A qualitative study exploring the dynamics of patient adherence to psychotropic medication use amongst adult patients with Bipolar Mood Disorder.

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DECLARATION

I declare that this dissertation is my own unaided work. All citations, references and borrowed ideas have been duly acknowledged. It is being submitted for the degree of Master of Social Science (Clinical Psychology) in the School of Applied Human Sciences, University of KwaZulu-Natal, Durban, South Africa.

None of the present work has been submitted previously for any degree or examination in any other university.

Signature: 

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DISCLAIMER

The Researcher of this study specifically disclaims all responsibility for any liability, loss or risk, personal or otherwise, which may be incurred as a consequence, directly or indirectly, of use of this report or any of the material in it.

DEDICATION

This dissertation is dedicated to:

My parents, Stephen and Laurie Jane Colton,

My sister, Sarah Amy Colton,

My aunt, Robyn Ann Howie,

And my late grandmother, Vivienne Elaine Hatcher.

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- And finally, the participants who took the time and effort to be interviewed and share their difficulties with me.

ABSTRACT

This study explored the perceived barriers of patient adherence to psychotropic medication use amongst adult patients with Bipolar Mood Disorder. Particular attention was paid to the personal experiences of each participant in relation to their mental illness, their treatment regimen and the private health care system. Two main theories were employed as a means to give the questions asked of each participant direction, namely the Theory of Reasoned Action and the Theory of Planned Behaviour. These theories were employed as a means to help interpret the results of the data gathered since they provide a broad canvas for the exploration of health-seeking behaviour. A qualitative approach was used with a semi-structured, individual face-to-face interview being conducted with each participant. The data gathered from this research was analysed using thematic analysis. Each participant was acquired through a private psychiatrist and contacted telephonically by the researcher, who then organised a face-to-face interview with each participant in a place of their choice. Each interview was audio-recorded with the permission of each participant. A total of 6 participants took place in this research, comprising of 3 males and 3 females who all met the selection criteria for this research. All participants were over the age of 18 years and had been diagnosed with Bipolar Mood Disorder (either type I or II) and had been on treatment for many years.

Three core themes emerged from this research: perceived barriers to medication adherence (medication side-effects, cost and availability of medication, alcohol and substance use), behavioural beliefs and attitudes toward taking medication (psychoeducation from mental health care practitioners, phases of illness, societal and social pressure, nature and complexity of treatment regimen), as well as self-efficacy (self-learning research, ways of remembering medication). Although this research mainly focused on factors that influence non-adherence, it also sheds light on the way in which self-efficacy was enabled.

This study supported previous research conducted regarding non-adherence to medication to which factors such as medication side-effects and social stigma were determined to act as barriers to adherence, however, this research attempts to explore the personal beliefs and attitudes of people who experience these barriers to their mental health treatment regimen on a daily basis.

Keywords: psychotropic medication, non-adherence, Bipolar Mood Disorder, barriers to medication adherence, Theory of Reasoned Action, Theory of Planned Behaviour.

CONTENTS

Chapter 1: Introduction

Chapter 2: Literature Review

Chapter 3: Methodology

Chapter 4: Discussion of Results

Chapter 5: Interpretation of Findings

Chapter 6: Conclusion, Limitations and Recommendations

CHAPTER ONE

INTRODUCTION

1.1.Introduction

This chapter introduces some of the main areas of focus in this research dissertation. Highlighted is the issue of non-adherence to psychotropic medication globally and the negative impact that medication non-adherence has on the effectiveness of the treatment regimen. Furthermore, the two theoretical models employed in this research, namely the Theory of Reasoned Action and the Theory of Planned Behaviour shall be briefly introduced. The rationale for this research will also be explored followed by an outline of this dissertation.

Mental illness is one of the major contributors to the global burden of diseases, and has an impact not only on the affected individual and their quality of life, but also on their family and caregivers and on the country's mental health services (Burns, 2011). There are multiple pharmacological treatments for mental illness, as well as adjunct treatments in the form of psychotherapy, however, due to multiple factors such as resource availability, individual and societal perceptions of mental illness, phases of being unwell, side-effects of medication etcetera, there is a rising burden of non-adherence in relation to mental health treatment regimens and protocols amongst mental health users around the world (Roy, Jahan, Kumari, and Chakraborty, 2005). For instance, in a study conducted by McHugh, Whitton, Peckham, Welge and Otto (2013), it was found that adults experiencing Unipolar depression and anxiety preferred to engage in psychotherapy rather than take psychotropic medication due to factors such as medication side-effects. However, in recent years, psychotropic medication has become the most common treatment of depression and anxiety due to the rapid sublimation of symptoms. McHugh et al. (2013) found that adherence to psychotropic medication by their participants over time was poor, as the participants were not engaging in the treatment modality of their preference.

Medication non-adherence has several negative effects on the ill individual, their ability to function daily as well as on their loved ones. However, much existing research on medication non-adherence tends to focus more on chronic medical conditions such as HIV, diabetes, cardiac disease and tuberculosis (Van Dyk, 2011; Kolandaivelu, Leiden, O'Gara, and Bhatt, 2014; Adegbola, Marincowitz, Govender, Ogunbanjo, 2016; Mabitsela, 2012). Thus it is necessary to understand the complexity regarding adherence and non-adherence to psychotropic treatment in cases of chronic mental illness and explore why non-adherence to medication is so common amongst the mentally ill.

At the opposite end of the spectrum are actions of taking medication for mental or physical health known as protective behaviours, which refer to what people do in the belief that their behaviour helps to facilitate or protect their health (Tlou, 2009). These beliefs are strongly influenced by both individual and societal factors which guide an individual's intentions and thus their actual behaviour and are understood using two models, namely the Theory of Reasoned Action and the Theory of Planned Behaviour.

Theorists Azjen and Fishbein first proposed the Theories of Reasoned Action and Planned Behaviour which focus on how attitude can impact on a person's behaviour, in which attitude is a combination of both that individual's perception of a particular action and also what they perceive others to believe about the behaviour (Tlou, 2009). Individual attitude is dependent on whether a person views a behaviour in a favourable or unfavourable manner whereas the perception of what others believe about a behaviour is determined by whether others approve or disapprove of a behaviour. Ultimately a person's decision to carry out a behaviour is weighted by how much importance they place on the subjective opinions of others and if they choose to comply with those views. The attitudes of the individual and others ultimately decide the intention of the person to either carry out the behaviour or abandon it. These theories can be used to help explore the dynamics of medication non-adherence amongst the mentally ill regarding how their perception of the importance or unimportance of medication in relation to their mental health, as well as how others such as family, friends and society perceive mental illness, can influence the intent of an individual to adhere to their medication.

This dissertation explored the dynamics of patient adherence to psychotropic medication use amongst adult patients with Bipolar Mood Disorder. Bipolar Mood Disorder is a chronic mental illness which is episodic in nature, in which an affected person experiences shifts in their mood state and energy levels (National Institute of Mental Health, 2009). These

episodes include depressive episodes or manic/ hypomanic episodes. Bipolar Mood Disorder has two main types, namely Bipolar type I and Bipolar type II, in which Bipolar type I is characterised by the occurrence of manic episodes which is a more severe mood state, whereas Bipolar type II is characterised by hypomanic episodes (Hirschfeld, Bowden, Gitlin, Keck, Suppes, Thase, Wagner and Perlis, 2010). Both forms of Bipolar Mood Disorder can experience depressive episodes, however, Bipolar type II experiences more prominent depressive episodes whereas mania is more prominent in Bipolar type I (Colin, 2013).

The psychotropic treatment of Bipolar Mood Disorder involves a combination of medications including mood stabilizers such as lithium, antipsychotics, anti-depressants and in some cases an anti-epileptic medication is prescribed as well (Avasthi, Kumar and Vikas, 2004). Often when the concoction of medications proves to be insufficient in the maintenance of the affected individual's level of functioning, the dosage of each medication is adjusted accordingly (Hirschfeld et al., 2010). The process of finding the correct combination and dosage of psychotropic treatment is complex and takes time, as with all mental illness, psychotropic treatment has to be tailored to the specific individual and their illness presentation (Avasthi, Kumar and Vikas, 2004). According to Hirschfeld et al. (2010), other forms of management that can be used in combination with the pharmacological treatment of Bipolar Mood Disorder including electro-convulsive therapy (ECT), psychosocial support structures as well as psychotherapy and group psychotherapy (Hirschfeld et al., 2010).

The participants of this research were heterogeneous in that both types of Bipolar Mood Disorder, namely type I and type II were included. All of the participants were private mental health care users. Furthermore, participants in this research had been on psychotropic treatment for years. This factor was necessary to this research due to the complex treatment regimen used in Bipolar Mood Disorder which is dependent on a best fit titration of medication based on the mood states of the individual. As such, finding a best fit titration of medication takes time to 'perfect'. This was to ensure that all participants in this research were on a stable treatment regimen on which they had time to both adhere and in the case of this research, non-adhere to their medication. This was also to ensure mood stability at the time of the interviews.

