probability to abscond is high. Nonetheless, it is thought that MHCUs in a medium-secure unit pose a lesser risk than those in high security wards (Heap, 2003). Open wards are less stringent in that MHCUs are encouraged to engage in work or project orientated tasks prior to their return to the community (Moore, 2005). Aside from this, the evidence base and information available regarding the classification of security in forensic psychiatric settings in other countries is minimal.

The typical movement of a MHCU through a hospital system has been described as hierarchical from a secure to medium-secure to an open ward (Moore, 2005). This is dependent on the severity of the offence, a MHCUs therapeutic and medical progress as well as the reports from their leave (Moore, 2005). Sterkfontein Psychiatric Hospital is primarily considered a medium-secure setting as MHCUs are granted parole by the multidisciplinary team. This varies from ground parole to occupational therapy parole with or without an escort.

Admission of forensic MHCUs is usually lengthy and hospitalisation results in institutionalisation. It is evident that this brings about many challenges for meaningful occupations and general wellbeing. These challenges have been recognised since the moral movements as long ago as the 18th century (Christiansen and Haertl, 2014). The necessary limitations of a forensic psychiatric institution are bound to reduce opportunities and thereby cause occupational problems (Craik et al., 2010). These risk factors are seen as obstacles to purposeful occupational participation. Such factors that arise from institutional living include occupational deprivation, imbalance, and alienation (Craik et al., 2010).

Literature simply describes various clinical features and causes of institutionalisation. However, Zietsman and Casteleijn (2014) highlight the similarities between the causes of institutionalisation and the above stated risk factors, termed occupational injustice (Zietsman and Casteleijn, 2014). Hospitals are often reasonably isolated from the community. The implication of this is that the MHCU loses contact with their support systems and is exposed to unsettling situations. This is comparable to that of occupational alienation. It is also likely that MHCUs must share space with persons with values and opinions that differ from their own (Zietsman and Casteleijn, 2014).

In addition, the ward arrangement is such that MHCUs fail to engage in occupations that ordinarily occur in the evening, such as reading or conversing with others. The setting expects for them to retire to bed earlier than usual, resulting in deprivation in this area. This is related to inactivity forced on long term MHCUs (Zietsman and Casteleijn, 2014). Lastly, it is extremely difficult to accommodate the unique needs of a large amount of MHCUs admitted to forensic units leading to an occupational imbalance. The limited engagement in activity associated with institutionalisation accustoms MHCUs to the setting, yet potentially impedes their ability to resume community living (Zietsman and Casteleijn, 2014).

The incorporation of context and daily activity involvement that is meaningful, and of value to an individual, constitutes the unique contribution of the occupational therapist in a forensic institution. It defines the profession from other health care practitioners in every aspect of intervention (O'Connell and Farnworth, 2007). The importance of occupational therapy with regards to institutionalisation and occupational risk factors must be emphasized. The occupational therapist should adopt an approach that encourages and supports opportunities for participation in desired occupations. This is with the view to promote a sense of achievement, health as well as favourable outcomes (Zietsman and Casteleijn, 2014, Wilcock, 1999). Furthermore, it is the occupational therapist's responsibility to deliver services that account for the lack of involvement in familiar occupations associated with institutionalisation (Zietsman and Casteleijn, 2014).

Institutional living is associated with a number of negative influences that are evident in the prolonged hospital admissions of MHCUs. The loss of individuality and contact with reality and the authoritarian attitude of staff tend to reinforce institutionalisation. In summary, the issue of institutionalisation coupled with stigma, disadvantages and marginalises MHCUs. This, in turn, affects their activity participation and thus occupational therapy treatment is needed.

2.3. Forensic mental health care users

2.3.1. Occupational Therapy Services

The most common diagnostic groups of forensic MHCUs consist of those with a psychotic disorder such as schizophrenia, disorders involving mood, as well as dysfunctional personalities (O'Connell and Farnworth, 2007). The main diagnosis of a large majority of the MHCUs involved in this research was that of schizophrenia. Therefore, it is relevant for this psychiatric illness to be discussed here further. Schizophrenia is thought to be one of the most incapacitating mental

illnesses that progresses over time. The nature of schizophrenia is such that these MHCUs usually struggle with participating in occupations (Crouch, 2014). Therefore, intervention should initially be provided on an individual basis or separate tasks given in a group. However, this is not realistic in health care settings filled to their capacity. In addition, therapy is greatly influence by the stigma associated with this condition as assisting such MHCUs with their return to their personal and professional lives is incredibly difficult (Crouch, 2014). In short, these multiple above mentioned factors imply that the possibility for change in schizophrenic MHCUs is questionable. As a result, it is important that the unique opinions, feelings of accountability, and independence of the MHCUs with schizophrenia be stressed rather than the remaining symptoms of the disorder, ill-health, and reliance on others (Crouch, 2014).

Psychiatric disorders are associated with a tremendous amount of stigma. This, in conjunction with a criminal history, means that the forensic MHCUs are twice as vulnerable a population (O'Connell and Farnworth, 2007). Moral treatment dates back to the movement shaped by significant changes in the way in which persons with psychiatric disorders were treated. An emphasis was placed on more acceptable, compassionate treatment of MHCUs (Christiansen and Haertl, 2014). Occupational therapists should continue to be mindful of this. Forensic psychiatric services are responsible for both providing MHCUs with appropriate intervention as well as safeguarding the community at large (Farnworth and Munoz, 2009, O'Connell and Farnworth, 2007).

Occupational therapy intervention should be directed at dealing with the involvement of persons in daily activities to promote the well-being of an individual (American Occupational Therapy Association, 2008). This is achieved via engagement in purposeful, constructive pursuits (Farnworth and Munoz, 2009). Difficulties, including the involvement of persons in a therapeutic programme for the sole purpose to qualify for a leave of absence from the hospital, also need to be explored (O'Connell and Farnworth, 2007). The procedures are correctional in nature, and strict procedures must be followed. Thus, it is important for the occupational therapist to apply the occupational therapy process within the stated rules and procedures of the Mental Health Care Act 17 of 2002.

Institutionalisation often amounts to significantly reduced decision making on the part of the MHCUs. This was experienced and reported on by Craik et al. (Craik et al., 2010). Participants emphasized that their choices were limited to either accepting or declining participation in groups. The MHCUs described this decision as meaningless since involvement in therapy was often considered as an automated rather than a beneficial process. MHCUs engaged simply for

the reason of obtaining positive reports as this was believed to essentially influence discharge (Craik et al., 2010).

MHCUs also indicated that offering their views on activity choice proved challenging (Craik et al., 2010). It is thought that perhaps the hospital staff expect MHCUs to engage in unfamiliar tasks that are not in keeping with their culture and thus of minimal importance (Zietsman and Casteleijn, 2014). MHCUs explained that negotiating with staff about using different activities might count against them. Their reason for this argument was that perhaps the staff report the MHCUs as problematic. The article suggests that access to opportunities be increased in future to allow MHCUs greater choice in occupations (Craik et al., 2010). This is ideal; however the minimal number of occupational therapists employed in South African psychiatric hospitals and clinics means that the ratio of MHCUs to professionals remains high (Casteleijn, 2012).

The above mentioned factors regarding institutionalisation must be considered and attended to through intervention provided by occupational therapists in long-term psychiatry. Additional research and collaboration internationally should be used for occupational therapy to gain recognition as a necessary service in forensic psychiatry (O'Connell and Farnworth, 2007). Expansion of occupational outcome measures that are relevant for evaluation of this population of MHCUs remains a priority. In essence, evidence of the effect of services is needed. This can be achieved through routine outcome measurement with a valid and reliable outcome measure for a forensic setting.

2.4. Outcome Measurement

2.4.1. Importance of patient outcome measurement

Literature highlights the importance of routine outcome measurement to demonstrate the effect of service delivery and track change (Duncan and Murray, 2012, Unsworth, 2000, Unsworth et al., 2012), and support for the consistent use of outcome measures (Duncan and Murray, 2012, Skeat and Perry, 2008, Unsworth, 2000, Unsworth et al., 2012). Such tools allow for improved feedback by health care professionals regarding the kinds of outcomes attained as well as the way in which these are comparable with other disciplines (Duncan and Murray, 2012).

Outcome measures are of significance and value to occupational therapists as such tools assist the professional to establish whether constructive adaptation is observed over time, best practice is employed, and intervention is provided at a preferable point in time (Unsworth, 2000).

This, in turn, highlights the importance of occupational therapy in programmes and maintains its inclusion in programmes (Unsworth, 2000). This concept should remain true in a forensic setting. Forensic psychiatry is associated with a prolonged hospitalisation, and therefore constant re-evaluation (Moore, 2005) as well as tracking change in behaviour is advised.

The use of outcome measures in routine outcome measurement is not without challenges. Practitioners often evaluate their clients subjectively, the danger of which is bias in terms of overstating the progress of a client (Colquhoun et al., 2010). A solution to counteract this problem is the simultaneous use of an outcome measure. This will ensure that change in a client is determined according to specific standards in order to facilitate fair evaluation (Colquhoun et al., 2010). A tool with sound psychometrics is thought to contribute to objective scoring (Bilsker and Goldner, 2002).

Systematic error, that is also a form of bias, is another challenge in measuring outcomes routinely. It may adversely influence the results of a study and should therefore be limited as far as possible (Bilsker and Goldner, 2002). Different types of systemic error exist, three of which are particularly applicable in outcome measurement. Descriptions of these follow. The first is selection bias whereby the focus is placed on the baseline assessment for those believed to most certainly attain positive results. Attrition bias is the second bias type concerned with the professional focusing on MHCUs with a positive rating during follow-up assessments (Bilsker and Goldner, 2002). The third and final type of bias is that of detection bias. This refers to inaccurate, improbable high scores given to those on completion of treatment (Bilsker and Goldner, 2002, MacDonald and Trauer, 2010). It is thought that bias is usually a process that one is unaware of (Bilsker and Goldner, 2002). Therefore, it is of vital importance to be cognisant of and account for the possibility of this phenomenon.

Further research that encouraged expert reports of occupational therapists emphasized that measuring outcomes are an essential requirement for the continued existence, recognition, and respect that the occupational therapy profession deserves (Casteleijn and Graham, 2012). Duncan (2011) proposed reducing the concerns and challenges associated with routine outcome measurement. This is in the hope that the evidence of the value of the occupational therapy profession improves (Duncan, 2011). Therefore, outcome measurement in occupational therapy is necessary to track change in the activity participation of South African MHCUs.

2.4.2. Facilitators and barriers of outcome measures

Evidence has shown that both facilitators and barriers are associated with the application of routine outcome measures (Duncan and Murray, 2012, Skeat and Perry, 2008). The identified facilitators are that if these tools are simple and time effective to complete, and comprise basic scoring methods, they offer valuable information in a practical setting (Duncan and Murray, 2012). The likelihood of practitioners utilising outcome measurement is greater if the tool is readily available, purposeful, concise, and not very complex (Duncan, 2011). It is most favourable for therapists to employ a routine outcome measurement of their choice (Duncan, 2011, Skeat and Perry, 2008). Feeling competent in their abilities to complete an outcome measure also contributes to the probability of practitioners using such a tool (Duncan, 2011, Skeat and Perry, 2008).

Another key factor in the effective implementation of an outcome measure is the support offered by the organisation itself. Their assistance in the form of training opportunities as well as appropriate resource allotment is necessary for routine outcome measurement to be most beneficial (Duncan and Murray, 2012). The employment of certain outcome measurement tools is expected in a number of psychiatric centres in the United States of America (USA). Furthermore, it is seemingly standard practice in the UK and Australia that an outcome measure be utilised by all those offering psychiatric care (Bilsker and Goldner, 2002). Essentially, barriers are implicit should the above mentioned facilitators not be in place.

2.4.3. Activity Participation

MHCUs within forensic units are faced with both practical and personal barriers that interfere with their engagement in meaningful occupation that is productive. This affects their time within secure institutions in the sense that MHCUs' occupational choices are extremely limited and largely driven by the setting (Farnworth and Munoz, 2009). Reports indicate that MHCUs in a forensic setting state that groups were no longer interesting or helpful after an extended hospital admission (O'Connell and Farnworth, 2007). Studies identified boredom as a significant factor among these MHCUs in secure divisions, in spite of their engagement in occupational therapy (O'Connell and Farnworth, 2007). This possibly links to behaviour related to institutionalisation where MHCUs with lengthy or permanent admission as MHCUs tend to become indifferent, disinterested, and ultimately lose their uniqueness (Venter and Zietsman, 2005).

In addition, the atmosphere within a mental health care ward has been described as having both positive and negative effects on MHCUs. A Swedish study identified relations, intervention, daily

activities, physical context, and sense of security as distinct features of the ward atmosphere. Daily activities were viewed by participants as individual tasks and group games contributing to improved relationships with others. Conversely, there not been sufficient activities available in the forensic ward and minimal structured activities serve as an adverse factor. Furthermore, it is thought that institutions that are overprotective are detrimental to the functioning of patients (Brunt and Rask, 2007).

2.4.4 Types of outcome measures

There are a number of outcome measures that were developed for use in occupational therapy. Those measures that have been well reported in the literature are briefly described below. This list is by all means not exhaustive but it seems that these outcome measures are often used in different settings in occupational therapy.

The Canadian Occupational Performance Measure was first introduced in 1990 and stresses the importance in the link between occupation and wellness. It consists of an interview that is semi-structured and completed in four steps. There is considerable evidence regarding the properties and use of this tool (Kirsh and Cockburn, 2009). The outcome measure is widely accepted by occupational therapists, yet studies indicate several difficulties associated with it. These involve problems in the rating scale, especially with intellectually impaired MHCUs. Furthermore, the Canadian Occupational Performance Measure considers the client as the expert, and this concept is praised in Western culture. However, this might create concern in other cultural denominations. In short, the cultural sensitivity of this tool should be studied further (Kirsh and Cockburn, 2009).

The Model of Human Occupation Screening Tool (MOHOST) was founded on the Model of Human Occupation (MOHO). The MOHOST includes 24 items arranged into a number of separate sections, namely Volition (or motivation for occupation), Habituation (or pattern of occupation), Communication and Interaction Skills, Process Skills, Motor Skills, and Environment (Forsyth et al., 2011). Research conducted in the UK and USA concluded that completion of the MOHOST required more time to complete in comparison to the typical assessments, particularly at first (Forsyth et al., 2011). Contrariwise, assessment occurs over a period of time and is discreet, which occupational therapists consider favourable (Parkinson et al., 2008). It is clear that there is evidence from the UK and USA populations; however minimal research with regards to the use of the MOHOST in a South African context exists.

The Australian Therapy Outcome Measure (AusTOMs) arose from the identified need for such a tool in Australia. The Therapy Outcome Measure (TOM), used in the UK, was modified to align with the Australian practices (Unsworth et al., 2004). The development of the AusTOMs was intended to provide an outcome measure for the allied health professionals including, occupational therapists, physiotherapists, and speech therapists. It is thought that tools completed by therapists, of which the AusTOMs is one, are more costly than those of self-report. There remains a definite limitation in the number of tools available that are administered by therapists (Unsworth et al., 2004). The AusTOMs is recognised at an international level and is flexible in the sense that it covers all diagnoses, persons of different ages, and health care services (Fristedt et al., 2013). This serves as a challenge in the field of mental health as the tool fails to accommodate for specific occupational performance areas (Casteleijn and Graham, 2012). Client factors that are not incorporated in the AusTOMs typically include self-esteem as well as volitional and cognitive components (Casteleijn, 2012).

The AusTOMs comprises 12 occupational therapy scales, including Learning and Applying Knowledge, Upper Limb Use, Carrying Out Daily Tasks and Routines, Transfers, Using Transport, Self-care, Domestic Life – Home, Domestic Life – Managing Resources, Functional Walking and Mobility, Interpersonal Interactions and Relationships, Work, employment and Education and Community Life, and Recreation, Leisure and Play. This tool focuses on the measurement of scales, and the following four domains are rated: impairment, activity limitation, participation restriction, and wellbeing/ distress (Unsworth et al., 2004). The test-retest as well as the inter-rater reliability for all the scales pertaining to occupational therapy are reported as high (Fristedt et al., 2013). The AusTOMs is restricted to the understanding of allied health practitioners in Australia. These might differ to that of other countries, posing a problem in this respect (Perry et al., 2004).

The need for the APOM arose as a result of there been no appropriate tool of this kind available for the South African population. The diversity of the country in terms of racial groups and type of care is indicative of the complex nature of the development of an instrument for this setting. Nonetheless, Casteleijn (2012) identified that using the VdTMoCA, a theory familiar to occupational therapists, might facilitate this process (Casteleijn, 2012). The APOM permits various data collection points known as baseline and re-assessments. The time frame between these re-assessments is dependent on the institution and usually ranges from approximately three weeks to six months (Casteleijn, 2011). The psychometric properties linked to a particular outcome measure should correspond to the relevant concepts and domains in their entirety

(Casteleijn and Graham, 2012). The psychometric properties of the APOM including the validity (both content and construct), reliability, and the responsiveness are described as good (Casteleijn, 2013).