1.2.Rationale for this Research

Ceasing or irregularly taking anti-depressant or antipsychotic medication can have serious physical and mental side-effects due to what is known as "discontinuation syndrome" (Ackroyd, 2005). According to Ackroyd (2005), the physical side-effects of stopping anti-depressant and antipsychotic medication include vomiting, nausea, headaches and restlessness whereas the mental side-effects include agitation and irritability, emotional outbursts including crying and suicidal thoughts, insomnia, sensory disturbances as well as cognitive impairment. This is due to the fact that anti-depressant and antipsychotic medications should not be stopped abruptly or taken randomly but instead, gradual reduction of the amount of the anti-depressant or antipsychotic drug must be taken in order to avoid discontinuation syndrome to occur and the symptoms associated with this syndrome. As such, it is important for individuals on treatment for mental illness to be aware of the danger involved in discontinuing their treatment.

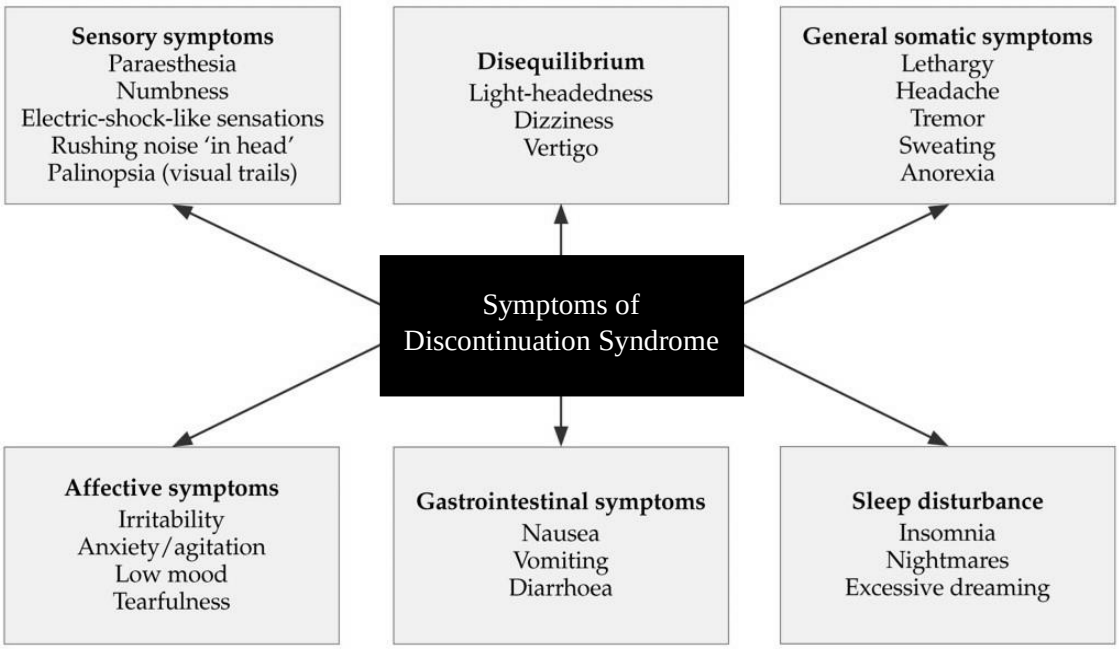

Figure 2.3: Symptoms of Discontinuation Syndrome from Haddad and Anderson (2007, pg 451).

Furthermore, mental health care services and facilities are inadequately available within South Africa and whilst advances have been made in our health care system, the mental health care system has been left neglected with few resources being available to our public both within the private and public sectors of health (Burns, 2011). According to Hassim (2007), psychiatric illnesses contribute to 14% of diseases worldwide, yet despite this high percentage of the occurrence of mental illness, many medical aid schemes limit psychiatric benefits within the private sector. This is evidenced in how access to certain medications for the treatment of mental illnesses are limited depending on which medications are listed on the "Essential Drug List" by medical aid schemes, resulting in some medications not being covered and paid for by a person's medical aid. Difficulties with regard to cost and availability of medication acts as a barrier to health seeking behaviour in which seeking care is delayed (Institute of Medicine, 2002).

According to Hassim (2007), there are even fewer mental health resources available in the public sector. Few psychiatrists are being hired in the public sector, but also many primary health care clinics within communities do not have the resources to treat psychiatric illnesses and there is limited access to clinics that do treat mental illness. As such, this research will help bring awareness to the mental health care gap which needs attention not just within our country but globally as well. This research will also focus specific attention to the private health care sector and assist in understanding the dynamics that affect adherence to psychotropic medication amongst private mental health care patients.

Mental illness is still an area of health that is subject to much stigma in which individuals fear the scrutiny and judgment associated with requiring psychotropic medication to help them with their overall functioning (Hassim, 2007). This research will help to bring awareness to the effect that stigma has on medication adherence and on the affected person in general.

In exploring some of the dynamics which impact medication adherence, it was envisaged that this research would identify some of the significant dynamics that impact on treatment adherence, specifically amongst mental health patients treated for Bipolar Mood Disorder.

1.3.How will the Research Attempt to Understand the Problem?

This research will uncover the potential dynamics of non-adherence to medication for the treatment of Bipolar Mood Disorder. If modifiable factors are determined, the aim would be to establish interventions that highlight and educate the dangers of non-adherence, as well as make recommendations that facilitate and promote adherence to medication. In essence, the research will be the driving force to identify the problem areas that will target a reduction in patient non-adherence to medication for the treatment of Bipolar Mood Disorder. This research is also part of a larger research project on non-adherence and whilst it is not the scope of the present research, the practitioners' perspective would also enhance our understanding of factors that affect non-adherence.

1.4.Outline of this dissertation

In *Chapter one* of the dissertation, a background to the problem of non-adherence to medication is provided as well as an understanding of what Bipolar Mood Disorder is and how it is pharmacologically managed. This chapter also includes the rationale for conducting the current study and the aims and objectives of the research.

Chapter two consists of a thorough review of the literature on Bipolar Mood Disorder, non-adherence and the impact of non-adherence on wellness. The chapter concludes with a theoretical framework, the theory of reasoned action and theory of planned behaviour, explaining the mechanisms of non-adherence, and a hypothesis on why Bipolar Mood Disorder individuals are sometimes non-adherent to their medication.

Chapter three presents the study's research methodology, challenges and issues of trustworthiness.

Chapter four presents the study's findings, and includes direct quotes from the participants in this research.

Chapter five presents an interpretation of the findings of this study in relation to the Theory of Reasoned Action and the Theory of Planned Behaviour and existing research.

Chapter six presents the conclusions, limitations and recommendations of this study.

1.5.Summary of Chapter

To summarise, this chapter introduced some of the main areas of focus in this research dissertation. Highlighted were the issues of non-adherence to psychotropic medication globally and the negative impact that medication non-adherence has on the effectiveness of the treatment regimen. Furthermore, the two theoretical models employed in this research, namely the Theory of Reasoned Action and the Theory of Planned Behaviour were briefly introduced. The rationale for this research was explored followed by an outline of this dissertation. In the next chapter, i.e. chapter two, an extensive review of the literature already existing within this field of interest shall be explored.

CHAPTER 2

LITERATURE REVIEW

2.1. Introduction

A literature review entails investigating a body of knowledge already existing within a field of interest (Mouton, 2013). This review begins with describing the physiology of Bipolar Mood Disorder and its impact on the affected persons. The types of pharmacological treatments for Bipolar Mood Disorder shall also be discussed. This will be followed by the prevalence and impact of non-adherence to medication amongst individuals on chronic medication and its outcome on their wellness. Some of the factors impacting on medication adherence shall also be explored. Finally, the study has drawn on theories from the field of Health Promotion, i.e. the Theory of Reasoned Action and the Theory of Planned Behaviour to assist in conceptualizing the multifaceted nature of treatment adherence.

2.2. Nature and Scope of the Problem

According to Tomlinson, Grimsrud, Stein, Williams and Myer (2009), mental disorders contribute to about 14% of disease in all regions of the world. Bipolar Disorders have been recognised by the World Health Organisation (2004) as being a leading cause of incapacitation in 17.6% of individuals under 59 years old in low and middle-income countries, much like South Africa. A problem identified has been that despite effective treatments in the form of medications and professional interventions available to treat mental illnesses including Bipolar Mood Disorder, many individuals' have increasing levels of non-adherence towards their prescribed treatment regimens (Roy et al., 2005). In a study conducted in Ranchi, India by Roy et al. (2005), the average level of poor adherence to medication amongst the mentally ill ranged from 30 – 35% in relation to all mental illness states. This non-adherence to medication has consequences on the ill individual, their mental and physical health, their relation to loved ones, the health care system and society at large (Marcus, Yasamy, Ommeren, Chisholm and Saxena, 2012).

Research question: *What are some of the factors that contribute towards poor patient adherence to Bipolar Mood Disorder medication treatment regimens?*

2.3. What is known so far?

2.3.1. The Pathophysiology of Bipolar Mood Disorder

According to Berns and Nemeroff (2003), Bipolar Mood Disorder is an episodic condition in which an affected person experiences abrupt phases of being unwell until returning to a relatively normal state. These episodes of being unwell take the form of a depressive episode or a manic/ hypomanic episode. Bipolar Mood Disorder is divided into two types, namely Bipolar I and Bipolar II, in which Bipolar type I is characterised by manic episodes whereas Bipolar type II is characterised by hypomanic episodes (Hirschfeld et al., 2010). Both forms of Bipolar Mood Disorder can experience depressive episodes, however, Bipolar type II experiences more prominent depressive episodes whereas mania is more prominent in Bipolar type I (Colin, 2013). According to Vieta (2014), mania is a complex mood state in which a rapid change in a person's behaviour occurs including elevated energy levels which goes in hand with a reduced need for sleep, increased goal-directed behaviours, impulsivity and irritability. Symptoms of mania last for at least one week (Hirschfeld et al., 2010). The table below by Vieta (2014) lists the symptoms which may be experienced by individuals experiencing a manic episode and these symptoms can affect the persons' mood, cognition, activity and behaviour or even take the form of psychosis:

Table 2.1 – Symptoms of Mania

Mood:	**Cognition:**	**Psychosis:**	**Activity/ Behaviour:**
Irritability	Grandiosity	Any ***delusions*** including:	Hyperactivity
Euphoria	Flight of ideas	Grandiosity	Decreased need for sleep
Depression	Distractibility – poor concentration	Persecutory paranoia	Violent assault behaviour
Mood lability	Confusion	Any ***hallucinations*** including:	Rapid pressured speech
Expansiveness		Auditory/ Visual	Hyper verbosity
		Thought disorder	Hyper sexuality

(Vieta, 2014, pg 3).

Mania can have two presentation types, namely euphoric mania in which the persons' mood is elevated and expansive, and irritable mania in which the mood may be aggressive and agitated (Vieta, 2014). These symptoms must last for at least one week for a diagnosis of Bipolar Mood Disorder type I to be made (Colin, 2013). Mania can be extremely debilitating to the individual as during this time functionality in most spheres of their life such as work or school, relationships and finances are affected.

According to Vieta (2014), hypomania is a mild to moderate form of mania, however, no psychotic symptoms occur and the individual may still be able to function during their hypomanic phase. Symptoms of hypomania are similar to those in mania, however, the duration of the symptoms must occur for at least 4 days in order for a diagnosis of Bipolar Mood Disorder type II to be made. The symptoms of hypomania in affected individuals often do not impair their daily functioning, and in some instances are experienced as enjoyable, to which individuals may experience a pleasant mood state, a good sense of humour and high productivity levels (Michalak, Yatham, Kolesar & Lam, 2006). However, hypomania can have profound effects on the person as things they say or do during this mood state cannot always be repaired or taken back. Furthermore, hypomania can develop into a manic episode or it may precede a depressive episode to which the symptoms are severe.

A Major Depressive Episode (MDE) can occur in both types of Bipolar, however it is more prevalent in Bipolar type II. These episodes are characterised by a low mood and loss of interest and pleasure lasting for at least two weeks (Michalak et al., 2006). Other symptoms of a major depressive episode include lethargy, difficulties concentrating, troubles with sleep, changes in appetite as well as thoughts or attempts at suicide (Hirschfeld et al, 2010). *Table 2.2* by Vieta (2014) lists the symptoms which may occur in individuals experiencing a major depressive episode:

Table 2.2 – Symptoms of a Major Depressive Episode (MDE)

Signs and Symptoms of a Major Depressive Episode
Lasting sadness, anxious or empty mood
Feelings of hopelessness or pessimism
Feelings of guilt, helplessness or worthlessness

Loss of interest or pleasure in once pleasurable activities including sex
Decreased energy, fatigue or being slowed down
Restlessness and irritability
Sleeping too much or unable to sleep
Change in appetite and/ or weight loss/ gain
Chronic pain or other physical symptoms not caused by illness or injury
Thoughts of death or suicide, or suicide attempts

(Vieta, 2014, pg 4).

Bipolar Mood Disorder can be reliably diagnosed by a mental health care practitioner and a combination of psychotherapy, social support and medications have been found to be effective in the treating of the major symptoms (Marcus et al., 2012). Despite the availability and effective nature of medication in the maintenance of the symptoms of Bipolar Mood Disorder, a prevalence for non-adherence to medication amongst people with Bipolar Mood Disorder has been found due to adherence being highly dependent on the motivation and self-efficacy of the patient (Chowdhury, Patel, George and Callahan, 2013). This motivation and self-efficacy of the patient can and will be linked to two major theories in this research, namely the Theory of Reasoned Action and the Theory of Planned Behaviour, which shall be discussed in further detail.

2.4.Theoretical Frameworks of Health Behaviour

Before understanding what motivates a person's health behaviour, it is important to understand what health behaviour is. According to Tlou (2009), health behaviour is any activity that a person performs in order to help maintain or improve their health. This definition can be expanded to include health protective behaviour which refers to what people do in the belief that their behaviour helps to facilitate or protect their health.

2.4.1. The Theory of Reasoned Action

The Theory of Reasoned Action (TRA), was created by Martin Fishbein and Icek Ajzen and was built on the theoretical tradition that considered attitudes as a major influence on human behaviour (Tlou, 2009). According to Vallerand, Pelletier, Mongeau, Deshaies and Cuerrier (1992), the Theory of Reasoned Action focuses on how the engagement in certain behaviour by a person is motivated by two major factors, namely their attitude toward the behaviour as well as a social component, known as subjective norms, which is what other people believe he or she should do. *Attitude toward the behaviour* can be defined as "accessible or salient beliefs about the likely outcomes of performing the target behaviour", whereas *subjective norms* can be defined as "the perceived social pressure to perform or not perform the target behaviour" (Nisson and Earl, n.d, pg: 2). According to Nisson and Earl (n.d) the perceived likelihood of an individual performing a particular target behaviour is known as the *behavioural intention*. An individual's attitude toward a specific behaviour is believed to be motivated by their evaluation of its consequences or outcome whereas the social component is more based toward others' expectations and advice on what should be done and as such the individual may choose to comply with the directions of these social others (Vallerand et al., 1992). Adding to the complexity of understanding human behaviour is the notion of *perceived behavioural control*, which refers to one's perception of their ability to enact the target behaviour (Tlou, 2009).

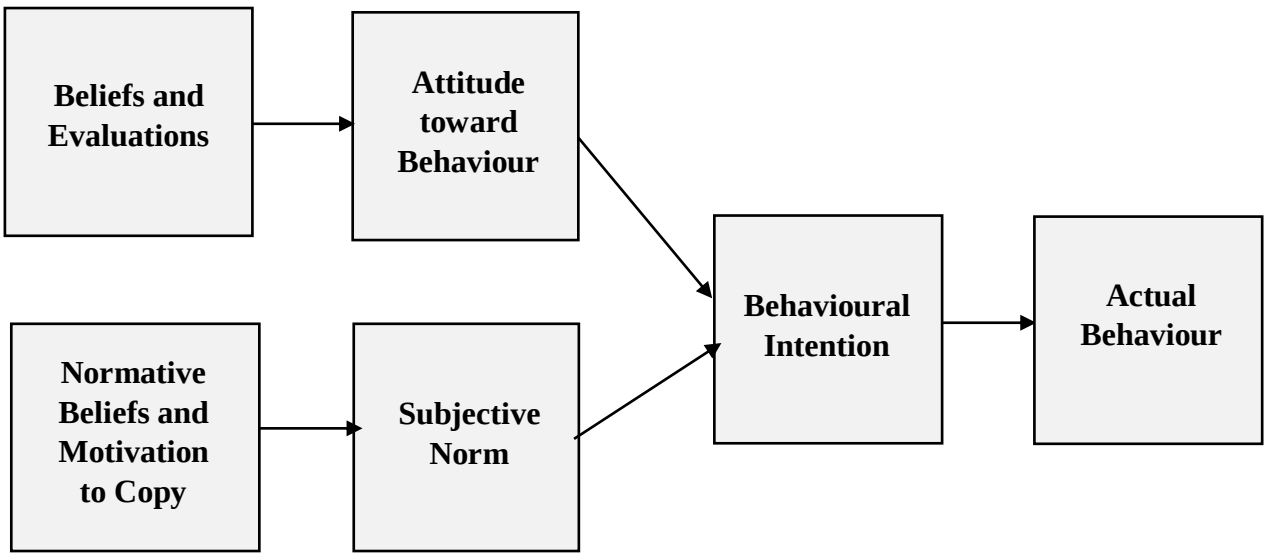

Figure 2.1: The Theory of Reasoned Action taken from Tlou (2009, pg 41).

The Theory of Reasoned Action has been found to be a relatively successful predictor of health intentions and behaviour, however, in certain situations behaviour is not only determined by attitude and personal motivation but also other factors such as biological aspects, access to treatment and health service as well as financial difficulties (Nisson and Earl, n.d). These factors shall be explored in more detail later into the literature review.

Although the Theory of Reasoned Action was originally created to try and understand as well as "predict" behaviour, this theory is also useful in helping to identify important target areas for intervention in order to try and change health behaviours.

2.4.2. The Theory of Planned Behaviour

According to Cameron (2010), the Theory of Planned Behaviour focuses on how behaviour is largely determined by a person's behavioural intention which is influenced by their attitude toward a behaviour, the subjective norms surrounding the behaviour and the person's perception of their control over the behaviour. This theory explores factors that both motivate and influence human behaviours, including health behaviours (Rhodes and Courneya, 2003). According to Rhodes and Courneya (2003), one of the most important factors influencing a person's behaviour is their intent or choice to engage in such an action and such choices are greatly influenced by each individual's subjectivity and attitude. A person's attitude refers to their evaluation of a particular behaviour whereas subjectivity, or rather subjective norms refer to an evaluation of the behaviour and whether the individual is pressured to either perform or not perform such activities by others within their social context.