Examples to illustrate the above mentioned follow. The Item-level calculations all exceeded 0.78, which is considered the minimum for adequate results. Thus, the Scale-level content validity is acceptable. Cronbach's alpha was calculated to greater than 0.7 for each domain, and this is considered good internal consistency. The p value was below 0.0001 for all areas showing that this tool is sensitive and change is easily detected (Casteleijn, 2012). The APOM was standardised and eight specific domains were identified (Casteleijn, 2011). These favourable psychometric properties indicate that the APOM serves as a valuable tool in the field of mental health, it has been standardised on a South African population and its theoretical framework is based on a model that is well used in South Africa. However its use in a forensic facility has not been studied to date.

2.4.5. Trends in change after occupational therapy intervention

There is a paucity of literature that describes trends in changes after intervention in MHCUs. A few studies were located that reported change. Cook et al. used the Social Functioning Scale in a community in the UK on persons with a psychotic illness that yielded optimistic findings. It revealed that MHCUs involved in occupational therapy improved considerably over a one year period as compared to the control group. Therapists were required to adjust the intervention according to the specific needs of each participant. The Social Functioning Scale was used and the positive change occurred in four specific areas (Cook et al., 2009). These included relationships, independence performance, as well as competence, and recreation (Cook et al., 2009). This international study highlights the considerable improvement of MHCUs participating in community occupational therapy programmes. The scarcity of information that exists with regards to the functional changes in forensic MHCUs must be stressed.

Participants in a Swedish study were involved in outpatient occupational therapy and primarily presented with depressive and anxiety disorders. Their background comprised residing in their usual home environment either independently or with relatives. MHCUs attended sessions voluntarily and contributed to the decisions regarding their intervention. This meant that treatment was highly individualised and aims met the specific needs of the MHCU. These MHCUs named numerous factors relating to positive change (Sundsteigen et al., 2009). It is proposed that precise timing, acceptance of the MHCU within the group, being involved, and

purposeful occupation are a few factors contributing to successful outcomes (Sundsteigen et al., 2009). Although this evidence is based on outpatient therapy, it might be that such factors are as applicable in inpatient treatment. It is for this reason that the details of these factors are elaborated on below.

Results from the above mentioned study indicated that intervention required MHCUs to attend sessions. A professional opinion on timing in terms of commencing therapy was of importance (Sundsteigen et al., 2009). There were instances when intervention might have been suggested at an early stage to avoid inactivity. Time should permit for one to acknowledge that intervention is necessary, behavioural modification to take place, and therapy to be concluded appropriately. The article also stresses that treatment that does not align with the existing needs of the MHCU, lacks purpose and therapeutic value (Sundsteigen et al., 2009).

The concept of belonging involved the want to be with others with whom MHCUs shared similar ideas, values, or difficulties. The initial emphasis was placed on stigma and isolation associated with psychiatric illness that progressed to an appreciation of person specific differences (Sundsteigen et al., 2009). Involvement was intended for MHCUs to actively engage during intervention. It was noted that this might be negatively affected by ill health and low energy levels on commencement of treatment (Sundsteigen et al., 2009). Occupations that were considered meaningful to MHCUs were those that dealt with their difficulties, were calming, and evoked a sense of positivity (Sundsteigen et al., 2009).

A South African study was conducted at six different psychiatric hospitals within the Gauteng region. The sample comprised occupational therapists and MHCUs (with a diagnosis of schizophrenia) with a readmission to one of the institutions. MHCUs were functioning on the passive participation level of creative ability (experimental action) at the time of the study. This is with specific reference to the area of personal management (Smith et al., 2014). The results of their research indicated the common perception that poor social participation served as a primary factor influencing the readmission of these MHCUs to a psychiatric institution (Smith et al., 2014).

Literature pertaining to the functional change of MHCUs in settings, such as the community and outpatient units, is available as presented above. This holds true for international more so than local evidence. It is alarming that the same cannot be said for forensic settings in that there is no South African evidence as compared to the limited international evidence. In conclusion, change in forensic psychiatry in the South African context is not reported on in the literature.

Consequently, this is considered a priority research area and calls for outcome based studies in forensic MHCUs.

2.5. Conclusion

The literature review highlighted the unique features of forensic psychiatric units as well as the intervention offered to MHCUs. The importance of outcome measurement in occupational therapy was discussed. It is evident that facilitators of outcome measures are most useful as an absence thereof implies barriers. Activity participation in an institution is limited by the environment particularly in a forensic context. Although many different types of outcome measures exist, the APOM was identified as most suitable for a South African psychiatric population. The lack of literature reporting change in a forensic psychiatric setting especially in South Africa is of great concern. In short, it is clear that the evidence in terms of outcome measurement in occupational therapy with regards to forensic MHCUs is inadequate. This extreme limitation is noticeable as seen in textbook references and unpublished dissertations from masters' degrees. Thus, there is a strong need for research in this area in an attempt to contribute to the literature and aid the knowledge base for this select population.

Chapter 3: Research Methodology

The methodology of the two distinct sections of this research will be described separately. However, the procedure in terms of ethical clearance was similar for aim 1 and aim 2 as described in section 3.5. Please refer to the diagrammatic representation below.

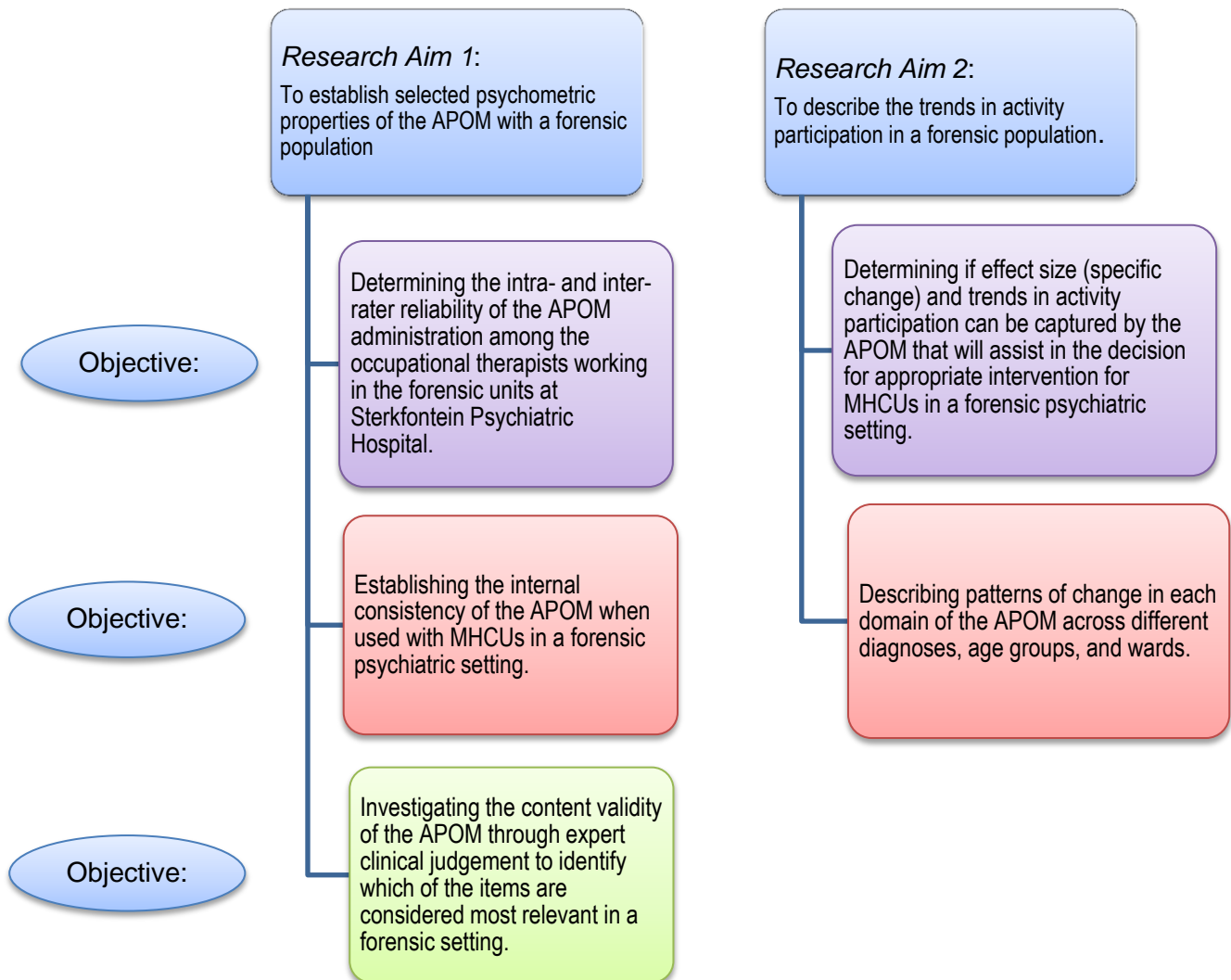


Figure 1: Aims and objectives of the study

3.1. Research Design

This research was descriptive, quantitative, and longitudinal in nature. Descriptive research intends to explain for example a scenario, dilemma, incident, or an opinion concerning a particular topic in a methodical fashion (Kumar, 2011a). Quantitative research designs are precise with a sound construct (Kumar, 2011b). Thus, this type of study design is systematic in nature. Such studies should contain adequate detail to ensure that imitation is possible (Kumar, 2011b). The quantitative elements of this research occurred with the investigation of the psychometric properties of the APOM with a specific population of MHCUs. Longitudinal studies are used to establish the nature of variations over time to understand trends (Kumar, 2011b). This was used to determine change that occurred over five months in forensic MHCUs to establish trends in the APOM domains of activity participation.

3.2. The Research Setting

The research took place at Sterkfontein Psychiatric Hospital that caters for general and forensic cases. It had a bed occupancy rate of approximately 489 at the time of the study. From a total of 489 beds, approximately 250 of the beds were allocated to the forensic sections. This is the only one of its kind in the Johannesburg, Gauteng region. This region has a population of 4,434,827 (Statistics South Africa, 2011). The multidisciplinary team members comprise a consultant psychiatrist, a registrar, social worker, psychologist, and occupational therapist for the most part. There were seven occupational therapists and six assistant staff members working in the hospital at the time of the study.

Each case is considered separately in that the multidisciplinary team discusses and grants permission for MHCUs that are regarded as low risk to walk between the ward and occupational therapy department with or without an escort. This is known as parole and is considered a privilege that is not necessarily determined by the nature of the ward but is rather based on the behaviour of the MHCU. Those MHCUs not granted parole received occupational therapy in the ward.

3.3. Aim 1: Intra- and inter-rater reliability, internal consistency and content validity of the APOM

3.3.1. Population to be studied

The same occupational therapists working in a forensic unit at Sterkfontein Psychiatric Hospital formed the population for both the intra- and inter-rater reliability, and content validity. The internal consistency of the APOM involved a population of forensic MHCUs.

3.3.2. Sampling

Quota sampling was used in the first aim of the study. This type of sampling is a means of selecting participants from a place of convenience to the researcher where persons with certain skills are available and asked to be part of the research (Kumar, 2011e). The inclusion criteria were occupational therapists with a minimum of 12 months working experience with forensic MHCUs and who received training in the use of the APOM. There were three occupational therapists who participated in this study based on these inclusion criteria. It was decided that a total of five MHCUs should be included to ensure a fair range contributing to repeatability of the study. However, differences between raters were evident as the study advanced and thus the need to assess a sixth MHCU became apparent. This was in an attempt to improve the consistency in ratings prior to commencement of the main study. The exclusion criterion was occupational therapy technicians and assistants as they are not trained in the APOM. The sample for the internal consistency was all those APOM scores of the MHCUs who were rated by the three raters.

3.3.3. Measurement Tools

The Activity Participation Outcome Measure: The APOM is a web based outcome measure, requiring a licence for its use and a secure password for access to the system (Casteleijn, 2013). It is used to determine changes in the participation in activities of persons with a mental illness (Casteleijn, 2013). The tool comprises various items illustrative of eight domains namely Process Skills, Communication or Interaction Skills, Lifeskills, Role Performance, Balanced Lifestyle, Motivation, Self-esteem, and Affect (Casteleijn, 2011). It was used to record three sets of data of the MHCUs obtained through regular assessment. The raw scores or ratings of the APOM were entered onto a data capturing sheet (hard copy) specifically designed for the research (Appendix A). Refer to Appendix B for an example of the APOM. Please refer to section 3.4.6. for a complete explanation of the assessment procedure regarding the APOM.

Checklist for Content Validity: Casteleijn (2012) also included a checklist of relevance in the development of the APOM (Casteleijn, 2012). The same checklist with the 53 items of the APOM was used in this study. It included a likert scale of relevance ranging from 1 to 5 (Appendix C). A score of 1 indicated no relevance at all, and a score of 5 that the item is very relevant to the forensic setting at Sterkfontein Psychiatric Hospital.

3.3.4. Research Procedures

Data collection commenced once ethical clearance, permission to conduct the research, and consent from both the MHCUs and occupational therapist participants (raters) were obtained. The intra- and inter-rater reliability was done first. The raters were asked to initially complete three APOM ratings of the same five MHCUs and then an additional MHCU for purposes previously described. Data collection occurred at a time suitable to the raters and MHCUs. All participants observed each of the MHCUs completing one activity. Each MHCU completed routine activities as part of their usual therapy while being observed by three occupational therapist participants for three days. These activities were the same as those used in the baseline assessment for aim 2, examples of which were crafting an envelope individually and preparing instant pudding as a group. Please refer to Table 1 for further details. The raw APOM scores were entered into Excel and analysis for internal consistency was extracted from the raw data.

The checklist for content validity was completed by three occupational therapists in print format and returned to the researcher. This was done on completion of aim 2, after the assessment and recording of results using the APOM of MHCUs in the forensic psychiatric unit for a period of 10 months. This allowed the participants to develop some expertise in the use of this outcome measure in forensic psychiatry, which facilitated informed decisions about the content validity of the tool.

3.3.5. Data Analysis

The concept of reliability in research refers to aspects like consistency, predictability, and stability (Kumar, 2011d). Intra-rater reliability is the consistency of the rater with him or herself over a period of time (Fawcett, 2002). Therefore, if a rater uses an instrument on the same MHCU at different times (given there is no change in the MHCU), he/she must get the same results. Intra-rater reliability of the APOM in a forensic context was determined via the use of Spearman's correlation coefficient. This non-parametric statistic needed to be used with the small sample size of this study that is not normally distributed. A correlation coefficient above 0.7

is deemed sufficient for consistent rating (Tomita, 2006). Essentially, the APOM scores across the three days of each rater were correlated to establish intra-rater reliability while scores across the three days were correlated among the three raters to establish inter-rater reliability. When different raters are using the same instrument on the same population, there should be consistency between the scores (Fawcett, 2002). Inter-rater reliability was analysed with the ANOVA statistic to determine if there was a significant difference or invariance between the raters. A p-value above 0.05 would indicate that there was not a significant difference between the raters. A Spearman's correlation was also done to see if scores across the initial five MHCUs correlated between the three raters. A correlation coefficient of above 0.7 would indicate a sufficient correlation.

The internal consistency of the items on the APOM was established using the Cronbach's alpha. Internal consistency is concerned with whether items intended to measure the same concept, effectively yield alike results. This should be the case regardless of the amount of items in a tool (Kumar, 2011d). The standard value that is recognised for Cronbach's alpha is usually that of 0.70 and higher (Spiliotopoulou, 2009). A Cronbach's alpha of 0.80 or greater is also suggested and considered acceptable (Fawcett, 2002). It should be noted that there is value in such a score.

Content validity is based on the judgement of professionals and is classed as an analysis that is descriptive in nature (Lynn, 1986). A content validity index was used to determine the consensus in the content validity checklist. Lynn (1986) proposed that both an Item-level and a Scale-level Content Validity Index exists. The former serves as an index for single items while, the latter serves as an index for the measure in its entirety (Lynn, 1986).

This concludes the data analyses for the first aim. The analyses for aim 2 follow.

3.4. Aim 2: Trends of change in activity participation in a Forensic Population

3.4.1 Population to be studied

The population studied were MHCUs admitted to the forensic psychiatric wards.

3.4.2. Sample Size

The Raosoft[®] web based sample size calculator was used (Raosoft, 2004). The margin of error is usually set at 5%, but due to the unpredictable nature of MHCUs (diagnoses, effect of institutionalisation, values, interests etc.), the margin of error was set at 10%. The confidence level was set at the usual 95%, while the population was set at 250. The response distribution, that is one's expectation of the results, was another unsure indicator due to the lack of research in the forensic setting. The expectation is unpredictable as explained above and therefore set at a low % of 30. The calculation showed that a sample size of 62 was needed. Each MHCU was rated three times, which should have given a response data set of 186 responses. Random sampling was used to select MHCUs.