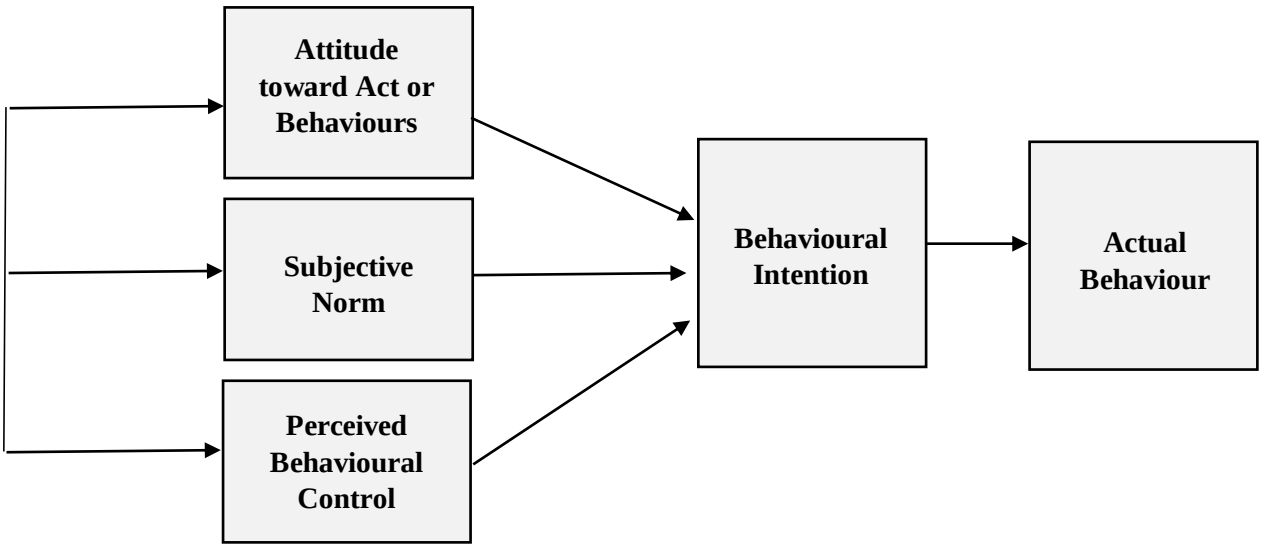

Figure 2.2: The Theory of Planned Behaviour taken from Cameron (2010, pg 3).

2.4.3. Limitations of the Theory of Reasoned Action and the Theory of Planned Behaviour

Tlou (2009) states that both the Theory of Reasoned Action and the Theory of Planned Behaviour have some limitations. Both theories fall within the cognitive behavioural realm which assumes that all human beings have the ability to reason and that reasoning allows one to make decisions regarding one's behaviour. However, during certain states of being mentally unwell, a person with mental health issues may have impaired reasoning and as such, these two theories do not always apply. Furthermore, the Theory of Reasoned Action and the Theory of Planned Behaviour both take an individualistic stance in which behaviour and decision-making processes are seen to be within the internal locus of control of the individual. The role of social influence and pressure is often minimised despite individual evaluations of the opinions and beliefs of significant others being an important factor in the decision-making process.

2.5. What is Adherence and Non-Adherence?

According to the World Health Organisation (2001), the term "adherence" can be defined as "the extent to which a persons' behaviour – taking medication, following a diet, and/ or executing lifestyle changes, corresponds with agreed recommendations from a health care provider". On the other hand, non-adherence can be defined as "a patient's passive failure to follow a prescribed therapeutic regimen" (Latif and McNicoll, 2009). This definition of adherence greatly differs from the term "compliance" which entails the passive following of instructions given by a health care practitioner to take one's medication, thus implying that the consumption of the medication is not an independent or informed choice of the patient (Chowdhury, Patel, George and Callahan, 2013).

Medication non-adherence has become a growing concern within the health care field, including in the treatment of medical conditions such as hypertension (Wetzels, Nelemans, Van Wijk, Broers, Schouten and Prins, 2006). According to the World Health Organisation (2013), approximately 50-70% of hypertensive patients globally do not adhere with their anti-hypertensive medication as prescribed and recommended. Within South Africa, this non-adherence to anti-hypertensive medication is a common phenomenon despite availability to anti-hypertensive medications within the public health system (Sanson-Fisher and Clover,

1995). Such non-adherence has found to be a realistic problem in a range of other health concerns such as the use of anti-retroviral medication for the treatment of the Human Immunodeficiency Virus (HIV). According to Van Dyk (2011), as of 2004, South Africa has the largest national anti-retroviral treatment programme in the world. Despite the availability of treatment programmes to the public, a lack of non-adherence to antiretroviral medication amongst HIV-positive patients in South Africa remains a problem that has serious health implications, including the formation of resistance to treatment, causing the infection to spread and thus implicating the survival rate of the infected person. Valjee (2000) conducted research among adults with multi-drug resistant tuberculosis in which it was recognised that despite the availability of medications used to treat tuberculosis, South Africans have developed a norm for defaulting on their medication. Thus it is evident that amongst many health conditions, non-adherence is a common issue.

2.5.1. Non-Adherence Amongst People with Bipolar Mood Disorder

According to Chakrabarti (2016), about half of people diagnosed with Bipolar Mood Disorder become non-adherent at some point during their long-term treatment. A multitude of factors impact on the adherence rate of individuals with Bipolar Mood Disorder, however, most research tends to only focus on demographics and medical-related factors influencing adherence. Non-adherence to medication in Bipolar Mood Disorder has many adverse effects on the usefulness of the treatment, and increases the risk of relapse, hospitalisation and suicide. Furthermore, non-adherence results in the greater utilisation of health-care services and thus an increase in mental health expenditures. There are further consequences of non-adherence on the individuals' quality of life, stigmatisation, functional impairment and the need for care from family and friends.

Other factors affecting adherence rates amongst people with Bipolar Mood Disorder include dosing regimen, medication side effects, the fear of becoming addicted to medication as well as concerns regarding drug interactions (Ibrahim, Pindar, Yerima, Rabbebe, Shehu, Garkuwa, Bashir, Wakil and Yahya, 2015). According to Ibrahim et al. (2015), most studies exploring non-adherence to medication looked at patient-related socio-economic factors, with little research focusing on medication-related factors regarding rates of non-adherence. In a study conducted in Nigeria by Ibrahim et al. (2015), factors associated with medication non-

adherence amongst people with Bipolar Mood Disorder and Schizophrenia included the cost of medications, medication combinations, dosing frequency and medication side effects. These factors shall be explored in further detail into this literature review.

According to Chakrabarti (2016), the rate of non-adherence amongst people with Bipolar Mood Disorder has increased over the years despite many new and different medications being introduced. The rate of non-adherence to medication amongst people with Bipolar is currently on par with several other chronic mental and medical disorders such as Schizophrenia, diabetes and high blood pressure.

2.6.Treatment of Bipolar Mood Disorder

Amongst individuals with Bipolar Mood Disorder, the main pharmacological treatments involve a combination of drugs including mood stabilizers such as lithium, antipsychotics, anti-depressants and in some cases an anti-epileptic drug is prescribed as well (Hirschfeld et al., 2010). Often when the concoction of medications proves to be insufficient in the maintenance of the affected individual's level of functioning, the dosage of each medication is adjusted accordingly. According to Hirschfeld et al. (2010), other forms of management that are used in hand with the pharmacological treatment of Bipolar Disorder include electro-convulsive therapy (ECT), psychosocial support structures as well as psychotherapy and group psychotherapy. Most recently, psychiatrists have been exploring new types of treatment for Bipolar Mood Disorder including the use of Ketamine, which has been found to produce quick, yet short lasting relief of depressive symptoms in Bipolar patients (Iosifescu, 2015). Although there is no cure for Bipolar Mood Disorder, such treatments allow for the stabilisation of the mood patterns of affected person's and can greatly reduce the high 10 – 15% suicidality that has been calculated amongst those with Bipolar Mood Disorder (Hirschfeld et al., 2010).

2.7. The Rising Burden of Non-Adherence among Patient's with Bipolar Disorder

Adhering to medication prescribed for the treatment of any mental illness is highly pertinent and positively correlated with the improvement in one's level of health and functioning (Roy et al., 2005). According to Roy et al., (2005), non-adherence to medication is a problematic

factor in all areas of medical health, with mental illness being no exception to this rising problem. Thus poor or non-adherence can be cited as an integral cause of uncontrolled and untreated Bipolar Disorder as well as a re-entering of affected persons' into mental health care facilities. This highlights the need to improve control of Bipolar Disorder to prevent premature death due to high suicidality rates among Bipolar persons' as well as to prevent the general degradation in their quality of living.

2.8.Dynamics of Non-Adherence Regarding Medication and Lifestyle Regimens

Non-adherence is a complex, multidimensional phenomenon which involves various factors both unique and context specific to the individual, which contribute to non-compliance. Some of the reasons for non-adherence to medication include:

2.8.1. Medication Side-Effects

In a study conducted amongst 100 subjects between 2002 and 2003 in India, one of the major contributors to a lack of adherence to medication was due to the side-effects experienced as a result of anti-depressant medication (Roy et al., 2005). According to the Agency for Healthcare Research and Quality Advancing Excellence in Healthcare (2007), some of the major side-effects of anti-depressant medications include excessive weight gain, diarrhoea, nausea, dry mouth, dizziness, troubles with sleeping at night, sleepiness during the daytime, headaches, shaking and even sexual dysfunction. These symptoms can often act as a deterrent to Bipolar persons' from taking their medication. However, multiple types of anti-depressants are available and as such, individuals' with Bipolar Disorder, in conjunction with a professional such as a psychiatrist or medical doctor, have the ability to identify an option that works best for them and has minimal side-effects.

According to Stafford (2011), lithium is a commonly used medication for the treatment of Bipolar Disorder, however, both short-term and long-term side-effects associated with this drug act as major causes of non-adherence amongst people with Bipolar Disorder. Short-term side-effects include an upset stomach, tremors of the hands and legs, excessive thirst, the need to urinate frequently, unsteadiness on one's feet as well as fatigue. The long-term side-effects of lithium, which often persist months after taking the medication, include excessive weight gain, thyroid problems, continued thirst and frequent urination. Other side-effects

which are often an annoyance include a metallic taste on the tongue that alters the taste of food. Finally, but most worrying of the side-effects includes fluid retention, visual impairment, deregulation of the heart beat (arrhythmia), memory loss, seizures and even Parkinson's disease. It is thus understandable as to why such side-effects may act as a deterrent to adherence to one's medication.

Another commonly used medication for the treatment of Bipolar Mood Disorder includes an anticonvulsant which also has side-effects such as dizziness, drowsiness, fatigue, nausea, tremors and weight gain, as well as some severe side-effects including an increased risk of suicide and life-threatening skin rashes (Health.org., 2011). Finally, antipsychotic medications for the treatment of Bipolar Disorder have been found to include a long list of side-effects such as vomiting, dizziness, tics and tremors, dry mouth, seizures, weight gain, nausea, restlessness, constipation and even low white blood cell counts which impacts on the body's ability to fight off infections (Agency for Healthcare Research and Quality, 2013).

In a study conducted by Ibrahim et al. (2015), it was found that individuals on treatment for Bipolar Mood Disorder whom experienced side-effects from their medication were seven times more likely to be non-adherent in comparison to those who experienced no medication side-effects. This was found to be due to the impairment in quality of life associated with having negative medication side-effects as well as the interference side-effects have on their ability to carry out activities of daily living.

Illustrated in the table below is a list of medications used in the treatment of Bipolar Mood Disorder and their side-effects:

Table 2.3 – Medications Used in the Treatment of Bipolar Mood Disorder and their Side-Effects

	Anti-Depressant:	**Lithium:**	**Anti-Convulsant:**	**Anti-Psychotic:**
Common Side Effects:	Excessive weight gain, diarrhoea, nausea, dry mouth, dizziness, troubles	Upset stomach, tremors of the hands and legs, excessive thirst,	Dizziness, drowsiness, fatigue, nausea, tremor, weight	Vomiting, dizziness, tics and tremors, dry mouth, seizures,

	with sleeping at night, sleepiness during the daytime, headaches, shaking, sexual dysfunction	the need to urinate frequently, unsteadiness on feet, fatigue, excessive weight gain, thyroid problems metallic taste on tongue	gain.	weight gain, nausea, restlessness, constipation.
Severe Side Effects:		Fluid retention, visual impairment, deregulation of the heart beat (arrhythmia), memory loss, seizures, Parkinson's disease	Increased risk of suicide, life-threatening skin rashes.	Low white blood cell count – weakens immune system.

(Agency for Healthcare Research and Quality Advancing Excellence in Healthcare, 2007; Stafford, 2011).

2.8.2. Dosing Frequency of Medication

According to a study by Ibrahim et al. (2015), dosing frequency was found to be the main predictor of medication non-adherence amongst individuals with Schizophrenia and Bipolar Mood Disorder. Individuals with multiple dosages of medication per day were eight times more likely to be non-adherent to their medication than those who had fewer daily dosages. Some of the main reasons for the relationship between dosing frequency and non-adherence included forgetting to take the medication, medication side-effects such as sedation and impairment in cognition as well as the discomfort of having to take medication multiple times during the day which is often forgotten amongst individuals with busy life schedules.

The relationship between dosing frequency and non-adherence does not only exist amongst individuals on treatment for mental illness, but in many other medical conditions too. In a study conducted in Singapore by Toh, Teo, Kwan, Raaj, Tan and Tan (2014), it was found that multiple dosages of medication per day resulted in greater amounts of non-adherence and more hospital admissions amongst individuals with chronic conditions such as high blood pressure. Similarly, in a study by Coleman, Limone, Sobieraj, Lee, Roberts, Kaur and Alam (2012), it was found that individuals with chronic medical conditions had greater levels of adherence to medication when the dosing frequency was once daily. Individuals with medication dosages occurring twice or three times daily were found to have higher rates of medication non-adherence. However, even individuals whom only had to take medication once daily were found to sometimes be non-adherent to their treatment, indicating that there are other factors which contribute to medication non-adherence. Some of these factors shall be further explored.

2.8.3. Patient Perceptions, Beliefs and Attitudes

2.8.3.1.Anxiety Regarding Long-Term Efficacy of Treatment

According to Roy et al., (2005), another contributing factor to non-adherence to medication amongst the mentally ill is due to their perception that taking such medications will result in immunity to its effects and thus will result in larger doses being required; in other words, reduced treatment efficacy.

2.8.3.2.Social Stigma

Other perceptual factors involve the social stigma Bipolar Disordered persons' feel is attached to requiring medication for the treatment of their mental illness and thus they fear the scrutiny and judgment associated with requiring a drug to help them with their overall functioning (Centre for Disease Control and Prevention, 2012).

2.8.3.3.Impairment in Functioning

Another major issue introduced to non-adherence to medication is the perception that many mental illnesses impair one's overall level of mental functioning, reasoning, judgement and stability which too could hinder their level of compliance (Centre for Disease Control and Prevention, 2012).

2.8.3.4.Religious and Cultural Beliefs

An important factor recognised with regard to perceptions included religious and cultural beliefs surrounding the use of medications to treat their mental illness (Roy et al., 2005). For instance, according to Starkowitz (2013), 80% of people in South Africa would prefer to visit a traditional healer for alternate forms of medicinal treatment rather than visit a medical doctor or mental health care practitioner. Some of the reasons expressed by our country's population as to why traditional healers are a preferred source of treatment include a higher accessibility of traditional healers within our country as well as that they are more cost efficient. Traditional healers are also seen to have a more holistic approach to treatment in that they focus on the psychological, spiritual and environmental factors which influence and impact on a person.

In relation to mental health care in particular, traditional healers have been a source of treatment for mental illness for centuries in South Africa, whereas psychiatry and psychology are fairly new fields of practice in our country, with many of its means of treatment being based on a Westernised society which does not always fit the needs of our country's people (Starkowitz, 2013). This is due to the fact that culture is a strong determining factor for how a person experiences and shows emotional distress and illness, meaning that a person in a Westernised society may experience and exhibit different symptoms of a mental illness than that of someone in South Africa.

2.8.3.5.Perception of Mania

Adding to the dynamic of patient non-adherence to medication is the patient perception of the manic symptoms experienced by Bipolar patients' being enjoyable, and as a result, many

individuals' do not wish to suppress these symptoms by taking their medication (Boyd and Dunn, 2015). As a means to explain this, a quote by an individual with Bipolar Disorder stated that the mania acts as an "emotional amplifier: when my mood is high I feel far quicker, funnier, smarter, livelier than anyone". Having a manic episode can sometimes feel exciting and fun in which the individual feels euphoric, special and untouchable. In another quote from Boyd and Dunn (2015), an individual with Bipolar Disorder states that the trick is to try and not be seduced by the mania, thus illustrating the desire that some people feel to remain manic. This may result in non-adherence to their medication as a means to maintain their "high".

2.8.3.6.Nature and Complexity of Treatment Regimen and Self-Learning

A further aspect contributing to medication adherence and non-adherence is individual knowledge regarding ones' condition and the perception of the importance of taking ones' medicine. In a study conducted by Ben-Natan, Salama, Khalaily and Adler (2013), if an individual believes that medications are important and should be administered; this will be manifested in their behaviour and thus encourage a higher rate of adherence to medications. These beliefs about medication importance are acquired based on one's life experience and knowledge of a certain topic, leading to the formation of opinions and impacting one's reasoning about a specific behaviour.

Much of an individual's initial knowledge into their mental disorder and their understanding of the importance of their medication should come from the practitioner who diagnosed them, however, according to the Treatment Advocacy Centre (2014), a poor therapeutic alliance between patient and practitioner may result in a practitioner not taking the time to explain a diagnosis and medication to the patient. This could contribute to non-adherence as the patient is often left unaware of the importance of and why they need medication. Furthermore, not fully understanding the purpose of medication could also lead to compliance, in which the patient takes their medication strictly because their doctor told them to, and this results in passivity rather than the individual feeling independent and in control of their own health.

2.8.4. Socio-Economic Factors

According to Burns (2011), mental disorders are responsible for numerous concerns including increased mortality in the form of suicide, reduced life expectancy; for individual and collective suffering; for significant loss of social and occupational functioning, disability and an extensive burden on family and other caregivers. Yet despite all of these factors, mental health care services and facilities are inadequately available within South Africa (Burns, 2011; Stein, 2014; Parker, 2014; Gillis, Robertson, Zabow and Stein, 2012). Whilst advances have been made in our health care system, the mental health care system has been left neglected with few resources being available to our public (Burns, 2011). Within South Africa, the average number of psychiatrists is approximately 0.05 per a 100 000 population as compared to high income countries which have an average of 10.5 psychiatrists per a 100 000 population. Not only within South Africa but globally, mental health services receive a much smaller proportion of funding in comparison to other health sectors, in which mental health is often considered a low priority.