3.4.3. Selection Criteria

The inclusion criteria were female and male MHCUs, 18 years or older admitted to the forensic division of Sterkfontein Psychiatric Hospital, presenting with a psychiatric illness on any one or more of the axes, of the DSM-IV-TR on commencement of the study. Additional conditions of inclusion were MHCUs had to be referred to and part of an occupational therapy programme. Exclusion criteria comprised individuals who were eligible for extended leave of absence (two weeks or more) from the hospital in 2013 and 2014.

3.4.4. Selection of Participants

Electronic lists of the hospital numbers of possible participating MHCUs as stipulated in selection criteria were generated. Thereafter, a computerised application software known as 'The Hat' was used to randomly select MHCUs (2013). An essential characteristic of random sampling is that every person has an equal probability of inclusion in a research design (Kumar, 2011e). There were three raters to collect the data who are occupational therapists trained in the APOM with experience in the forensic division of Sterkfontein Psychiatric Hospital. These were the same three raters who participated in the inter-rater reliability investigation.

Each rater was allocated 20 MHCUs that were chosen from the total random list. Participating MHCUs were assigned to therapists with whom they were familiar, although this was not always possible. Raters were subsequently provided with MHCUs from a particular ward with a minimum of three and maximum of five wards allotted to one rater. Assessments of the MHCUs who agreed to participate were completed, which included the baseline assessments at one month, the follow up interim assessment at approximately seven weeks, and final assessment at

approximately five months. The rater was allocated an additional participant if a participant was unable to be assessed for the interim and/ or final assessments due to unforeseen circumstances, such as an unexpected leave of absence.

3.4.5. Measurement Tool

The Activity Participation Outcome Measure: The APOM was used as described in aim 1 to determine the trends in activity participation. The demographic section that forms part of the APOM was completed for each participant (Appendix B).

3.4.6. Research Procedure

On receipt of ethical clearance, permission to conduct the research and consent from both the MHCUs and occupational therapist participants, data collection commenced and occurred over a period of 10 months. Every MHCU was tracked over a period of approximately five months. However, the research continued for a total of 10 months to ensure that the desired sample size was met. The names of MHCUs that correspond with the hospital numbers were available on a separate electronic list, which allowed the researcher to identify who should be approached for inclusion in the study. This sample selection ensured that this research was representative of the entire population of the MHCUs in the hospital during the 10 month time frame.

The assessment formed part of the usual work expected of the occupational therapists employed at the institution, and thus the raters continued with their usual work and were not required to perform extra duties as far as possible. Each participant continued with the usual occupational therapy programme offered at the hospital. Assessments took place in an allocated area within the ward or at the occupational therapy department if the participant had parole. The rater explained at the first assessment that the participant should complete the tasks presented as far as possible and time of completion depended on the participant. The rater was present throughout the assessment procedure, and data captured on the APOM as soon as possible, within approximately two to three days post assessment.

Participating MHCUs were assessed in groups of between two and seven depending on the ward and parole status of the MHCU. There was an exception where MHCUs were seen individually as necessary. This occurred if, for example, a MHCU was transferred to another ward or was absent for a group session for reasons such as attending a follow up appointment at another hospital. The MHCU was then assessed on an individual basis to ensure that he/she were at the same place in the assessment process as the other MHCUs in that particular group.

The same occupational therapy technician assisted all the raters with translation as required. This ensured consistency of instructions given and uniformity of assessments, which contributed to the rigor of the study.

Thorough assessments were performed with the MHCUs. These involved interview questions, observations, collateral information obtained from the medical file and respective nursing staff as far as possible, as well as specific craft and survival skills activities. The latter consisted of different food preparation tasks, such as preparing tea or coffee, instant pudding, sandwiches, jelly, or fruit salad. Each of the assessment sessions required the MHCUs to work both individually and in groups. A baseline assessment took place according to the above mentioned specifications. Activities included creating an envelope, a box, as well as a noughts and crosses game. A further assessment, known as the interim assessment, was conducted seven weeks post the baseline assessment as an approximate time frame. This comprised MHCUs completing a paper wallet, key ring, and morabaraba board and paper tokens. The final assessment occurred approximately seven weeks after the interim assessment. Essentially, the baseline to final assessment period ranged between 14 and 15 weeks. MHCUs were asked to construct a gift card, origami pouch, and draughts game board using various tools and materials. All activities were used as far as possible with the total sample of MHCUs regardless of their level of creative ability established at the baseline assessment. In summary, the information and findings were triangulated by a variety of assessment techniques and recorded on the APOM. The interim and final assessments were as extensive as the baseline assessment, contributing to the rigor of the study. Please see the summarised table below.

Table 1: Assessment Methods

Baseline Assessment		Interim Assessment	Final Assessment
Interviews questions, observations, Collateral information			
Activities	Envelope Box Game of noughts and crosses Tea/ coffee Sandwich Instant pudding	Paper wallet Key ring Morabaraba board game Tea/ coffee/ Nesquik Sandwich Fruit salad	Gift card Origami pouch Draughts board Tea/ coffee/ Oros Sandwich Jelly dessert

3.4.6.1. Control for Bias

In this study, different types of biases were addressed. The plan to control for bias is described as follows. As mentioned previously, selection bias refers to the sole inclusion of MHCUs whose prognosis appeared good or who were functioning on a higher level. It is described in literature as focusing on baseline evaluations of MHCUs most likely to show improvement (Bilsker and Goldner, 2002). MHCUs were selected using randomisation ('The Hat' method) and, in so doing, selection bias was accounted for. This prevented the inclusion of only those MHCUs thought to have a good prognosis. It also avoided placing emphasis on the baseline assessments of MHCUs believed to improve with time. Attrition and detection bias was also avoided. This was achieved as the web based APOM hides previous assessment scores, thus the rater was blinded and not influenced by previous scores. Furthermore, the same occupational therapists assessed the same participant over time. The researcher provided the raters with, and orientated them to, a guideline for each assessment including interview forms and activities. This further ensured that the procedure was as uniform as possible to control for bias.

3.4.7. Data Analysis

Descriptive statistics were used to describe the demographic data of the MHCUs. In addition, effect size was calculated to describe trends in the changes in activity participation. Different types of effect sizes may be calculated (Eurich et al., 2006, Terwee et al., 2003). For this study, the standardised response mean was used. This was done by dividing the mean change score by the standard deviation of the change score (Eurich et al., 2006). The formula for this calculation is presented below (Terwee et al., 2003).

Mean (test1-test2) of the total group

SD (test1-test2) of the total group

Mean (test2-test3) of the total group

SD (test2-test3) of the total group

Mean (test1-test3) of the total group

SD (test1-test3) of the total group

The standardised response mean was calculated for each domain at three time periods: time period 1 was between the baseline and interim assessment, time period 2 between interim and final assessment, and time period 3 covered the entire time from baseline to final assessment.

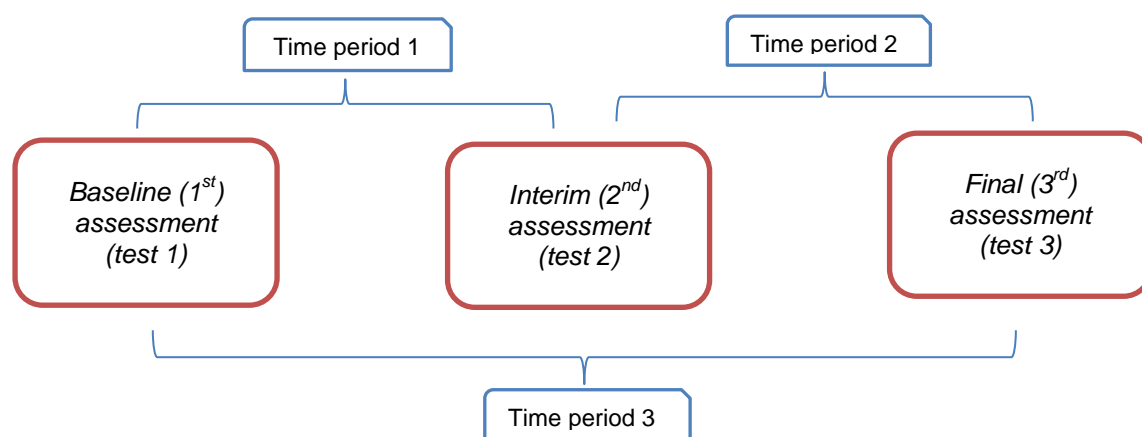


Figure 2: The three time periods of the study

The paired sample t-test was used to determine if there was a significant difference between the time periods (Terwee et al., 2003) and whether certain domains showed better (or worse) change between time periods. The p-value was set at 0.05.

3.5. Ethics Clearance

Ethics approval from the Human Ethics Research Committee at the University of the Witwatersrand (Ethical Clearance number: M130738) (Appendix D) was obtained. Furthermore, the Chief Executive Officer (CEO) and the Head of the Occupational Therapy Department at Sterkfontein Psychiatric Hospital granted permission for this research. These individuals were asked to give permission, sign, and return the letter to the researcher (Appendix E).

The occupational therapist participants were given an information sheet and asked to sign informed consent for both aim 1 and 2 (Appendix F). The consultant psychiatrist of the relevant wards was contacted and their opinion on the capacity of the selected MHCUs to give consent obtained. Those MHCUs identified as able to consent met with the researcher as well as a translator if necessary or at the MHCUs request and invited to participate in the study. They were given an information sheet and encouraged to clarify their understanding of the expectations. The MHCUs were then asked to sign informed consent for both aim 1 (Appendix G) and aim 2 (Appendix H). If a MHCU did not give their consent, then they were not included in the study. The relevant social worker contacted and arranged a meeting with a family member of MHCUs functioning at a level too low to give their own informed consent (Appendix I). If this was not possible, the consultant psychiatrist was approached and asked to sign consent for the MHCUs participation in this research (Appendix J). These documents included a brief description of the research to be carried out, the research objectives, and an explanation of

withdrawal from the research without adverse consequences together with the contact details of the researcher and supervisor.

Confidentiality was maintained through coding of the names of the MHCUs as well as the names of the participating occupational therapists. The names and details of participants were kept in a secure location by the researcher. All participants in this research study had the right to access the results. If they requested any information with regards to the study, the researcher would have made this information available.

In conclusion, chapter 3 covered the methodology used for the two aims of the study. It provided a detailed outline of the research design, setting, population, sampling, measurement tools, procedures, and data analysis. Chapter 4 containing the findings from the implementation of this research follows.

Chapter 4: Results

The research results discussed in this chapter are inclusive of the demographics of the sample, reliability, content validity, effect size, and trends in terms of patterns of change. In further explanation, intra- and inter-rater reliability, and internal consistency is covered in the section following sample demographics.

4.1. Aim 1: Intra- and inter-rater reliability, internal consistency and content validity of the APOM

4.1.1. Demographics of the sample

Occupational therapists at Sterkfontein Psychiatric Hospital with experience in a forensic setting were invited to take part in this research, three of whom consented as participants. Please refer to Table 2 below for a summary of the demographics of the sample of occupational therapists.

Table 2: Demographics of Occupational Therapist Participants (n=3)

	n	%
Gender		
Male	1	33.333
Female	2	66.667
Age in Years		
20-29	2	66.667
30-39	1	33.333
Years of experience in forensic Psychiatry at commencement of study		
12 months	2	66.667
6 years	1	33.333

There are several ways to test the reliability of an instrument. The results of the reliability investigations are presented here.

4.1.1. Intra-rater reliability

In this study, intra-rater reliability was tested with the correlation coefficient in three raters assessing six MHCUs and each MHCU had three measurements. The average correlation for all

the raters was well above 0.7. Rater 1 had a correlation coefficient of 0.986, rater 2 had 0.992 and rater 3 had 0.994. These results indicate that raters are consistent in their rating over time.

4.1.2. Inter-rater reliability

Inter-rater reliability was important for this study as there were three different occupational therapists scoring the same population of forensic MHCUs using the APOM. The inter-rater reliability was initially tested across five MHCUs with three measurements per MHCU. The ANOVA statistic showed a p-value above 0.05. This indicated that there was no statistical difference between the three raters for the five MHCUs whom they rated three times. Furthermore, this p value for the inter-rater reliability that was not significant corresponded with the high correlation co-efficient indicating good inter-rater reliability.

Table 3: ANOVA for inter-rater reliability

ANOVA: Difference between groups

SUMMARY

<i>Groups</i>	<i>Count</i>	<i>Sum</i>	<i>Average</i>	<i>Variance</i>
A1 – Rater 1	120	9289	77.408	1322.983
A2 – Rater 2	120	8228	68.566	1063.592
A3 – Rater 3	120	8573	71.441	1132.332

ANOVA

<i>Source of Variation</i>	<i>SS</i>	<i>Df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>F crit</i>
Between Groups	4881.672	2	2440.836	2.081	0.126	3.021
Within Groups	418750.050	357	1172.969			
Total	423631.722	359				

Table 4: Correlation coefficient of three raters assessing 5 MHCUs three times

Correlation

	<i>A1</i>	<i>A2</i>	<i>A3</i>
A1 – Rater 1	1		
A2 – Rater 2	0.982	1	
A3 – Rater 3	0.985	0.985	1

The raters however noticed that there were certain items where they had different scores and thus seemed to be inconsistent. These items included attention, task concept, organising space and objects, physical contact, use of speech, domestic skills, problem solving skills, awareness of roles, time use and routines, habits, as well as awareness of qualities. The raters then discussed and agreed on how to observe and interpret attention, task concept, organising space and objects, physical contact, use of speech, domestic skills, and problem solving skills, awareness of roles, time use and routines, habits, as well as awareness of qualities in an attempt to resolve and avoid such discrepancies. Thereafter, it was decided that an assessment of a sixth MHCU take place to improve the consistency of the ratings before the main study commenced. The results of this rating showed that all three raters came to the same level on all eight domains for this MHCU.

Despite the inadequate correlations in a few items, the MHCUs overall level of creative ability correlated well between the three raters. It appears that the large number of items tends to account for minor differences and ultimately balances the scores.

4.1.3. Internal consistency

The Cronbach's alpha for internal consistency for all the domains was well above 0.80 as indicated as the guiding value (Fawcett, 2002). This means that the items on the APOM for the forensic sample are consistent and will produce the same scores over time. This is important when an instrument is used to measure change as a stable instrument will provide reliable data at baseline, interim and final assessment. The overall Cronbach's alpha value was that of 0.979, which was extremely high.

Table 5: Internal consistency of the APOM

Domain	Summary for scale: Mean=83.001 Std.Dv.=15.246 Valid N:56 (APOM Cronbach's alpha) Cronbach's alpha: .984 Standardized alpha: .987 Average inter-item corr.: .918
	Alpha if deleted
Process	0.982
Communication	0.981
Lifeskills	0.981
Role Performance	0.980
Balanced Lifestyle	0.982
Motivation	0.981
Self-esteem	0.980
Affect	0.990
TOTAL	0.979

4.1.4. Content Validity

The relevance of all 53 items for the forensic population at Sterkfontein Psychiatric Hospital was tested among the three occupational therapist participants in the study. The checklist as described under methodology was used, and the results are presented in Table 6 below.

Table 6: Content Validity of the APOM

Domain	Item-level content validity index	Scale-level content validity index – average method (S-CVI/Ave)	Scale-level content validity index – universal agreement method (S-CVI/UA)
Process Skills	1.00	0.881	0.773
Communication/ Interaction Skills	0.92		
Lifeskills	0.70		
Role Performance	0.66		
Balanced Lifestyle	1.00		
Motivation	1.00		
Self-esteem	1.00		
Affect	1.00		
Mean I-CVI	0.91		

The Item-Level Indices of the domains were relatively high for the most part, with a mean of 0.91. Results show that five of the eight domains scored 1.00, which is indicative of complete agreement across items. Contrariwise, the weakest Item-Level content validity index was that of role performance at 0.66. The average method calculation for the Scale-level content validity index yielded a result of 0.881, while that of the universal agreement method was 0.773.

According to the opinion of occupational therapist participants, there was consensus that child care skills and transport is not relevant for this setting. Vocational skills as an item under Lifeskills received a lower rating to be included, but it was not deemed as irrelevant for a MHCU given the nature of their long stay. For the APOM in a forensic setting, use of transport and child care skills is recommended to be omitted.

4.2. Aim 2: Trends of change in activity participation in a Forensic Population

4.2.1 Demographics of the sample

The demographics of the MHCUs are represented in Table 7 below and described thereafter.

Table 7: Demographics of MHCU (n=62)

	n	%
Gender		
Male	60	96.774
Female	2	3.226
Age in Years		
<20	3	4.839
20-29	10	16.129
30-39	32	51.613
40-49	10	16.129
50-59	5	8.065
60-69	2	3.226
Diagnoses		
Schizophrenia	41	66.129
Intellectual Impairment	11	17.742
Epilepsy	7	11.290
Bipolar Mood Disorder	3	4.839
Length of Admission in years		
< 1	3	4.839
1-5	28	45.161
6-10	18	29.032
11-15	11	17.742
16-20	2	3.226

MHCUs from the forensic wards were randomly selected, and the study continued until the required sample size of 62 was met. Selection bias was accounted for in this study by randomisation using computer software. The sample comprised 60 males and two females at the baseline assessment. There were a total of 57 males and two female MHCUs at the interim assessment and 54 male and two female MHCUs at the time of the final assessment. The ages

of participating MHCUs were calculated using the final assessment dates as indicated in Table 2 below. The latest date of assessment was used to calculate the ages of those MHCUs who were only involved for part of the study, as described above. It is evident that half of the participants were in the 30-39 age group, while only two were in the 60-69 age groups. The youngest of the three participants in the under 20 years of age group was 18 years old. The two females were both 38 years of age and thus formed part of the 30-39 age groups. At the time of the study, the majority of the MHCUs were hospitalised for a period of between 1 and 5 years. The extremes of the spectrum, namely less than one year and 16-20 years of admission had the least number of MHCUs.