Within South Africa, approximately 86% of health services are provided through the public health care sector, however, only 50% of health expenditures are covered by tax-funded money from the government (Health Policy Project, 2016). This means that the remaining 50% of payment for public health care services is the responsibility of the health care seeker, despite public health services mostly being used by low income individuals who can ill afford the costs of medical treatment. The private health sector consists of approximately 16% of the South African population whom are mostly individuals with a middle to high income financial background who can afford to be on medical aid schemes which assist in paying for certain health care treatments.

South Africa has approximately 86 different medical aid schemes which medical aid members pay for in order to cover the costs of many types of health care, however, medical aid schemes do not cover the total costs of all treatments, to which residual monetary amounts come out the pocket of the medical aid member (Ncayiyana, 2012). According to Ncayiyana (2012), pharmaceuticals are the most claimed for from medical aid schemes, with some medications having exorbitant residual fees for the medical aid user to pay themselves. However, the same medications can usually be prescribed and given in the public health care sector at a much lower cost. This evidences how medical health care schemes in South Africa are not only expensive but also deeply flawed.

Despite there being pitfalls in our health care system, South Africa does however have a progressive mental health legislation with the purpose of providing the following:

- Access to mental health care including access to the least restrictive care;
- Rights of mental health service consumers, family members, and other care givers;
- Competency, capacity, and guardianship issues for people with mental illness;
- Voluntary and involuntary treatment;
- Accreditation of professionals and facilities;
- Law enforcement and other judicial system issues for people with mental illness;
- Mechanisms to oversee involuntary admission and treatment practices; and
- Mechanisms to implement the provisions of mental health legislation (World Health Organisation, 2007, pg 8).

Due the financial constraints and in some cases blatant mismanagement of psychiatric care facilities in South Africa, such as in the Life Esidimeni Case in which former mentally ill residents had their Mental Health Care Rights breached when they were discharged from the facility to multiple Non-Government Organisations (NGO's), in which following their discharge 94 people died (Makgoba, 2017), audits of psychiatric care in the public domain have been criticised for the following:

- Psychiatric hospitals remaining outdated and often unfit for human use;
- Serious shortages of mental health professionals;
- An inability to develop vitally important tertiary level psychiatric services (such as child and adolescent services, psychogeriatric services, neuropsychiatric services, etc.) and;
- Community mental health and psychosocial rehabilitation services remaining undeveloped (Burns, 2011, pg 104).

2.8.4.1.The Impact of Poverty on Adherence

Approximately 50% of South Africa's population live below the poverty line, with individuals from lower income households often finding medicine for their mental illness a cost that they can ill afford (Burns, 2011). According to Statistics South Africa (2014), the severity of poverty in South Africa has worsened, with approximately 4,75 million households in South Africa living below the poverty line. Within the lower economic groupings in South Africa, majority of people from rural areas seek out traditional means of treatment rather than having to pay the cost of receiving care and medicine from professional health care practitioners (Burns, 2011). According to Sorsdahl, Stein, Grimsrud, Seedat, Flisher, Williams and Meyer (2009), approximately 41-61% of South Africans with mental illness have consulted a traditional healer, with 26% seeking the help of a traditional healer first before going to see a professional mental health care practitioner due to higher availability of traditional healers and more affordability.

Non-adherence amongst individuals with Bipolar Mood Disorder is evidently an important issue which requires attention within our country but also globally. The risk of non-adherence has individual, social and societal impacts, however, the specific barriers to medication adherence in South Africa have not been explored in their entirety. These barriers need to be identified and thoroughly explored in order for them to be addressed.

2.9.Summary of Chapter

This chapter described the physiology of Bipolar Mood Disorder and its impact on the affected persons. The types of pharmacological treatments for Bipolar Mood Disorder were also discussed followed by the prevalence and impact of non-adherence to medication amongst individuals on chronic medication. Finally, the Theory of Reasoned Action and the Theory of Planned Behaviour were explored. The next chapter focuses on the methodology of the study.

CHAPTER 3

METHODOLOGY

3.1.Introduction

Research methodology concerns itself with the methods and procedures used when particular phenomena are under investigation (Mouton, 2013). The focus is on the research process as well as the kind of tools used by the researcher to answer the specific research questions. This chapter begins by providing an overview of the research design used to achieve the aims of the study, followed by an explanation on the selection of participants. The research instrument as well as the data collection method will also be discussed in detail after which an explanation of the data analysis is employed. The chapter concludes with a reflection section as well as a section on the reliability of this study and how this study attempted to maintain it.

3.2.Research Design

A research design refers to a plan of how the researcher intends to conduct the research (Mouton, 2013). A way in which research starts is through a research question and how the researcher intends to answer the research question through finding evidence. The type of research design that a researcher chooses should fit with the aims and goals of the research and should not be chosen based on the researchers' design preferences.

This study was based on the thematic paradigm. According to Braun and Clarke (2006) thematic analysis is a method for identifying, analysing and reporting patterns or themes within the data. Themes are defined as a specific pattern found in the data in which one is interested in. Thematic analysis is the searching across a data set to find repeated patterns of meaning. Thematic analysis is an appropriate method for first time researchers who are not familiar with the analysis process since it allows the researcher to organise the material to

how she/he thinks it connects. Braun and Clarke (2006) proposed a 6 phase guide that can be used when doing thematic analysis. These include:

a) Familiarising oneself with the data- through the process of transcribing, reading and re-reading the data which allows the identification of initial themes that exist.

b) Generating initial codes or themes- grouping different aspects of the data into codes in the fashion that they relate to one another, by going systematically through each item in the data.

c) Searching for themes- this involves sorting the different codes into potential themes and collating all the relevant coded data extracts within the identified themes.

d) Reviewing themes- combine and document related patterns into sub-themes; looking for coherent and themes that need to be discarded or revised.

e) Defining and naming themes- build a valid argument for choosing the themes by defining what each theme mean, captures and identify what is interesting about them.

f) Writing up the report- this involves the final analysis of the results and making an argument in relation to your research questions and informing theory.

An exploratory, cross-sectional research design was used for this particular study. This means that the data collected from the target population of this research was analysed at one specific point in time. The results from a cross-sectional research design come from a population with specific characteristics and can be used to describe the prevalence of the research problem in said population as well as to describe risk factors related to said problem. This research aimed to explore the dynamics of why persons with Bipolar Mood Disorder default their medication and the sample population was selected using specific inclusion and exclusion criteria, making an exploratory, cross-sectional research an appropriate fit. Exploratory research is more open, flexible and inductive due to the fact that the methodology aims to look for new insights into an existing phenomenon.

3.2.1. A Qualitative Approach

Qualitative research is centred in peoples lived experiences, beliefs, values and meaning systems from their own perspective (Mason, 2002). This approach to research is considered to be more subjective and it considers the social context of people. The aim of qualitative research is to increase insight and understanding of phenomena in order to answer the research question. The aim of this study was to identify the dynamics hindering adherence to medication amongst both male and female Bipolar Disorder clients. This was done with the ultimate goal of recognising the particular dynamics experienced by the study population resulting in poor adherence to their medication as well as to identify strategies that can be implemented to address non-adherence to medication for the treatment of Bipolar Disorder. Specific attention was paid to participants' episodes of being unwell and how these impact on their adherence, their experience of medication ineffectiveness and/or side-effects as well as their knowledge and insight regarding their condition and whether they recognise the value and importance of medication to their wellness.

Qualitative research requires entails systematic collection and interpretation of material given by participants which in this research was acquired from a semi-structured face-to-face interview. The advantage of using this type of research methodology was that the researcher could acquire rich and complex data which may have been lost had a quantitative study been conducted (Mason, 2002).

3.2.2. Data Collection Instrument – Semi-Structured Interviews

As an instrument for data collection this study utilised semi-structured interviews. Interviews were guided by an interview schedule with open-ended questions and probes. Semi-structured interviews consist of a number of key questions that help to define the areas to be investigated in the study, but also allow the interviewer and interviewee to explore ideas in great detail (Neuman, 2011). According to Neuman (2011), a semi-structured interview comprises of a standardized series of questions that because of their flexibly, allow for the researcher to ask follow up questions based on the response given. Core themes that were addressed in the semi-structured interview were developed on the basis of a review of relevant empirical literature (see for eg., Vallerand, Pelletier, Mongeau, Deshaies and

Cuerrier, 1992, and Rhodes and Courneya, 2003) and consultation with identified national experts in the fields of research methodology and Bipolar Disorder.

The interviews were conducted face-to-face between the researcher and the participant. According to Opdenakker (2006), face-to-face interviewing is a beneficial data collection technique in that it allows for a greater amount and more complex information to be collected. Furthermore, participants are more likely to allow more time to be spent during a face-to-face interview than a telephonic interview or online survey. Furthermore, questionnaires and online surveys run the risk of individuals not personally completing the questions themselves but rather having someone else fill them out for you whereas face-to-face interviews remove this risk. Another advantage of face-to-face interviews is that individuals who struggle to read and write are not excluded from the research as the interview is verbal rather than written. Most importantly, according to Opdenakker (2006), face-to-face interviews often give the most quality data due to the fact that the researcher has control over the data collection process. There is also a higher response rate for face-to-face interviews in comparison to telephonic interviews and written questionnaires.