4.2.2. Effect Size

Effect size was calculated for the three time periods. The first was between the baseline and interim score (time period 1) with an average time between these two assessments of seven weeks. The second effect size was between the interim and final assessment (time period 2), of which the average time between these was also seven weeks. The third effect size was calculated between the baseline and the final assessment, thus with an average time between these points of approximately 14 -15 weeks (time period 3).

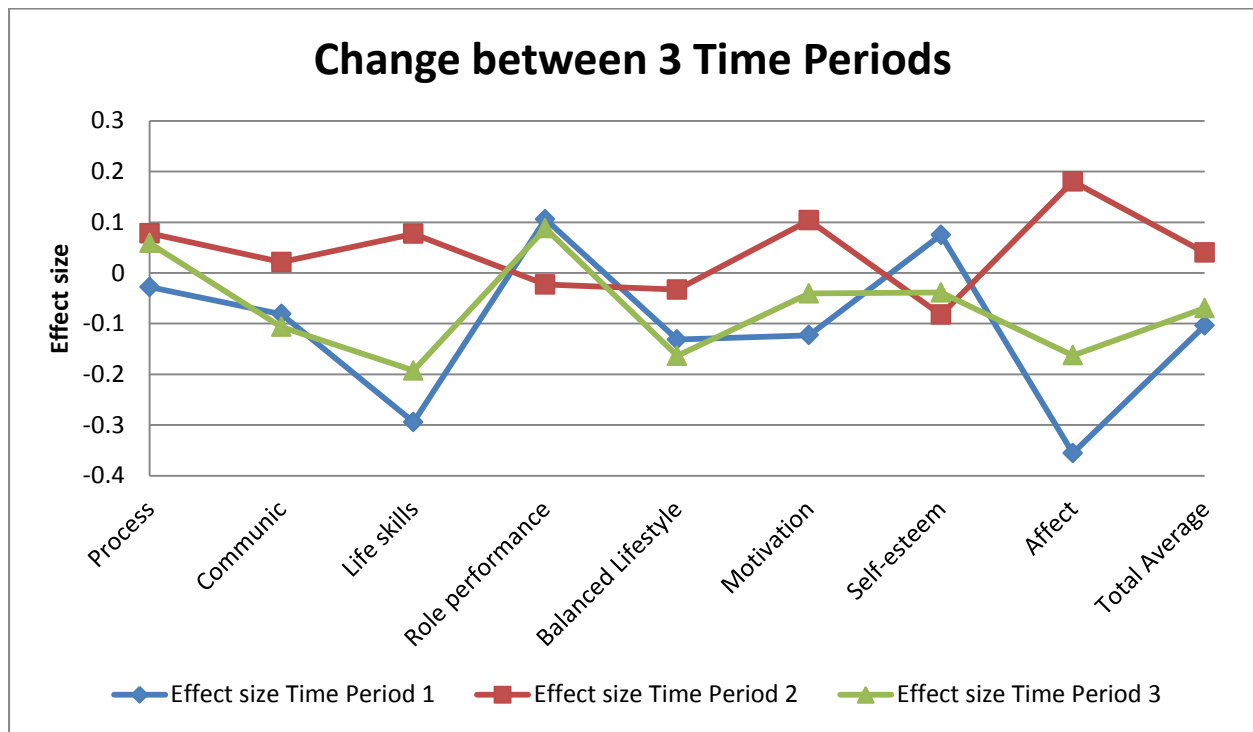


Figure 3: Change between three time periods

The results of time period 1 and 2 yielded a significant p value. However, the former showed a negative change while the latter a positive change. The p value of time period 3 was insignificant and no significant change was observed. This is expected as the negative and positive change in time period 1 and 2, respectively, cancelled each other out, resulting in no change from baseline to final assessments. The effect size of each domain for all three time periods was also calculated; however, this too indicated no significant difference.

Table 8: ANOVA for effect size of Time Period 1 vs Time Period 2

ANOVA: Time Period 1 vs Time Period 2

SUMMARY

<i>Groups</i>	<i>Count</i>	<i>Sum</i>	<i>Average</i>	<i>Variance</i>
Effect size Time Period 1	8	-0.833	-0.104	0.026
Effect size Time Period 2	8	0.322	0.040	0.007

ANOVA

<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>F crit</i>
Between						
Groups	0.083	1	0.083	4.982	0.042	4.600
Within Groups	0.234	14	0.017			
Total	0.317	15				

Table 9: ANOVA for effect size of Time Period 2 vs Time Period 3

ANOVA: Time Period 2 vs Time Period 3

SUMMARY

<i>Groups</i>	<i>Count</i>	<i>Sum</i>	<i>Average</i>	<i>Variance</i>
Effect size Time Period 2	8	0.322	0.040	0.007
Effect size Time Period 3	8	-0.558	-0.070	0.011

ANOVA

<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>F crit</i>
Between						
Groups	0.048	1	0.048	5.277	0.038	4.600
Within Groups	0.1287	14	0.009			
Total	0.177	15				

Table 10: ANOVA for effect size of Time Period 1 vs Time Period 3

ANOVA: Time Period 1 vs Time Period 3

SUMMARY

<i>Groups</i>	<i>Count</i>	<i>Sum</i>	<i>Average</i>	<i>Variance</i>
Effect size Time Period 1	8	-0.833	-0.104	0.026
Effect size Time Period 3	8	-0.558	-0.070	0.011

ANOVA

<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>F crit</i>
Between						
Groups	0,004728361	1	0.004	0.255	0.622	4.600
Within Groups	0,260079316	14	0.019			
Total	0,264807678	15				

Table 11: Statistical significance of the effect size of the domains of the APOM

Domain	Time Period	Number of Observations (n)	Mean difference	Correlation	p value
Process Skills	1	59	-0.015	0.954	0.832
	2	56	0.054	0.930	0.565
	3	56	0.042	0.922	0.664
Communication/ Interaction Skills	1	59	-0.058	0.909	0.539
	2	56	0.014	0.927	0.875
	3	56	-0.073	0.924	0.433
Lifeskills	1	59	-0.188	0.883	0.029
	2	56	0.048	0.903	0.570
	3	56	-0.132	0.878	0.159
Role Performance	1	59	0.102	0.862	0.423
	2	56	-0.022	0.850	0.866
	3	56	0.089	0.834	0.517
Balanced Lifestyle	1	59	-0.153	0.783	0.321
	2	56	-0.030	0.861	0.807
	3	56	-0.185	0.795	0.230
Motivation	1	59	-0.112	0.863	0.352
	2	56	0.096	0.863	0.445
	3	56	-0.039	0.848	0.765
Self-esteem	1	59	0.125	0.596	0.572
	2	56	-0.138	0.616	0.545
	3	56	-0.034	0.876	0.775
Affect	1	59	-0.393	0.852	0.009
	2	56	0.199	0.872	0.187
	3	56	-0.214	0.810	0.233

4.2.3. Patterns of Change

The overall average level of creative ability for the baseline, interim, and final assessments was that of the transitional phase of the explorative level of action regarding creative ability. Therefore, there was neither an improvement nor a decline in the level of functioning of the participants. The following graphs represent the APOM scores according to diagnostic groups (figures 4 and 5), age groups (figures 6 and 7) and across the different wards (figures 8 and 9). The graphs must be interpreted with caution as the number of MHCUs per diagnostic category differs. It indicates that those with intellectual impairment scored the lowest on the APOM as compared to the other three groups. This is to be expected given the nature and presentation of

MHCUs diagnosed with intellectual impairment. The latter diagnostic group was followed by schizophrenia while the psychosis and Bipolar Mood Disorder (BMD) groups scored similarly in terms of levelling on the APOM. It should be noted that the psychosis group also included one MHCU with a diagnosis of epilepsy and a history of a head injury as well as a MHCU with delusional disorder. Additionally, MHCUs in the schizophrenia and psychosis diagnostic categories showed similar patterns of change. Lastly, the BMD category was slightly more varied between domains than any other diagnosis.

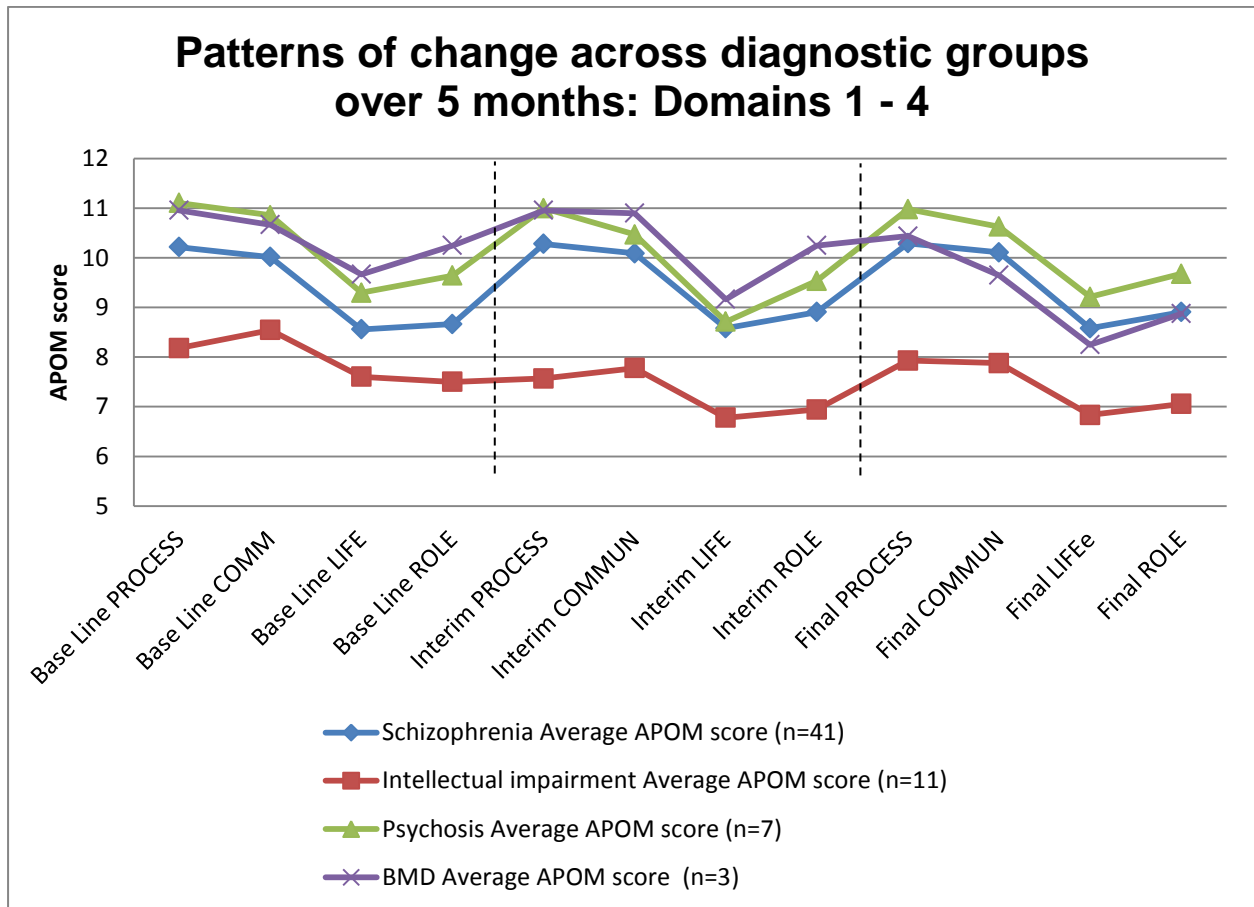


Figure 4: Patterns of change for diagnostic groups over 5 months: Domains 1 – 4

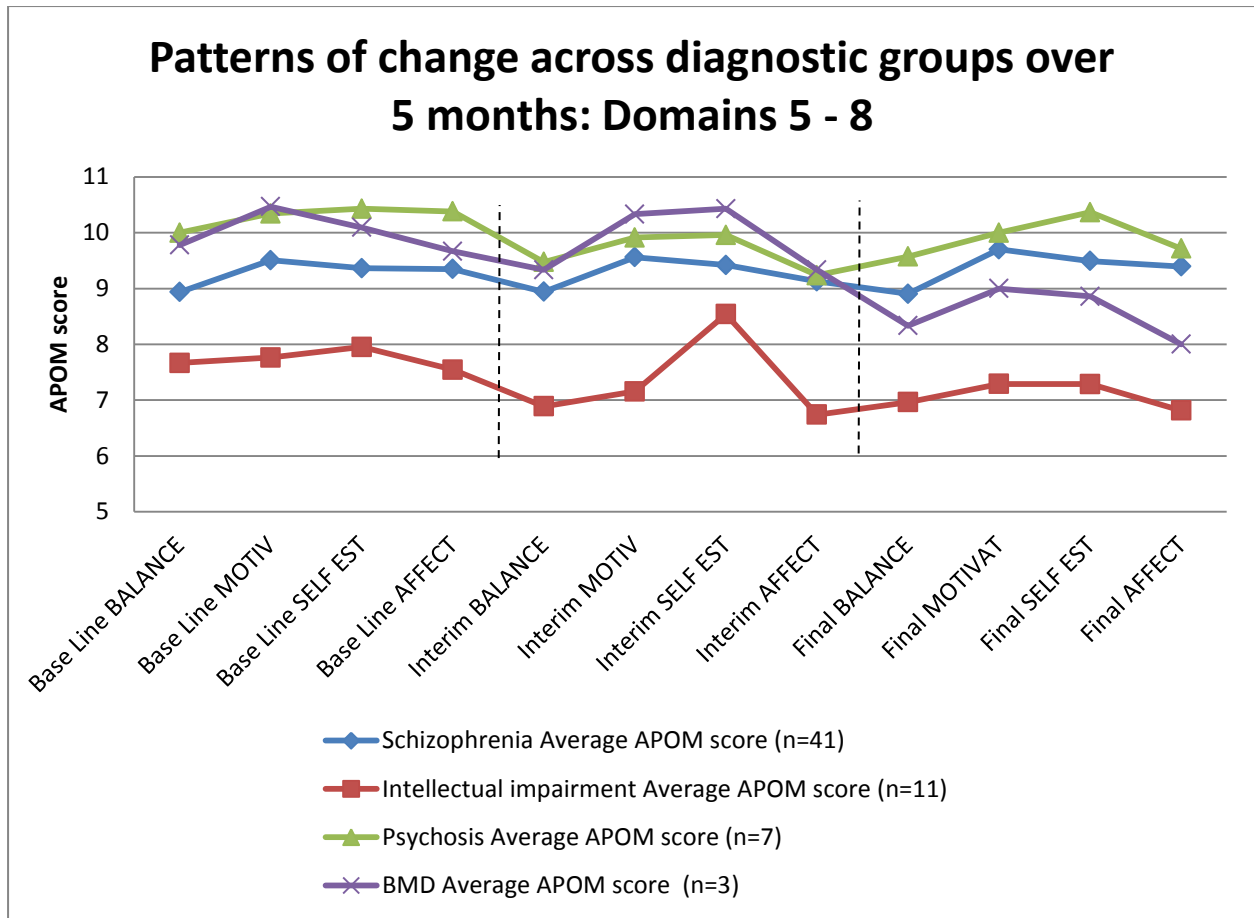


Figure 5: Patterns of change across diagnostic groups over 5 months for domains 5 – 8

Figures 6 and 7 should again be interpreted carefully as there were a different number of MHCUs in each group. Results suggest that APOM scores were primarily the lowest for the youngest participating MHCUs of those aged 18 – 19 years followed by the 20 – 29 and 50 – 59 years age groups. The MHCUs scoring the highest on the APOM were those age categories of 30 – 39 and 60-68.

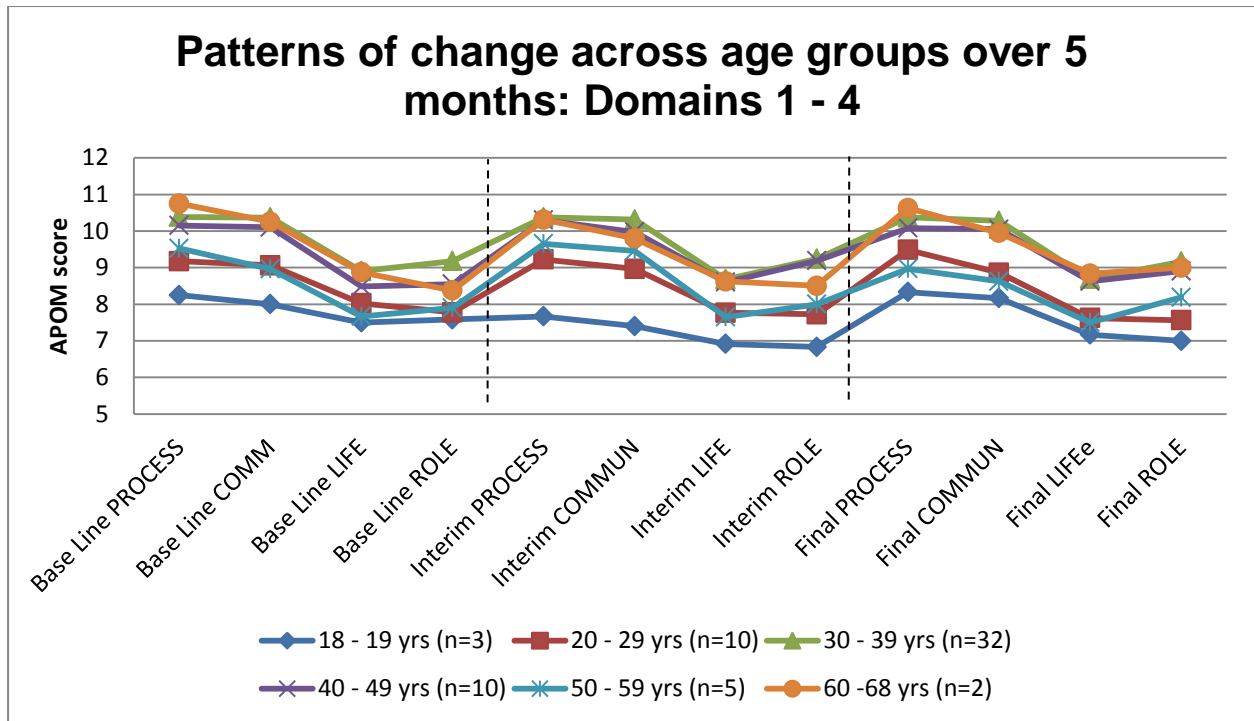


Figure 6: Patterns of change across age groups over 5 months for domains 1 – 4

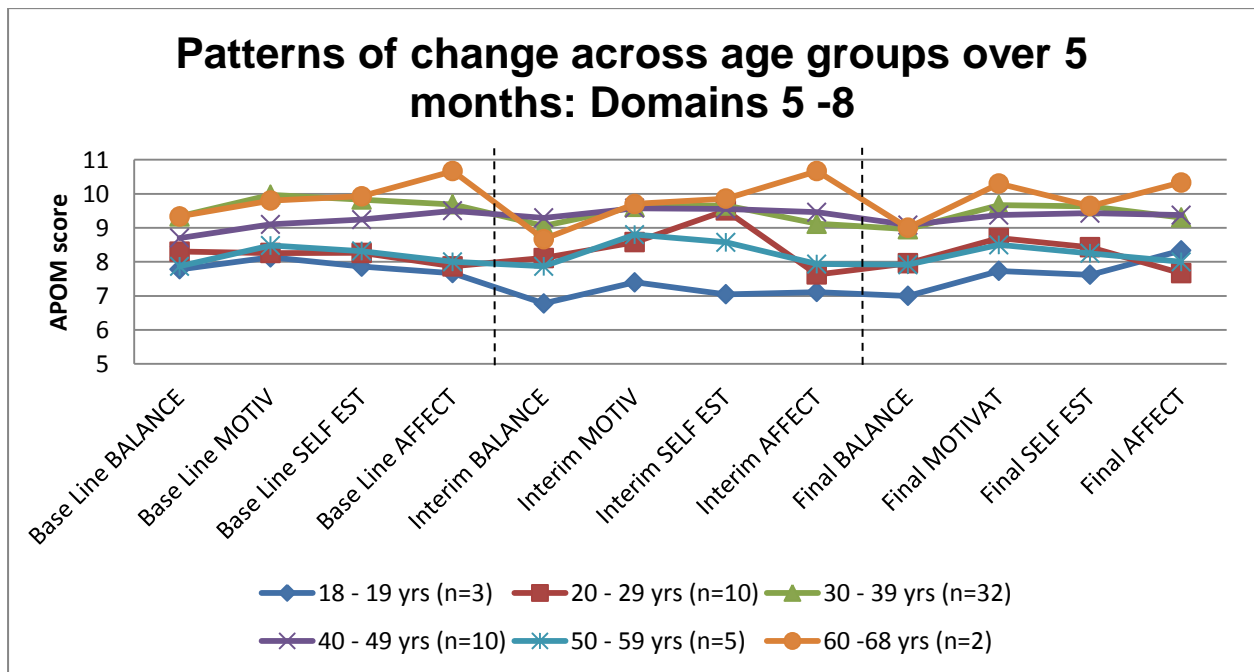


Figure 7: Patterns of change across age groups over 5 months for domains 5 - 8

The graphs that follow, namely figure 8 and 9, demonstrate less subtle changes for ward 17B between domains in comparison to the other wards. The patterns of change in the remaining wards were relatively similar to one another.

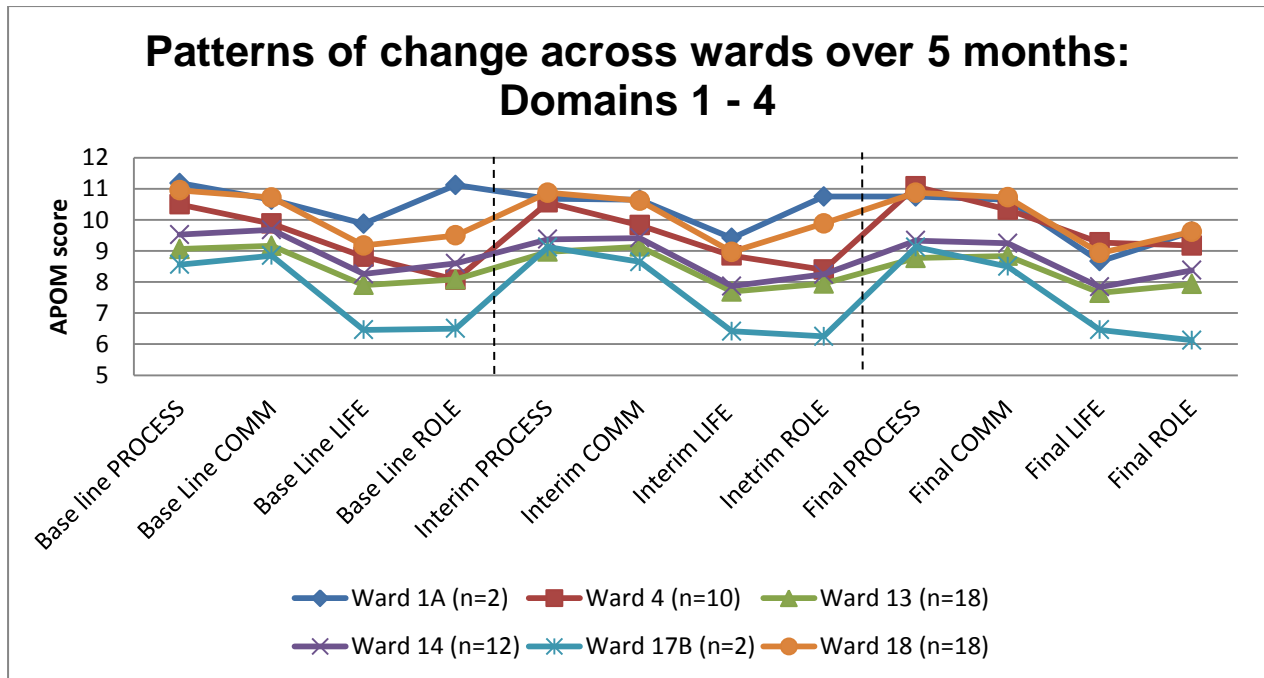


Figure 8: Patterns of change across wards over 5 months for domains 1 - 4

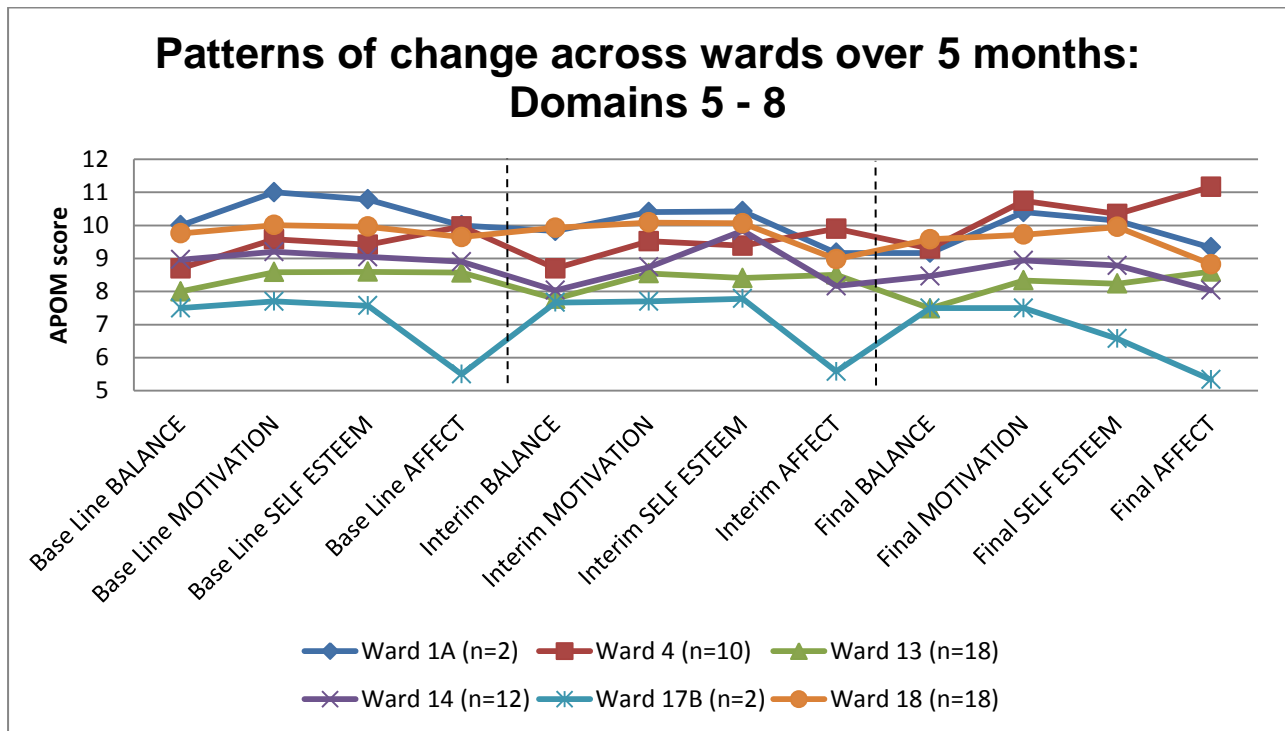


Figure 9: Patterns of change across wards over 5 months for domains 5 - 8

Aim 2 was achieved in determining effect size and describing trends. The implications of this for clinical practice are presented in the next chapter.

4.3. Conclusion

The results in this chapter are supportive of aim 1 that intended to establish selected psychometric properties of the APOM with a forensic population. The related objectives involved the intra- and inter-rater reliability, internal consistency and content validity of the APOM. The results also reflect aim 2 with regards to trends in change in activity participation in a forensic population. The objectives of effect size and patterns of change correspond to this aim. In conclusion, the results support the aims and objectives of this study.

Chapter 5: Discussion

The final chapter of this research report includes the demographics of the sample and discussions for aim 1, aim 2, and related objectives. It also focuses on the implications of findings for practice. Recommendations, limitations, as well as an evaluation of the study are presented in chapter 5, followed by a conclusion.

5.1. Demographics of the sample

The study included all possible occupational therapists based on the inclusion criteria, of which two were female and was male. The number of years of experience in forensic psychiatry differed from 12 months to six years while the ages of participants ranged from 20-39. The number of occupational therapist participants counteracted the bias of there been only rater, adding to the thoroughness of this research.

The demographics of the sample in terms of gender reflect the number of male to female MHCUs at Sterkfontein Psychiatric Hospital and are thus representative of the population. This is applicable in this forensic institution yet might differ across settings. The fact that there are evidently more male compared to female forensic MHCUs means that treatment should primarily be male orientated. This is in considering gender appropriate intervention with such a population. Most of the MHCUs were within the 30-39 age group followed by the 20-29 and 40-49 years age range. The two extremes namely <20 and 50-69 year old MHCUs had amongst the fewest MHCUs. The same holds true with the age categories in terms of influencing treatment and providing appropriate intervention in this regard. The large majority of MHCUs were admitted for 1-5 years, followed by those hospitalised for 6-10 years and 11-15 years.

Reasons for the decrease in the number of MHCUs from baseline to interim assessment were that one was granted an unexpected leave of absence while the other two were too ill to participate. Interestingly, of these two MHCUs, one became physically unwell and was thus unable to continue participating while the other participant relapsed and became unstable, psychotic, aggressive, and hence a danger to work with. A further three male MHCUs were not part of the final assessment. The discontinuation of two MHCUs occurred as a result of an unexpected leave of absence while the last participant merely refused to take part in the final assessment.

5.2. Aim 1 and Objectives

The objectives relating to aim 1 of the study were achieved. Intra- and inter-rater reliability was good, and this was necessary for the rigor of this study. There were no inconsistencies with intra-rater reliability. This is required when using routine outcome measures because of the need for repeated measurement. If raters are inconsistent in this respect, results might be skewed or biased.

Inter-rater reliability was initially inconsistent with one rater in particular. This rater tended to score higher than the other two raters for certain items, such as attention and task concept. The scores of all domains for the same rater were also consistently higher yet this was especially significant for Communication/ Interaction Skills and Lifeskills. The certain items that proved problematic called for a discussion between the raters, the conclusion of which was that a sixth MHCU be assessed to confirm that the problem areas were adequately addressed. Once again, this contributed to the rigor of this part of the study and ensured that procedures were thorough. This was of benefit and served as a positive factor as difficulties were dealt with to ensure consistency between the three raters. Furthermore, this has implications for the profession regarding assessment as it highlighted the need for training to promote uniformity. It also stressed the importance of consistency in the use of terms, understanding and interpreting of observations among clinicians. In effect, determining the intra- and inter-rater reliability as good was of importance in this study as the APOM should to be used routinely in forensic psychiatry in the future.

The internal consistency of the tool was also established with a sample size of 56. The Cronbach's alpha scores per domain were all equal to or greater than 0.980 while the total score was that of 0.979 on this sample. These scores were considerably higher as compared to those domain scores of Casteleijn (2012) based on non-forensic MHCUs. Casteleijn's scores ranged from 0.786 to 0.926 for seven of the domains, while the Lifeskills score was that of 0.998 (Casteleijn, 2012). Casteleijn (2012) reported that perhaps this extremely high value was indicative of too many items measuring the same concept (Casteleijn, 2012). Perhaps, this holds true for the forensic population in this study whereby the Lifeskills score was also that of 0.998. Spiliotopoulou warns against values close to 1 and suggests that the researcher should look closely into possible reasons for extremely high values (Spiliotopoulou, 2009). One possible reason in this study could be that only certain categories on the rating scale were used in certain items. MHCUs mostly scored between explorative and experimental levels of activity participation (scores between 7 and 12), meaning that the categories or scores of 1 to 6, and 13

to 18 were not used for certain items. The sample size was only 56 (x 3 readings), evidently resulting in some categories seldom being scored. This is a situation that often creates extremely high Cronbach's alpha values (Spiliotopoulou, 2009). When the APOM is implemented routinely in future and all forensic MHCUs are being scored, the Cronbach's alpha is expected to drop below 0.8.

Affect was another domain that showed a suspiciously high Cronbach's alpha of 0.990 in this study. This might indicate that the items are too predictable in the Affect domain. These results might be due to the fact that there are only a few items in this domain, and adding to this, the small sample size as mentioned above. The appropriate sample size in terms of calculating reliability is debatable (Spiliotopoulou, 2009). There is the possibility for samples that are small to produce large reliability coefficients (Spiliotopoulou, 2009). Casteleijn also acknowledged that this might account for the high Cronbach's alpha values in the study on general MHCUs (Casteleijn, 2012). It is a reminder that Cronbach's alpha is sample dependent meaning that scores might differ across different samples. Essentially, it seems that overall the tool is stable, yet results must be interpreted with caution until internal consistency is repeated with a larger sample and repeated over time.

In terms of content validity, the three occupational therapist participants identified that both child care skills and transport are not relevant for the setting. The reason for this is the lack of opportunity for MHCUs to exercise these skills given the nature of the institution and lengthy admission. Vocational skills as an item that forms part of the Lifeskills domain was rated lower for inclusion. However, it was thought not to be irrelevant due to the type of setting and lengthy admissions. Thus, this item could just not be addressed because of institutionalisation. Prevocational skills prove more appropriate for the setting. Furthermore, the high content validity indices support that the items in the domains of the APOM are relevant to a forensic setting.