3.3.Participant Selection

The sampling procedure used in this study was non-probability sampling. According to Terre Blanche, Durrheim, and Painter (2006), non-probability sampling refers to non-random participant selection. Purposive sampling was the sampling strategy used in this research, which entails not including just anyone in the research study based on their availability, but rather participants are chosen based on specific inclusion and exclusion criteria. In the case of this research, only individuals over the age of 18 years with a formal diagnosis of Bipolar Mood Disorder were included in the research. Furthermore, participants had to have been non-adherent to their medication within a one-month period and must be deemed to be clinically stable by their private psychiatrist whom was the gatekeeper for this research.

The rationale for using purposive sampling was that the sample population is a vulnerable group, in that they have a diagnosed mental illness, and as such it was important that the participants be deemed clinically stable in order to ensure that no mental harm would result from their participation in the research. One of the complicating issues regarding using a

vulnerable group of participants is that it is often difficult for patients with Bipolar Mood Disorder to recognise the phase of their illness as judgement and impulsivity is known to shift during different phases of their illness (hypomania, mania and depressed phases). As such when acquiring a study sample, the researcher made a decision to acquire clinically stable patients to collect data from so as to minimise this effect during data collection.

Participants were recruited via a private psychiatrist whom works in Durban South, whom was the gatekeeper for this research. All participants were selected based on whether they were determined to be clinically stable as assessed by the psychiatrist as well as whether they met the research's inclusion and exclusion criteria. These will be discussed in more detail later in this section.

The psychiatrist supplied the researcher with a list of eligible participants to be contacted. Each eligible participant was contacted and given a description of the research to be conducted and asked for their participation. Upon verbal agreement to participate in the research, each participant was met by the researcher in a place determined to be convenient for the participant. The sample size originally desired by the researcher was 10 participants, however, due to time constraints and the qualitative nature of this research, the sample size was 6 participants. According to Terre Blanche et al. (2006), a sample size of 6-8 sources is considered adequate if the information gathered from the research is rich.

3.4.Research Instrument

The data collection instrument as previously mentioned was a semi-structured face-to-face interview *(see attached research interview in Appendix 1)*. The researcher did not anticipate that any participant would be at risk of mental or physical harm and the researcher refrained from asking personal or distressing questions. The interview was also conducted in a place of choice and convenience for the participants in order to allow for them to choose a place that was comfortable for them to speak in an open manner. The interviews took approximately 25 minutes to complete and thus did not inconvenience the participants during their day and questions were kept simple with neutral language and no jargon. Participants were required to sign an informed consent form, answer biographical information without having to disclose

their names and finally answer the closed ended and open ended questions asked of them by the researcher.

Informed Consent:

The first part of the interview involved participants signing an informed consent form *(see attached in Appendix 2)*. These consent forms were available in both English and isiZulu. The participants of the study were required to meet certain inclusion criteria. These included:

- Patients who have been non-adherent to part or all of their treatment regimen (involving both follow-up consultations and medication use)
- Adult patients (both male and female)
- Bipolar Mood Disorder patients
- Able to speak English or isiZulu
- All participants that have been determined to be clinically stable as assessed by the psychiatrist

Persons deemed unsuitable for participation in this study included:

- Children and minors
- Non-Bipolar Disorder patients
- All patients deemed unsuitable for participation by the psychiatrist

Bio-demographics:

Participants were required to answer demographic questions including their age, gender, race, highest level of education, employment status, marital status as well as the age of their formal diagnosis of Bipolar Mood Disorder.

Interview Schedule:

The semi-structured interview consisted of 11 questions in total. The first question was a screening question in order to ascertain if a participant met all the inclusion criteria, most importantly a history of non-adherence to their Bipolar Mood Disorder medication within the last month. The questions thereafter were divided based on themes recognised in relevant texts relating to medication non-adherence including:

1. Perceived Barriers (Side effects, socio-economic factors etc.)
2. Beliefs and Attitude toward the Behaviour
3. Self-Efficacy and Cues to Action

3.5.Data Collection and Procedures

Once the researcher was given a list of eligible participants by the private psychiatrist, each participant was contacted telephonically and the researcher introduced themselves and the nature and purpose of the study as well as the fact that interviews would be audio-recorded for research purposes. Thereafter the participant was asked if they wished to participate in the study which was strictly voluntary. Once verbal consent was received, the researcher asked the participant on which date, time and place would be of most convenience for them in order to meet for a face-face interview. When the participant was met face-to-face, they were re-introduced about the nature and aim of the study using the information sheet *(see attached Appendix 3)*. Confidentiality was assured to each participant. The participant would then be given an informed consent form to read and sign. Each interview was audio-recorded using recording equipment for the purpose of data coding.

3.6.Ethical Procedures

This study was approved by the Humanities and Social Sciences Research Ethics Committee (protocol ref no: HSS/1541/016M) *(see Appendix 4)*. Care was taken to provide adequate information about the study and consent was obtained before the interviews were conducted. The supervisor of this study is a registered Clinical Psychologist whose contact details were made available to patients, should they experience any form of distress as a result of the study. Consultations were made available free of charge. If it was deemed that the participants experienced psychological distress that required psychiatric intervention, the treating psychiatrist would be contacted with an appropriate referral.

The consent form and information form given to each participants contained the aims and objectives of the study and clarification that this research is a compulsory part of the research's Master of Social Science in Clinical Psychology degree. Participants were informed that their participation was strictly voluntary and that anonymity was ensured as

participants were not required to release their names. Data and audio-recordings were securely stored in an online version which was only accessible to the researcher. Electronic data is to be kept for five years in the Discipline of Psychology. Participants were provided with contact details of the researcher, research supervisor and an administrator of the Humanities and Social Sciences Ethics Committee of the University of KwaZulu-Natal should they require any further information.

3.7.Data Analysis

Data were analysed using thematic analysis. Each participant audio-recording was transcribed verbatim by the researcher and analysed thematically in order to identify commonalities and variances among the responses of participants. Comparative analyses were made across the variable gender.

According to Boyatzis (1998), thematic analysis is a way of seeing, by making observations and coming to the insights "intuitively". People use thematic analysis to see something that had not been evident to others, and this is done by perceiving a pattern, or theme, in seemingly random information. The perception of this pattern allows one to proceed to the next step, which involves classifying or encoding the pattern by giving it a label or definition or description. Thereafter, the third major step involves interpreting pattern. As a process of encoding qualitative information, thematic analysis facilitates the location of themes found in information that at a minimum describes and organizes the possible observations and at maximum interprets aspects of the phenomenon. A theme may be identified at the manifest level (directly observable in the information) or at the latent level (underlying the phenomenon).

By using a data driven approach, which is constructed inductively from raw information, information appreciation is enhanced and with a complete view of the information available, the researcher can appreciate gross (i.e. easily evident) and intricate (i.e. difficult to discern) aspects of the information (Boyatzis, 1998). However, the approach of developing a code on the basis of prior research places the researcher approximately in the middle of the continuum. The theory driven approach is one of the more highly popular approaches, and in this approach the researcher begins with the theory of what occurs and then formulates the signals, or indicators, if evidence that would support the theory. The wording of the themes

emerges from the theorists' construction of the meaning and style of communication or expression of the theory.

Combining this approach with the prior data driven approach, provided the researcher with a broader knowledge base when developing themes that were investigated, and such preliminary investigations of existing phenomena increases inter-rater reliability (Boyatzis, 1998).

3.8.Reflection on Challenges

The **data collection** process proved to be difficult due to the need to rely on a gatekeeper for participants. This resulted in time spent waiting for a list of suitable participants which impinged the research from being continued until such a time as participants were identified. Furthermore, the process of needing to meet the participants face-to-face also proved to have some difficulties as participants would sometimes cancel and reschedule a meeting date and this too resulted in data collection being a slow process.

In relation to **data analysis**, the use of a semi-structured interview proved most useful as the researcher was able to gain data with depth and richness. This was due to the use of probing and the ability to ask participants further questions which helped acquire more detail from each participant.

3.9.Credibility, Transferability, Dependability and Confirmability

In order to ensure the trustworthiness of this research, the following aspects were targeted:

Credibility (Internal validity):
According to Trochim (2006), credibility involves establishing that the results of qualitative research are believable from the perspective of the research participants. Qualitative research attempts to understand phenomena from the eyes of the participants, and as such only participants can judge the credibility of the results. Credibility in this research was ensured by doing the following:

- No information obtained from each participant was altered or amended nor was any information created.
- The data was audio-recorded and transcribed verbatim so as to capture the exact thoughts and feelings of the participants.
- Thematic analysis was used in order to find themes in the content among each of the participants interviews.
- Ensuring honesty by allowing participants the right to voluntarily be part of the research and the ability to withdraw their participation at any point during the interview.

Transferability (External Validity):

Transferability refers to the degree to which research results can be generalised or transferred to other contexts or settings (Neuman, 2011). This studies transferability was affected by its few participants (6 in total). Furthermore, focus on only individuals treated for Bipolar Mood Disorder in the private sector may affect the results transferability to those being treated in the public sector. Another transferability difficulty with this research is that this research focuses specifically on medication non-adherence amongst people diagnosed with Bipolar Mood Disorder and as such the results may not be generalised to all types of mental illness.