5.3. Aim 2 and Objectives

Results from effect size indicated negative change for time period 1, which was the time between the baseline and interim assessments. There are two possible reasons for this. The first is that perhaps this was caused by the Hawthorne effect. This is a phenomenon whereby persons alter their performance when being observed or included in a research study. This occurs with the awareness that an observer is present and the difference in performance usually manifests as either improved or reduced performance (Kumar, 2011c). The initial negative

change in this study might be accounted for by the MHCUs knowing that they were being observed for research purposes, thus their performance was compromised by their anxiety of the situation.

Sundsteigen (2009) described that MHCUs participated more actively with time as their wellbeing and appreciation of the intervention process improved (Sundsteigen et al., 2009). It is proposed that this phenomenon was observed in this research and could be the reason for the positive change that occurred during time period 2. MHCUs expressed their comfort in working with the same rater which possibly reduced their anxiety as they became accustomed to the procedure and increased their performance level. Lastly, the lack of overall change from baseline to final assessment (time period 3) might be explained by the initial negative Hawthorne effect counteracted by the positive change noted during the second time period.

The effect size and patterns of change indicated that the overall level of creative ability of the MHCUs did not improve over the months of assessment. Perhaps, the material and human resources of the hospital, or limitations thereof, contributed to this. These shortcomings might limit the extent of occupational therapy services offered. The nature of the occupational therapy programme provided within the confines of the forensic process possibly also influenced the progress of MHCUs. The lack of improvement might further be explained by the MHCUs plateau in functioning due to institutionalisation. These results differ from those of the study conducted in the UK by Cook (2009) where occupational therapy was associated with positive progress in MHCUs (Cook et al., 2009). Swedish research on outpatient services also highlighted positive change. Such improvement was noted through MHCUs engagement in occupational therapy groups (Sundsteigen et al., 2009). Both these studies were based on non-forensic MHCUs and show that improvement in the general psychiatric population can be expected. Unfortunately, there is no data concerning the therapeutic progress of forensic MHCUs to compare with the above mentioned evidence. Consequently, it is not possible to correlate the results in terms of trends of this forensic research with literature.

On the other hand, the effects of institutionalisation are well described and should not be overlooked (Craik et al., 2010, Zietsman and Casteleijn, 2014). The loss of their individuality and contact with significant persons are examples of persistent factors of institutional living that remain problematic. The lack of overall change that occurred from baseline to final assessment might also be accounted for by the adverse effects of institutionalisation. It could be that occupational injustice remained a problem with the three risk factors described as follows. Firstly, the time factor is of note with reference to the lengthy admissions of the MHCUs ranging

primarily from 1-15 years as previously described with 6 years as an average length of stay. Perhaps the MHCUs' contact with their family or friends as well as the greater society decreased even more so over time. This is indicative of alienation. Secondly, it might be that occupational deprivation was heightened as MHCUs passively followed the ward routine and became more accustomed to this with time. In the third instance, there is also the possibility that MHCUs felt less like their individual needs were met within the institution. It is likely that activities are ward driven in order to accommodate numerous MHCUs, leading to occupational imbalance. Nonetheless, participation in this study and thus in sessions was the MHCUs' decision and activities in the assessment process involved elements of choice as far as possible.

Clinicians involved in this research at Sterkfontein Psychiatric Hospital, noticed the trend that a MHCUs' level of functioning tends to deteriorate due to a relapse that occurs during or soon after the reclassification process is completed. Reclassification is the process whereby the status of an individual, in a forensic setting, is changed from that of a state MHCUs, to an involuntary MHCUs. It is viewed as the anticipated end goal for forensic rehabilitation. Perhaps institutionalisation, linked to an inability to adapt to a non-forensic environment, causes stress. Such a change, associated with reclassification, possibly accounts for the decline although there is no evidence to explain this phenomenon. Thus, this phenomenon of decline in activity participation after reclassification requires further investigation.

It is, however, reassuring to know that functioning of forensic MHCUs involved in this research is maintained at a transitional phase of the explorative level of creative ability. The reasons why this is reassuring are that, firstly, this research has specified the functional level of these MHCUs that was not reported to date. This provides the opportunity for review of treatment programmes aimed largely at MHCUs on the creative ability level named above. The implication for practice is that the correct challenge has the potential to facilitate growth and further change. This idea coincides with the study by Sundsteigen et al. (2009), which highlighted that change is achieved by challenging MHCUs. Thus, expectations must be altered in occupational therapy to ensure that the MHCUs needs are constantly met (Sundsteigen et al., 2009). In the second instance, maintenance of function has shown that the structure and routine provided in an institution facilitates norm awareness and supports function to some extent.

This study confirmed that the APOM is relevant for use in a forensic psychiatric setting. The APOM is of value in the occupational therapy process as well as in the standing of the profession within the multidisciplinary team. This is of significance as it resonates literature by Casteleijn and Graham (2012) that described the important contribution of outcome measures to

occupational therapy (Casteleijn and Graham, 2012). The findings of a typical assessment performed by an occupational therapist coupled with the APOM as a routine outcome measurement is most beneficial. The reason for this is that the APOM serves to confirm assessment findings and the MHCUs level of functioning and creative ability. Thus, the combination, of the usual assessment and the APOM is recommended to promote evidence based practice.

In addition, the APOM is also specifically beneficial for occupational therapists as it allows for the placing of MHCUs in appropriate projects as evidence based practice is essential in this respect. The different projects include gardening and beading as examples. These are performed either in or out of the ward depending on the parole status of the MHCU. Gardening and beading projects are useful in the sense that different tasks link to specific phases of the creative ability levels. This provides opportunity for growth as the occupational therapist is able to assign activities according to the MHCUs level of functioning and, in so doing, offers a constant challenge. This is intended to motivate those involved in projects and strive for improvement. Knowledge of the overall average level of creative ability for forensic MHCUs is incredibly useful. In future, occupational therapists should plan graded treatment according to the results of this research. Thus, the final phase of the explorative level of creative ability is thought to serve as a safe starting point. This ought to assist in the suitable allocation of MHCUs to specific tasks in projects.

5.4. Recommendations

It was clear that the diagnostic category of schizophrenia formed the majority of MHCUs. Therefore, it might be of interest to expand on this and include an equal range of MHCUs with various diagnoses in future research. The nature of Sterkfontein Psychiatric Hospital is such that although hospitalisation is variable, it is generally lengthy. The setting might be considered similar to the home environment in the sense that it is the place where MHCUs reside and perform their activities of daily living. Thus, it is thought that the institution mimics such tasks and thus an extensive assessment of all areas should take place every six months. This also increases the possibility of assessing large numbers of MHCUs as select groups should be seen during different months. An example of which is for group 1 to be assessed during month 1 and 7, while the second group be seen during month 2 and 8.

An occupational therapy assessment and scores on an outcome measure, such as the APOM might prove particularly useful in assisting the multidisciplinary team in their decisions. Such decisions include granting MHCUs parole or a leave of absence from the hospital. Parole was only applicable during the data collection of this study. Assessments took place either in the ward or occupational therapy department depending on whether or not the MHCUs had parole. This merely served as an introduction into the concept of parole as objectives of this research did not extend beyond this. It appears that parole is granted based solely on a clinical decision at present. However, an ideal situation would be to identify the MHCUs level of creative ability as a predictor for safe and successful parole. The occupational therapist would then be able to assist the process to ensure that MHCUs are able to cope with parole. Evidence based practice on the APOM is an advantage in this respect. It is recommended that the predictive value of the APOM be established in future research. This should be achieved through the routine use of the tool and follow up on MHCUs during the parole process. Perhaps future research of the APOM could also confirm the change and level of functioning necessary for a successful leave of absence using a similar method to that described above.

5.5. Limitations

The small sample size of the study narrowed the degree of data collected. This meant that it was difficult to further analyse results. Perhaps this limitation might be dealt with in future research by involving a larger sample size. It should be noted that the results were as conclusive as possible given the size of the sample. Furthermore, the study involved a population from only one hospital, serving as a limitation. This could be overcome in future research by including numerous hospitals.

5.6. Evaluation of the study

The consent process (informing each MHCU about the study and obtaining their consent) was a lengthy process. Different reactions from the MHCUs were observed, ranging from being suspicious to totally passive with little response. The occupational therapy technician who was used to translate and explain the procedure was extremely useful and ensured that each MHCU was treated with respect and allowed them time to ask questions. The researcher is confident that this process contributed to the well informed research participants.

The research formed part of the routine procedures of the occupational therapy department at Sterkfontein Psychiatric Hospital, which served as an advantage. The probability of MHCUs

discontinuing their participation in a study of this nature was reasonably high. This is given the unpredictability of both the fluctuations in MHCUs and the setting in the case of an unexpected leave of absence granted by the team. Therefore, it was most useful to identify a few additional MHCUs from the onset of the research, the aim of which was an attempt to prevent delay of the process at a later stage when discontinuation of certain MHCUs occurred.

Systematic error was accounted for by randomisation in the selection of participants. This allowed for an accurate representation of MHCUs at Sterkfontein Psychiatric Hospital over the 10 month data collection period and counteracted the possibility of selection bias. The rigor of this research was further ensured by controlling for attrition and detection bias. Raters remained oblivious to previous assessment findings, which were not consulted during the scoring process and completion of the APOM. This contributed to the rigor of the study.

The facilitators and barriers of routine outcome measurement were evident during this research procedure. Sterkfontein Psychiatric Hospital arranges training for new staff members, which facilitates the use of the APOM at an organisation level. Training in the APOM promoted feelings of competence and equipped raters with invaluable skills. In hindsight, this tool was simple and time efficient to use. The information gained was necessary and contributed to the data base for forensic MHCUs which were inaccessible to date. This is an achievement in itself.

Furthermore, occupational therapists at Sterkfontein Psychiatric Hospital are assigned specific wards. That occupational therapist is responsible for the services offered in their entirety. In other words, assessment and treatment is provided by the same practitioner within one ward. Although this is not ideal, government practice is bound by these realities. As previously mentioned, this study confirmed the relevance of the APOM. This ensures that evaluation remains fair despite the fact that the same therapist performs all aspects of the intervention. Therefore, it was necessary that this research be performed to prove the appropriateness of the tool and encourage the use of the APOM for the objective assessment of MHCUs as well as measuring and reporting change in activity participation.

Lastly, this research encouraged the occupational therapists to reconsider the services provided in the department. This meant that the transitional phase of the explorative level of creative ability be considered for the most part. Treatment programmes were enhanced by an improved understanding of the needs of MHCUs established by completing the APOM. One clear example of this was the inclusion of different types of groups in an already existing project. This project initially only focused on prevocational skills with MHCUs primarily working in parallel. Group

therapy seemed as useful as that of an international study. MHCUs in Sweden indicated that group therapy allowed for a safe space where MHCUs experienced empowerment, individuality as well as hope (Sundsteigen et al., 2009). Encouragement from the group and discussions other than the psychiatric condition itself ensured a balanced focus on the illness for MHCUs (Sundsteigen et al., 2009). This was evident in the feedback provided by MHCUs. Therefore, this study was successful in highlighting the need to challenge MHCUs in a forensic setting and tailor intervention.

5.7. Conclusion

The ultimate goal of this research was to establish the reliability and relevance of the APOM to a forensic population of MHCUs. Specific results were disappointing. This was because there was no improvement in the level of functioning of MHCUs from initial assessment to completion of the study. Nonetheless, this information served as a starting point for the South African context. The practicalities of administering assessments and capturing the findings on the APOM assisted in identifying future research prospects.

It is important to remember that the number of participating MHCUs per diagnostic and age category differed. In terms of aim 1, the psychometric properties of the APOM were established with positive results for the most part. That is that the intra- and inter-rater reliability was good, while the internal consistency must be interpreted with caution. This was due to the small sample size of this study. The content validity was investigated with only two items of the APOM identified as irrelevant for the setting.

In terms of aim 2, trends in activity participation of these forensic MHCUs showed that there was no change in their functioning with time. MHCUs diagnosed with intellectual impairment were expectedly found to function at a lower level than those diagnosed with schizophrenia, psychosis, or BMD. Additionally, the eldest MHCUs, together with those aged between 30 and 49 years, scored relatively higher than all the other age groups. On the other hand, the youngest participants appeared to score the lowest in terms of creative ability.

In conclusion, the lack of literature in forensic mental health care is certain, especially in terms of occupational therapy. The extra vulnerability and stigmatisation of this already isolated population is cause for concern. However, it must be emphasized that forensic MHCUs are as important as those presenting to general psychiatry. Therefore, this study served to address the

scarcity of evidence available in the hope that it inspires others to conduct further research in this field of psychiatry.

Bibliography

2013. *The Hat* [Online]. Harmony Hollow Software. Available: http://download.cnet.com/The-Hat/3000-2056_4-10074565.html [Accessed 08 October 2013].
- AAS, I. M. 2010. Global Assessment of Functioning (GAF): properties and frontier of current knowledge. *Annals of General Psychiatry*, 9, 1-11.
- AMERICAN OCCUPATIONAL THERAPY ASSOCIATION 2008. Occupational therapy practice framework: Domain and process. *American Journal of Occupational Therapy*, 62, 625-683.
- AMERICAN PSYCHIATRIC ASSOCIATION 2013. *Diagnostic and statistical manual of mental disorders, Fifth edition DSM-5*, Washington, DC, American Psychiatric Publishing.
- BILSKER, D. & GOLDNER, E. M. 2002. Routine outcome measurement by mental health-care providers: is it worth doing? *The Lancet*, 360, 1689-1690.
- BRUNT, D. & RASK, M. 2007. Ward atmosphere - The scarlet pimpernel of psychiatric settings? *Issues in Mental Health Nursing*, 28, 639-655.
- CASTELEIJN, D. 2011. User Manual. The Activity Participation Outcome Measure - APOM: A tool for occupational therapy clinicians in mental health practices.
- CASTELEIJN, D. 2012. *Development of an outcome measure for occupational therapists: Mental health care settings*, Germany, LAP Lambert Academic Publishing.
- CASTELEIJN, D. 2013. Summary of important concepts of the APOM: A tool for occupational therapy clinicians in mental health practices. Unpublished document.
- CASTELEIJN, D. & GRAHAM, M. 2012. Domains for occupational therapy outcomes in mental health practices. *South African Journal of Occupational Therapy*, 42, 26-34.
- CHRISTIANSEN, C. H. & HAERTL, K. 2014. Chapter 2: A contextual history of occupational therapy. In: BOYT SCHELL, B. A., GILLEN, G. & SCAFFA, M. E. (eds.) *Willard and Spackman's occupational therapy* 12th ed. China: Wolters Kluwer: Lippincott Williams & Wilkins.
- COLQUHOUN, H., LETTS, L., LAW, M., MACDERMID, J. & EDWARDS, M. 2010. Routine administration of the Canadian Occupational Performance Measure: Effect on functional outcome. *Australian Occupational Therapy Journal*, 57, 111-117.
- COOK, S., CHAMBERS, E. & COLEMAN, J. H. 2009. Occupational therapy for people with psychotic conditions in community settings: a pilot randomized controlled trial. *Clinical Rehabilitation*, 23, 40-52.

- CRAIK, C., BRYANT, W., RYAN, A., BARCLAY, S., BROOKE, N., MASON, A. & RUSSELL, P. 2010. A qualitative study of service user experiences of occupation in forensic mental health. *Australian Occupational Therapy Journal* 57, 339–344
- CROUCH, R. 2014. Chapter 27: The occupational therapy approach to the management of schizophrenia. In: CROUCH, R. & ALERS, V. (eds.) *Occupational therapy in psychiatry and mental health*. 5th ed. United Kingdom: Wiley Blackwell.
- DU TOIT, V. 1991. *Patient volition and action in occupational therapy*, Hillbrow, Vona & Marie du Toit Foundation.
- DUNCAN, E. 2011. Editorial: Routine outcome measurement in practice: Overcoming challenges, seeking solutions, demonstrating impact. *Australian Occupational Therapy Journal*, 58, 221.
- DUNCAN, E. A. S. & MURRAY, J. 2012. The barriers and facilitators to routine outcome measurement by allied health professionals in practice: a systemic review. *Duncan and Murray BMC Health Services Research*, 12, 1-9.
- EURICH, D. T., JOHNSON, J. A., REID, K. J. & SPERTUS, J. A. 2006. Assessing responsiveness of generic and specific health related quality of life measures in heart failure. *Health and Quality of Life Outcomes*, 4, 1-14.
- FARNWORTH, L. & MUNOZ, J. P. 2009. An occupational and rehabilitation perspective for institutional practice. *Psychiatric Rehabilitation Journal*, 32, 192-198.
- FAWCETT, A. L. 2002. Chapter 5: Assessment. In: TURNER, A., FOSTER, M. & JOHNSON, S. E. (eds.) *Occupational therapy and physical dysfunction: principles, skills and practice*. 5th ed. United Kingdom: Churchill Livingstone.
- FORSYTH, K., PARKINSON, S., KIELHOFNER, G., KRAMER, J., SUMMERFIELD MANN, L. & DUNCAN, E. 2011. The measurement properties of the Model of Human Occupation Screening Tool and implications for practice. *New Zealand Journal of Occupational Therapy*, 58, 5-13.
- FRISTEDT, S., ANDERSSON, E. E. & UNSWORTH, C. A. 2013. The inter-rater and test-retest reliability of the Self-care and Transfer scales, and intra-rater reliability of all scales of the Swedish Translation of the Australian Therapy Outcome Measure for Occupational Therapy (AusTOMS-OT-S). *Scandinavian Journal of Occupational Therapy*, 20, 182-189.
- HEAP, M. 2003. Differences in the progress of discharged and undischarged patients in a medium secure unit: A pilot study. *Journal of Psychiatric and Mental Health Nursing*, 10, 534-542.

- KIRSH, B. & COCKBURN, L. 2009. The Canadian Occupational Performance Measure: A tool for recovery-based practice. *Psychiatric Rehabilitation Journal*, 32, 171-176.
- KUMAR, R. 2011a. Chapter 1: Research: A way of thinking. *Research Methodology: A step-by-step guide for beginners*. 3rd ed. London: SAGE Publications Ltd.
- KUMAR, R. 2011b. Chapter 8: Selecting a study design. *Research Methodology: A step-by-step guide for beginners*. 3rd ed. London: SAGE Publications Ltd.
- KUMAR, R. 2011c. Chapter 9: Selecting a method of data collection. *Research Methodology: A step-by-step guide for beginners*. 3rd ed. London: SAGE Publications Ltd.
- KUMAR, R. 2011d. Chapter 11: Establishing the validity and reliability of a research instrument. *Research Methodology: A step-by-step guide for beginners*. London: SAGE Publications Ltd.
- KUMAR, R. 2011e. Chapter 12: Selecting a sample. *Research Methodology: A step-by-step guide for beginners*. 3rd ed. London: SAGE Publications Ltd.
- LINDSTEDT, H., SODERLAND, A., STALENHEIM, G. & SJODEN, P.-O. 2005. Personality traits as predictors of occupational performance and life satisfaction among mentally disordered offenders. *Nord Journal of Psychiatry*, 59, 357-364.
- LYNN, M. 1986. Determination and quantification of content validity. *Nursing Research*, 35, 382-385.
- MACDONALD, A. J. D. & TRAUER, T. 2010. Objections to routine clinical outcomes measurement in mental health services: Any evidence so far? *Journal of Mental Health*, 19, 517-522.
- MOORE, M. 2005. Chapter 11: Forensic psychiatry and occupational therapy. In: CROUCH, R. & ALERS, V. (eds.) *Occupational therapy in psychiatry and mental health*. 4th ed. London: Whurr Publishers Ltd.
- O'CONNELL, M. & FARNWORTH, L. 2007. Occupational therapy in Forensic Psychiatry: A review of the literature and a call for a united and international response. *British Journal of Occupational Therapy*, 70, 184-191.
- PARKINSON, S., CHESTER, A., CRATCHLEY, S. & ROWBOTTOM, J. 2008. Application of the Model of Human Occupation Screening Tool (MOHOST Assessment) in an acute psychiatric setting. *Occupational Therapy in Health Care*, 22, 63-75.
- PERRY, A., MORRIS, M., UNSWORTH, C., DUCKETT, S., SKEAT, J., DODD, K., TAYLOR, N. & REILLY, K. 2004. Therapy outcome measures for allied health practitioners in Australia: the AusTOMS. *International Journal of Quality in Health Care*, 16, 285-291.

- RAOSOFT, I. 2004. *Sample size calculator* [Online]. Available: <http://www.raosoft.com/samplesize.html> [Accessed 05 October 2013].
- REPUBLIC OF SOUTH AFRICA. 2002. *Mental Health Care Act 17 of 2002* [Online]. Available: http://www.justice.gov.za/legislation/acts/2002-017_mentalhealthcare.pdf [Accessed 23 March 2014].
- SAMSONRAJ, R. S., LOUGHRAN, M. F. & SECKER, J. 2012. Evaluating outcomes of therapies offered by occupational therapists in adult mental health. *Journal of Mental Health*, 21, 531-538.
- SKEAT, J. & PERRY, A. 2008. Research Report: Exploring the implementation and use of outcome measurement in practice: a qualitative study. *International Journal of Language & Communication Disorders*, 43, 110-125.
- SMITH, R., DE WITT, P. & FRANZSEN, D. 2014. Occupational performance factors perceived to influence the readmission of mental health care users diagnosed with schizophrenia. *South African Journal of Occupational Therapy*, 44, 51-56.
- SPILIOTOPOULOU, G. 2009. Reliability reconsidered: Cronbach's alpha and paediatric assessment in occupational therapy. *Australian Occupational Therapy Journal* 56, 150-155.
- STATISTICS SOUTH AFRICA. 2011. *City of Johannesburg: Key statistics* [Online]. Available: http://beta2.statssa.gov.za/?page_id=1021&id=city-of-johannesburg-municipality [Accessed 13 December 2014].
- SUNDSTEIGEN, B., EKLUND, K. & DAHLIN-IVANOFF, S. 2009. Patients' experience of groups in outpatient mental health services and its significance for daily occupations. *Scandinavian Journal of Occupational Therapy*, 16, 172-180.
- TERWEE, C. B., DEKKER, F. W., WIERSINGA, W. M., PRUMMEL, M. F. & BOSSUYT, P. M. M. 2003. On assessing responsiveness of health-related quality of life instruments: Guidelines for instrument evaluation. *Quality of Life Research*, 12, 349-362.
- TOMITA, M. R. 2006. Chapter 17: Methods of analysis: From univariate to multivariate statistics. In: KIELHOFNER, G. (ed.) *Research in occupational therapy: Methods of inquiry for enhancing practice*. Philadelphia: F.A. Davis Company.
- UNSWORTH, C. 2000. Measuring the outcome of occupational therapy: Tools and resources. *Australian Occupational Therapy Journal*, 47, 174-158.
- UNSWORTH, C. A., DUCKETT, S. J., DUNCOMBE, D., PERRY, A., SKEAT, J. & TAYLOR, N. 2004. Validity of the AusTOM scales: A comparison of the AusTOMS and EuroQol-5D. *Health and Quality of Life Outcomes*, 2.

- UNSWORTH, G., COWIE, H. & GREEN, A. 2012. Therapists' and clients' perceptions of routine outcome measurement in the NHS: A qualitative study. *Counselling and Psychotherapy Research*, 12, 71-80.
- VENTER, E. & ZIETSMAN, K. 2005. Chapter 8: Rehabilitation of the mentally ill in long-term institutionalization. *In: CROUCH, R. & ALERS, V. (eds.) Occupational therapy in psychiatry and mental Health*. 4th ed. London: Whurr Publishers Ltd.
- WILCOCK, A. A. 1999. Feature Article: Reflections on doing, being and becoming. *Australian Occupational Therapy Journal*, 46, 1-11.
- ZIETSMAN, K. & CASTELEIJN, D. 2014. Chapter 10: Care, treatment and rehabilitation programmes for large numbers of long-term mental health care users. *In: CROUCH, R. & ALERS, V. (eds.) Occupational therapy in psychiatry and mental health*. 5th ed. United Kingdom: John Wiley & Sons.

Appendix A

Data Collection sheet



Process skills	
Attention	
Pace	
Knowledge – of tools and materials	
Knowledge – concept formation	
Skills to use tools and materials	
Task Concept	
Organizing space and objects	
Adaptation	
Communication / Interaction skills	
Physicality – physical contact	
Physicality – Gazes	
Physicality – Gestures	
Physicality – Use of body	
Information exchange – Use of speech	
Information exchange – Content of conversation	
Information exchange – Expression of needs	
Information exchange – Initiate interaction	
Relations – Social norms	
Relations – Rapport	

Lifeskills	
Personal care, hygiene, grooming	
Personal safety	
Care of medication	
Use of transport	
Domestic skills	
Child care skills	
Money management, budgeting skills	
Assertiveness	
Stress management	
Conflict management	
Problem solving skills	
Pre-vocational skills	
Vocational skills	
Role performance	
Awareness of roles	
Role expectations	
Role balance	
Competency	

Balanced life style	
Time use and routines	
Habits	
Mix of occupations	
Motivation	
Active involvement	
Motives and drives	
Shows interest	
Goal directed behaviour	
Locus of control	
Self-esteem	
Commitment to task /situation	
Self-worth	
Using feedback	
Attitude towards self – self-assurance	
Attitude towards self – satisfaction with self	
Awareness of qualities	
Social presence	
Affect	
Repertoire of emotions	
Control	
Mood	

Organisation Name/Organisation:

Patient Name: JM Buchan

Patient Age: 33

Patient Gender: Female

Date Of Assessment: 2011/06/12

Date Of Admission: 2011/05/02

Level Of Creative Ability: Self Presentation

Assessment Detail

Process Skills

- **Adaptation** Engage in tasks to explore, needs prompting to anticipate or correct for errors but no learning from the consequences of errors.
- **Attention** Focuses attention for short periods, easily distracted.
- **Concept Formation** Basic knowledge of intrinsic properties of materials. Identifies elementary and combined concepts.
- **Organizing Space and Objects** Willing to explore with materials and tools but no intention to organize the workspace. Area to be structured by therapist. No attempt to restore workspace.
- **Pace** Inconsistent pace or task execution, slow or poor rate and poor accuracy.
- **Skills** Appropriate handling but poor maneuvering of tools. Uses tools and materials according to their intended purposes.
- **Task Concept** Beginning to understand the task and could identify with task. Will begin with a task but not able to plan logical order of the task independently. Task concept unconsolidated.
- **Tools and Materials** Poor selection and impulsive use of appropriate tools and materials for the task.

Communication/Interaction skills

- **Awareness of social norms** Awareness of basic social norms emerging but unable to conform to social norms, forms a relationship for egocentric reasons.
- **Establishing rapport** No interest to form rapport with others. Does not respond to the needs of others (might be aware of needs).
- **Exchanging information** Tries to communicate and exchange information but superficially and not always appropriate.
- **Expressing needs** Expresses desires and refusals inappropriately, cannot select the right situation.
- **Eye contact** Beginning to use gazes correctly for communication.
- **Initiating interaction and conversation** Does not initiate interaction unless for egocentric reasons.
- **Physical Contact** Limited physical contact but appropriate.
- **Using body to communicate** Does not maneuver body correctly to suit the situation or in relation to others.
- **Using gestures** Gestures becoming appropriate.
- **Using speech to communicate** Articulates understandable speech but short phrases, not always clear. Inability to modulate speech and volume for the situation.

Lifeskills

- **Assertiveness** Puts own rights first, is unaware of others' rights and feelings, acts with inappropriate response e.g. either aggression or withdrawal.
- **Care of medication** Able to take responsibility for medication most of the time. Understands the need for medication.
- **Child Care Skills** Does not care for children, usually under constant supervision or care.
- **Conflict Management** Inadequate management of conflict situation, reacts inappropriately e.g. with either aggression or withdrawal. Causes conflict repeatedly.
- **Domestic Skills** Greater variety in domestic skills with improved quality but not consistently performing well in these skills.
- **Money Management and Budgeting Skills** Is unaware of value of goods or setting priorities for spending money.
- **Personal Care, Hygiene, Grooming** Self-care skills appropriate and with good quality, refined self care appropriate and good quality.
- **Personal Safety** Is able to maintain personal safety, but inconsistent.
- **Pre-vocational Skills** Performs pre-vocational skills with some quality but inconsistently.
- **Problem Solving Skills** Is able to identify simple problems, no skills to perform other steps of problem solving.
- **Stress Management** Is aware of stressors but cannot identify own. Does not realise effect of stress on life. Is unaware of techniques for stress relieve.
- **Use of Transport** Dependent on others for transport.
- **Vocational Skills** Vocational skills emerging, may have splinter (habituated) skills e.g. computer or literacy skills.

Role Performance

- **Awareness of Roles** Is aware of role in institution, tries to comply but needs supervision.
- **Competency** Is able to perform minor tasks of a role in the institution or ward. Will execute certain tasks of the role to satisfy own needs or gain privileges.
- **Role Balance** No evidence of role balance, performs some tasks of a role under supervision.
- **Role Expectations** Needs reminding of expectations and tasks of a role. Unrealistic expectations.



Therapist: Daleen Castleijn
 Organisation: Organisation I
 Email: daleen.castleijn@wits.ac.za

2011/06/12 10:30 AM Page 5/7

Fax: +27 11 717 3709
 Tel: +27 11 717 2062

Organisation Name: Organisation1
 Patient Name: Dilly Dorothy
 Patient Age: 32
 Patient Gender: Female

Date Of Assessment: 2011/08/12
 Date Of Admission: 2011/05/02
 Level Of Creative Ability: Self Presentation

Balanced Lifestyle

- **Habits** Habits not well established and easily disrupted by illness. Finds it difficult to replace undesirable habits with good habits but realizes the importance of it.
- **Mix of Occupations** Is aware of the value of variety and meaningful occupations but finds it difficult to identify occupational preferences that provide meaning and satisfaction.
- **Time Use and Routines** Is aware of the importance of balance in tasks and to have a routines but unable to allocate time use independently.

Motivation

- **Active Involvement** Musters courage and is able to maintain effort if no problems are encountered. Shows enjoyment during the task.
- **Goal Directed Behaviour** Works towards a goal in well structured and well known tasks, action is passive and needs support and encouragement from therapist.
- **Locus of Control** External locus of control, egocentric and participates for rewards. Needs to experience success to engage in activity again, impulsive actions.
- **Motives and Drives** Approval and belonging to a group drive the person to action.
- **Shows Interest** Shows interest in variety of activities, sustains interest in preferred and known activities.

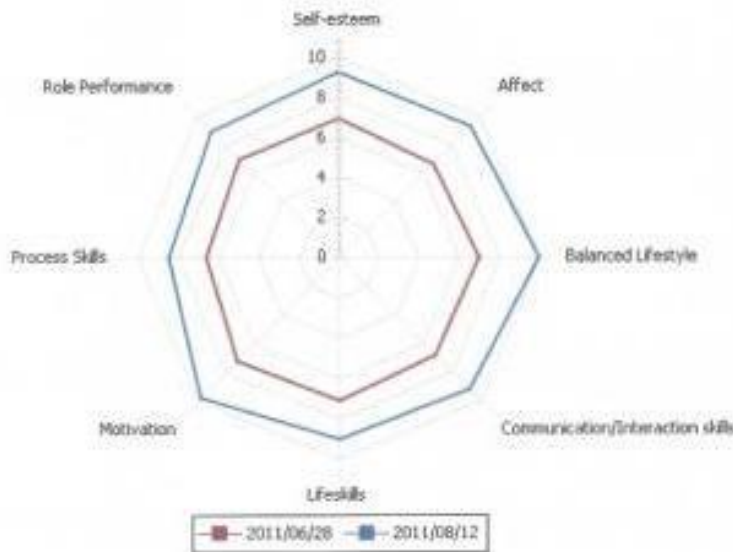
Self-esteem

- **Attitude Towards Self** Doubt own adequacy, self-defeating. Subtly negativistic.
- **Awareness of Qualities** Self-pitying, timid, could express concrete characteristics about self.
- **Commitment To Task/Situation** Willingness to try out an entire task in a secure environment and known situation.
- **Self Worth** Sometimes unrealistic self worth, not able to select appropriate criteria to judge self worth against.
- **Self-assurance** Hesitant if therapist or support is absent or unavailable. Sometimes over confident.
- **Social Presence** Dependent on social acceptance and attention.
- **Using Feedback** Is unable to view feedback as means to improve self esteem, sometimes overreacts to minor positive feedback.

Affect

- **Control** Little control over emotions.
- **Mood** Fluctuating moods.
- **Repertoire of Emotions** Anxious in unknown situations. Refined emotions like regret, pride, frustration, surprise.

Admission Summary



Therapist: Daleen Castela
 Organisation: Organisation1
 Email: daleen.castela@wits.ac.za

Appendix C

Relevance of the APOM items to my patient population

Rate each item's relevance to your setting

Setting:

Not relevant			Highly relevant	
1	2	3	4	5



Process skills	
Attention	
Pace	
Knowledge – of tools and materials	
Knowledge – concept formation	
Skills to use tools and materials	
Task Concept	
Organizing space and objects	
Adaptation	
Communication / Interaction skills	
Physicality – physical contact	
Physicality – Gazes	
Physicality – Gestures	
Physicality – Use of body	
Information exchange – Use of speech	
Information exchange – Content of conversation	
Information exchange – Expression of needs	
Information exchange – Initiate interaction	
Relations – Social norms	
Relations – Rapport	

Lifeskills	
Personal care, hygiene, grooming	
Personal safety	
Care of medication	
Use of transport	
Domestic skills	
Child care skills	
Money management, budgeting skills	
Assertiveness	
Stress management	
Conflict management	
Problem solving skills	
Pre-vocational skills	
Vocational skills	
Role performance	
Awareness of roles	
Role expectations	
Role balance	
Competency	

Balanced life style	
Time use and routines	
Habits	
Mix of occupations	
Motivation	
Active involvement	
Motives and drives	
Shows interest	
Goal directed behaviour	
Locus of control	
Self-esteem	
Commitment to task /situation	
Using feedback	
Self worth	
Attitude towards self – self-assurance	
Attitude towards self – satisfaction with self	
Awareness of qualities	
Social presence	
Affect	
Repertoire of emotions	
Control	
Mood	

Appendix D



R14/49 Ms Cassandra Ann Brooke

HUMAN RESEARCH ETHICS COMMITTEE (MEDICAL)

CLEARANCE CERTIFICATE NO. M130738

NAME: Ms Cassandra Ann Brooke
(Principal Investigator)

DEPARTMENT: Occupational Therapy
University of Witwatersrand
Sterkfontein Psychiatric Hospital

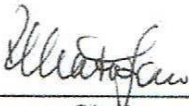
PROJECT TITLE: Reliability and Relevance of the Activity
Participation Outcome Measure (APOM) to a
Forensic Population of Mental Health Care
Users (MHCUs)

DATE CONSIDERED: 26/07/2013

DECISION: Approved unconditionally

CONDITIONS:

SUPERVISOR: Dr Daleen Casteleijn

APPROVED BY: 

Professor PE Cleaton-Jones, Chairperson, HREC (Medical)

DATE OF APPROVAL: 18/09/2013

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 a yearly progress report.**



Principal Investigator Signature

Date 26/09/2013

PLEASE QUOTE THE PROTOCOL NUMBER IN ALL ENQUIRIES

Appendix E

Department of Occupational Therapy
University of Witwatersrand
7 York Road
Parkton
2192.
April 2013

The Chief Executive Officer/ Head of the Occupational Therapy Department,
Sterkfontein Street
Krugersdorp
1739

To whom it may concern,

Request for Sterkfontein Psychiatric Hospital to participate in Occupational Therapy Research
I, Cassandra Brooke am enrolled for the Master of Science in Occupational Therapy programme through the Faculty of Health Sciences at the University of the Witwatersrand.

As part of this course, we are expected to conduct research into a specific field of interest. My research title is: Reliability and Relevance of the Activity Participation Outcome Measure (APOM) to a Forensic population of Mental Health Care Users (MHCUs). My research will investigate the appropriateness and relevance of the use routine use of the Activity Participation Outcome Measure (APOM) by occupational therapists in a forensic mental health care setting. I am hoping that this knowledge will contribute to the expansion of this field as there is currently minimal literature available in this respect.

The research participants will work with an occupational therapist and complete various interviews as well as activities. This will occur for three separate sessions over a five month period. Please be aware that their identity will remain confidential during the study by using a coding system in place of their names.

The sole resource required of Sterkfontein Psychiatric Hospital is time. The research design requires approximately 45 participants from the forensic division. Initially, I will require consent from you in order for Sterkfontein Psychiatric Hospital and its forensic Mental Health Care Users functioning at a level that is too low for them to give their own informed consent, to participate in this research. If you agree to this, your signature of authorization on the document to follow is necessary. Please also inform me of any additional forms of consent that should be obtained.

Appendix E

The Ethics Committee for Research on Human Subjects at the University has given their approval to conduct this research. Once your approval is obtained, the collection of data may commence.

I will be obliged to provide feedback on the findings at your request. My initial investigation into this topic confirmed that there is insufficient evidence about this topic with respect to the South African context. Therefore, I would appreciate for you grant me permission to complete this research at Sterkfontein Psychiatric Hospital.

A handwritten signature in cursive script, appearing to read "Brooke".

Yours Faithfully

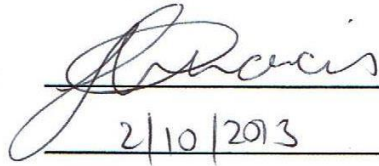
Researcher: Cassandra Brooke (011) 851 8295

Supervisor: Daleen Casteleijn (011) 717 3701

Permission for Research

I hereby agree that you conduct the above mentioned research at Sterkfontein Psychiatric Hospital.

Signature:



Date:

2/10/2013



**health and
social development**
Department: Health and Social Development
GAUTENG PROVINCE

**STERKFORTEIN HOSPITAL
CLINICAL DEPARTMENT**

Enquiries: Prof. Subramaney
Telephone : (011)951-8341
Facsimile : (011) 951-8391
e-Mail: Hannie.Smith@gauteng.gov.za

Ms. C. Makutulela
Acting Chief Executive Officer
Sterkfontein Hospital
KRUGERSDORP

Dear Ms. Makutulela

STUDY : RELIABILITY AND RELEVANCE OF THE ACTIVITY PARTICIPATION OUTCOME MEASURES TO A FORENSIC POPULATION OF MENTAL HEALTH CARE USERS.
RESEARCHER: CASSANDRA ANN BROOK

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:-

- Forensic observation patients cannot be used (They are not Mental Health Care Users, but awaiting trial detainees – permission will have to be obtained from the Department of Justice)
- It is therefore suggested that the population comprise only of Sterkfontein State (MHCA Section 42) patients be used.

However, since this is a research project involving voluntary participation, we cannot guarantee participation of individuals/staff members.

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

Thank you.

PROF. U. SUBRAMANEY
CHAIRPERSON: RESEARCH COMMITTEE
04/09/2013

Approved.

MS. C. MAKUTULELA
ACTING CHIEF EXECUTIVE OFFICER

Information Document for Occupational Therapist Participant

Study Title: Reliability and relevance of the Activity Participation Outcome Measure to a forensic population of Mental Health Care Users

Good day,

Introduction: I, Cassandra Brooke, am a postgraduate student of the University of the Witwatersrand currently enrolled for the Master of Science in Occupational Therapy programme. I am doing research to find out if a tool known as the Activity Participation Outcome Measure (APOM) that is used by occupational therapists is appropriate in a forensic setting.

Invitation to Participate: Your hospital has been chosen to be part of this research and I am inviting you to take part in this research study.

What is involved in the study: There are approximately three participants and this study is only about the South African setting. There are two parts to this study. The first is that you will be required to complete a baseline assessment for the same five mental care users on three different days that will form part of study 1. Thereafter, you will be asked to perform a baseline assessment at one month, interim and final assessment at three and five months respectively. This will be done for between 15 and 23 mental health care users. The data will be captured using the APOM and forms part of study 2. On completion of this, you will be required to complete a one page lickert scale which will take approximately 20 minutes and aside from your time, nothing else is required of you.

Risk Factors: There are no known risk factors regarding participation in this research.

Benefits: There are no direct benefits for you as an individual however your participation will contribute to improved service delivery in the long term.

You will be given relevant information on the study while involved in the project and after the results are available on request.

Participation is voluntary: You have the right to refuse to take part in this research and to withdraw at any point without any consequences or loss of benefit.

Appendix F

Confidentiality: Efforts will be made to keep personal information confidential. Please understand that your name remains confidential during the study by using a coding system. This means that only my supervisor and I will be able to identify who the data belongs to. However, absolute confidentiality cannot be guaranteed. Personal information may be disclosed if required by law.

Contact details of researcher and supervisor: If you need to ask any questions or report negative events about the study, please do so. The telephone numbers are

- Researcher: (011) 951 8295
- Supervisor: (011) 717 3701

Contact details of REC administrator and chair: If you have any complaints or ethical queries, please contact the secretary of the Human Research Ethics Committee, Anisa Keshav on (011) 717 1234.

Please complete the permission to participate that follows.

Yours gratefully

Cassandra Brooke

Permission for Participation

I _____, who is currently an occupational therapist at _____ *Hospital* agree to participate in this research. I understand that in participating, I will be required to complete documents.

I also understand that my name will not be included when the results of the study are published and that I have the right to withdraw at any point in time without negative consequences.

Signature of participant: _____

Signature of Witness: _____

Signature of Researcher: _____

Date: _____

Information Document for Mental Health Care User Participants: Study 1

Study Title: Reliability and relevance of the Activity Participation Outcome Measure to a forensic population of Mental Health Care Users

Good day,

Introduction: I, Cassandra Brooke, am a postgraduate student of the University of the Witwatersrand currently enrolled for the Master of Science in Occupational Therapy programme. I am doing research to find out if a tool used by occupational therapists is appropriate in a forensic setting. Research is a way to learn the answers to a question.

Invitation to Participate: Your hospital has been chosen to be part of this research and I am inviting you to take part in this research study.

What is involved in the study: There are approximately five participants and this study is only about the South African setting. Each one of you will be observed by approximately three occupational therapists at one time and asked to complete various interviews and activities. This will happen on three different days. Aside from participating in these sessions, nothing else is required of you.

Risk Factors: There are no known risk factors regarding participation in this research.

Benefits: There are no direct benefits for you as an individual however your participation will contribute to improved service delivery in the long term.

You will be given relevant information on the study while involved in the project and after the results are available on request.

Participation is voluntary: You have the right to refuse to take part in this research and to withdraw at any point without any consequence or loss of benefit to which you are usually allowed.

Confidentiality: Efforts will be made to keep personal information confidential. Please understand that your name remains confidential during the study by using a coding system. This means that only my supervisor and myself will be able to identify who the data belongs to. However, absolute confidentiality cannot be guaranteed. Personal information may be disclosed if required by law.

Appendix G

Contact details of researcher and supervisor: If you need to ask any questions or report negative events about the study, please do so. The telephone numbers are

- Researcher: (011) 951 8295
- Supervisor: (011) 717 3701

Contact details of REC administrator and chair: If you have any complaints or ethical queries, please contact the secretary of the Human Research Ethics Committee, Anisa Keshav on 011 717 1234.

Please complete the permission for participation form that follows.

Yours gratefully

Cassandra Brooke

Permission for Participation

I _____, who is currently a Mental Health Care User at _____ *Hospital* agree to participate in this research. I understand that in participating, I will work with an occupational therapist and complete activities.

I also understand that my name will not be included when the results of the study are published and that I have the right to withdraw at any point in time without negative consequences.

Signature of participant: _____

Signature of Witness: _____

Signature of Researcher: _____

Date: _____

Information Document for Mental Health Care User Participants: Study 2

Study Title: Reliability and relevance of the Activity Participation Outcome Measure to a forensic population of Mental Health Care Users

Good day,

Introduction: I, Cassandra Brooke, am a postgraduate student of the University of the Witwatersrand currently enrolled for the Master of Science in Occupational Therapy programme. I am doing research to find out if a tool used by occupational therapists is appropriate in a forensic setting. Research is a way to learn the answers to a question.

Invitation to Participate: Your hospital has been chosen to be part of this research and I am inviting you to take part in this research study.

What is involved in the study: There are approximately 45 participants and this study is only about the South African setting. Each one of you will work with an occupational therapist and complete various interviews and activities. This will occur a maximum of three times over a five month period. Aside from participating in these sessions, nothing else is required of you.

Risk Factors: There are no known risk factors regarding participation in this research.

Benefits: There are no direct benefits for you as an individual however your participation will contribute to improved service delivery in the long term.

You will be given relevant information on the study while involved in the project and after the results are available on request.

Participation is voluntary: You have the right to refuse to take part in this research and to withdraw at any point without any consequence or loss of benefit to which you are usually allowed.

Confidentiality: Efforts will be made to keep personal information confidential. Please understand that your name remains confidential during the study by using a coding system. This means that only my supervisor and I will be able to identify who the data belongs to. However, absolute confidentiality cannot be guaranteed. Personal information may be disclosed if required by law.

Appendix H

Contact details of researcher and supervisor: If you need to ask any questions or report negative events about the study, please do so. The telephone numbers are

- Researcher: (011) 951 8295
- Supervisor: (011) 717 3701

Contact details of REC administrator and chair: If you have any complaints or ethical queries, please contact the secretary of the Human Research Ethics Committee, Anisa Keshav on 011 717 1234.

Please complete the permission for participation form that follows.

Yours gratefully

Cassandra Brooke

Permission for Participation

I _____, who is currently a Mental Health Care User at _____ *Hospital* agree to participate in this research. I understand that in participating, I will work with an occupational therapist and complete activities.

I also understand that my name will not be included when the results of the study are published and that I have the right to withdraw at any point in time without negative consequences.

Signature of participant: _____

Signature of Witness: _____

Signature of Researcher: _____

Date: _____

Information Document: Consent from Family Member for Mental Health Care User to Participate: Study 2

Study Title: Reliability and relevance of the Activity Participation Outcome Measure to a forensic population of Mental Health Care Users

Good day,

Introduction: I, Cassandra Brooke, am a postgraduate student of the University of the Witwatersrand currently enrolled for the Master of Science in Occupational Therapy programme. I am doing research to find out if a tool used by occupational therapists is appropriate in a forensic setting. Research is a way to learn the answers to a question.

Invitation to Participate: Sterkfontein Psychiatric Hospital has been chosen to be part of this research and I am inviting your relative to take part in this research study.

What is involved in the study: There are approximately 45 participants. Participants will work with an occupational therapist and complete various interviews and activities. This will happen a maximum of three times over a five month period. Aside from participating in these sessions, nothing else is required of your relative.

Risk Factors: There are no known risk factors regarding participation in this research.

Benefits: There are no direct individual benefits however your relative's participation will contribute to improved service delivery in the long term.

You will be given relevant information on the study while involved in the project and after the results are available on request.

Participation is voluntary: You have the right to refuse for your relative to take part in this research and to withdraw them at any point without any consequence or loss of benefit to which they are usually allowed.

Confidentiality: Efforts will be made to keep personal information confidential. Please understand that your relative's name remains confidential during the study by using a coding system. This means that only my supervisor and I will be able to identify who the data belongs to. However, absolute confidentiality cannot be guaranteed. Personal information may be disclosed if required by law.

Appendix I

Contact details of researcher and supervisor: If you need to ask any questions or report negative events about the study, please do so. The telephone numbers are

- Researcher: (011) 951 8295
- Supervisor: (011) 717 3701

Contact details of REC administrator and chair: If you have any complaints or ethical queries, please contact the secretary of the Human Research Ethics Committee, Anisa Keshav on 011 717 1234.

Please complete the permission for participation form that follows.

Yours gratefully

Cassandra Brooke

Permission for Participation

I _____, _____ of _____, who is currently a Mental Health Care User at Sterkfontein Psychiatric Hospital agree for my relative to participate in this research. I understand that in participating, my relative will work with an occupational therapist and complete activities.

I also understand that my relative's name will not be included when the results of the study are published and that I have the right to withdraw them from the research at any point in time without negative consequences.

Signature of Relative: _____

Signature of Witness: _____

Signature of Researcher: _____

Date: _____

Information Document: Consent from Doctor for Mental Health Care User to Participate:
Study 2

Study Title: Reliability and relevance of the Activity Participation Outcome Measure to a forensic population of Mental Health Care Users

Good day,

Introduction: I, Cassandra Brooke, am a postgraduate student of the University of the Witwatersrand currently enrolled for the Master of Science in Occupational Therapy programme. I am doing research to find out if a tool used by occupational therapists is appropriate in a forensic setting.

Invitation to Participate: Sterkfontein Psychiatric Hospital has been chosen to be part of this research and I am inviting a mental health care user currently under your care to take part in this research study.

What is involved in the study: There are approximately 45 participants. Participants (forensic mental health care users) will work with an occupational therapist and complete various interviews and activities. This will happen a maximum of three times over a five month period. Aside from participating in these sessions, nothing else is required of the mental health care user.

Risk Factors: There are no known risk factors regarding participation in this research.

Benefits: There are no direct individual benefits however participation of mental health care users will contribute to improved service delivery in the long term.

You will be given relevant information on the study while involved in the project and after the results are available on request.

Participation is voluntary: You have the right to refuse for the mental health care user to take part in this research and to withdraw them at any point without any consequence or loss of benefit to which they are usually allowed.

Confidentiality: Efforts will be made to keep personal information confidential. Please understand that the mental health care user's name remains confidential during the study by using a coding system. This means that only my supervisor and I will be able to identify who the

Appendix J

data belongs to. However, absolute confidentiality cannot be guaranteed. Personal information may be disclosed if required by law.

Contact details of researcher and supervisor: If you need to ask any questions or report negative events about the study, please do so. The telephone numbers are

- Researcher: (011) 951 8295
- Supervisor: (011) 717 3701

Contact details of REC administrator and chair: If you have any complaints or ethical queries, please contact the secretary of the Human Research Ethics Committee, Anisa Keshav on 011 717 1234.

Please complete the permission for participation form that follows.

Yours gratefully

Cassandra Brooke

Permission for Participation

I Doctor _____ hereby give consent for _____
_____, who is currently a Mental Health Care User at
Sterkfontein Psychiatric Hospital, to participate in this research. I understand that in participating,
the mental health care user will work with an occupational therapist and complete activities.

I also understand that the name of the mental health care user will not be included when the
results of the study are published and that I have the right to withdraw them from the research at
any point in time without negative consequences.

Signature of Doctor: _____

Signature of Witness: _____

Signature of Researcher: _____

Date: _____