Dependability (Reliability):

According to Trochim (2006), dependability refers to the ability of research to be replicated or repeated. In essence, dependability is concerned with whether the study would achieve the same or similar results should it be repeated. In order to increase the dependability of this research, certain steps were taken:

- The research process undertaken by the researcher was explicitly explained in the methodology section.
- Both the advantages and disadvantages of the research methods were included.
- A copy of the research instrument was attached and details of the data gathering process were provided.

Confirmability (Objectivity):

Qualitative research is subjective and each researcher brings forth their own perspective to the research. Confirmability refers to whether the results of the study can be confirmed or

corroborated by others (Trochim, 2006). Steps to enhance confirmability of this research were undertaken including methods for:

- *Reduction of bias*:

The very best information was attempted to be obtained from each participant through the use of both open and closed ended questioning, thus allowing for the participants to elaborate on what they want to share through the use of both open and closed ended questioning, thus allowing for the participants to elaborate on what they wish to share with the researcher. The questions in the interview were concise and clear to prevent any confusion, ambiguity or misunderstandings. Clear instructions were provided to ensure that participants fully understood what was required of them. Furthermore, the interview was conducted on a personal level thus participants were able to inform the researcher if they required clarification. Overlapping questions were avoided and only relevant questions pertinent to the study were asked.

3.10. Summary of Chapter

To summarise, this chapter entailed the procedures used to answer the research question. It began with details on how the research was designed and the reasons for these decisions. A short section on the sampling procedures i.e. convenience sampling was presented. The qualitative semi-structured research instrument was discussed in more detail. The thematic analyses process was discussed and the themes that were found were mentioned, which will be discussed in more detail in the next chapter. Reflections on what the researcher found challenging about the research process were also discussed. This section concluded with steps the researcher took to increase the validity and rigour of the study. In the next chapter, i.e. chapter four, the findings of the study will be presented and discussed in detail with consideration of the researcher's interpretations of the findings in relation to the literature.

CHAPTER FOUR

DISCUSSION OF RESULTS

4.1. Introduction

This chapter reports on the biographical information of the research participants and the findings of this study which are derived from the analysis. This chapter will also explore the different core themes linked to the objectives of the study such as perceived barriers (Side effects, socio-economic factors etc.), beliefs and attitudes toward the behaviour as well as self-efficacy and cues to action.

4.2. Demographic details of participants

The total number of participants in this research was 6, with an equal number of males and females (three males and three females) (see table 4.2.1). The ages of the participants ranged from the youngest being 28 years, and the oldest being 59 years. These two figures were the outlying ages, with the majority of the participants within the age bracket of 40 years and 50 years old. The median age of the participants was 43 years and the mean age was 42,67 years.

Table 4.2.1. Demographic details of participants

Participant No.	Age	Gender	Age of Diagnosis	Private VS Public	Bipolar Type	Medication	History of Non-Adherence
1	46	Male	31	Private	I	Epilem, Epitec, Dopaquel	Yes
2	28	Male	14	Private	II	Trileptil, Abilify, Adco-Talomil, Convulex,	Yes
3	59	Female	39	Private	II	Camcolit	Yes
4	40	Male	35	Private	II	Zytomil, Fluoxitene, Rivotril	Yes
5	52	Female	49	Private	I	Cymgen, Camcolit	Yes
6	31	Female	26	Private	II	Nuzak, Toflex, Epitec	Yes

4.2.1. Initial Diagnosis

In this study, the mean age of diagnosis amongst all of the participants was 32,33 years. Within this research, all of the participants (100%) sought psychiatric intervention initially for their depressive symptoms only, with participants 3, 5 and 6 initially receiving a diagnosis of Unipolar depression:

> Participant 3 (female): "My first diagnosis was just plain, straight depression."

As a result of an initial diagnosis of Unipolar depression, participants 3, 5 and 6 were all originally initiated on antidepressant medications, with participant 3 being placed on Surmontil, participant 5 on Prozac and participant 6 on Nuzak.

4.2.2. Specialist VS Non-Specialist Health Care Providers

All of the participants (100%) were diagnosed with Bipolar Mood Disorder in the private sector. Five of the participants in this research (83,33%) were diagnosed by registered private psychiatrists, however, participant 6 stated that she was first diagnosed by a private general practitioner:

> Participant 6 (female): "It was by a General Practitioner… she informed me that I was Bipolar II."

The next theme will focus on the different barriers to medication adherence which emerged from the data analysis process. Some of the perceived barriers experienced by the participants in this research which impact on their medication adherence and self-management were found to include medication side effects, cost and availability of medication, private medical schemes rules and exclusions, the impact of complex treatment regimens on adherence, as well as perceptions of alcohol and substance use in relation to course of illness.

4.3.1. Medication Non-Adherence - External Factors

4.3.1.1. Medication Side-Effects

Four of the six participants in this research (66,6%) raised concerns regarding the severity of the side-effects of their medication and stated that the negative side-effects contributed not only to what they perceive as poor quality of life, but also such side-effects resulted in each participant being non-adherent to their medication in at least one point of their treatment.

Negative side-effects from the medication were expressed by 4 of the participants in the following way:

> Participant 3 (female): "What I found in my second year teaching at school when I was signing reports, my whole hand shook from taking the tablets. I couldn't sign my name… I also get a very dry mouth."

Participant 5 also stated that she experiences shakiness throughout her body as a side-effect of her medication:

> Participant 5 (female): "I get terrible shaking which happens every single time I wake up from sleeping, my whole body shakes."

Other common side-effects mentioned by the participants of this research included weight gain and a sense of not feeling like "themselves" on the medication:

> Participant 2 (male): "I have about a half-hour gap after taking them (the medication) and then I feel numb."

> Participant 5 (female): "One of the side-effects of the one tablet I am on is nausea and sometimes vomiting, which I don't like very much. This is one reason that would cause me to decrease my dosage and eventually not take it… I also don't like the way that you feel on them, like you don't have much of a personality… I experienced weight gain and it did concern me in the past but not now."

> Participant 6 (female): "Before coming off my medication I started feeling as though I was a zombie and I was gaining a lot of weight."

4.3.1.2. Cost and Availability of Medication

Another barrier to adherence of medication amongst the participants of this study included the cost and availability of their treatment. In this study half of the participants (50%) experienced difficulties in terms of the availability of their medication. For participant 1, acquiring his medication from his local pharmacy was difficult and this would sometimes result in him missing his treatment for up to 5 days:

> Participant 1 (male): "There's been endless fighting. A lot of the time I would go to Clicks and they would end up only giving me half of the medication and say they needed to order the rest. Then there are problems with the medical aid as they monitor how much medication I have per month. I mainly have a problem with getting my Epilem."

4.3.1.3. Private Medical Schemes Rules and Exclusions

Coinciding with the quote above by participant 1, difficulties with medical aid paying for prescribed psychiatric medication was also experienced by participant 5 who stopped taking a prescribed medication without discussing it with her psychiatrist due to medical aid not covering the particular quantity of tablets she was meant to be taking per month:

> Participant 5 (female): "I stopped taking the Abilify because the medical aid would not cover the quantity of tablets I was supposed to be on. It only paid for me to have a quarter of the dosage, which I didn't feel was very practical, since I was supposed to be on three times that amount so I stopped taking it all together."

Participant 2 also stated that they had limited medical aid which resulted in having to pay a monthly excess which he described as "exorbitant". This highlights the high costs of some of the more recently developed mood stabilisers used in the treatment of Bipolar Mood Disorder.

4.3.1.4. Impact of Complex Treatment Regimens on Adherence

Half of the participants in this research (50%) stated that they sometimes forget to take their medication daily:

> Participant 1 (male): "Sometimes when I am in a rush or have overslept then I may miss my dose."
>
> Participant 2 (male): "Either I just forget or I am too tired to take them."
>
> Participant 4 (male): "I sometimes skip a dose on days where I have slept through the day."

Significantly, each of these three participants reason for forgetting to take their medication involved the vegetative function sleep, to which all mentioned being too tired or oversleeping. These quotes by these participants may indicate they perceive themselves as 'forgetful' when attempting to adhere to their medication, when in all likelihood, some of the sedating effects of their evening doses may impact on their vegetative functioning (e.g. hypersomnia) which would subsequently impact on patient's ability to adhere to their morning doses of their treatment.

Participant 5 stated that she feels her memory has become somewhat worse since the onset of her diagnosis:

> Participant 5 (female): "I am definitely more forgetful, I don't know if that's normal or if it's another side effect to the medication, but I sometimes struggle to remember important things like taking my medicine."

4.3.1.5. Perceptions of Alcohol and Substance Use in Relation to Course of Illness

In this research 4 out of the 6 participants (66,67%) admitted to abusing substances at some point after they were diagnosed with Bipolar Mood Disorder, and 1 participant in this research was still actively using substances:

> Participant 2 (male): "To be honest, I smoke a lot of weed so that helps my mood… I smoke about 12 to 15 joints a day… it helps with my mood, curbs my appetite, everything!"

Participant 6 stated that during a hypomanic episode she began to use more of her antidepressants than was initially prescribed which resulted in her having to attend drug rehabilitation in order to be weaned off the medication.

One participant stated that he was using alcohol as a means to self-medicate his lack of sleeping:

> Participant 1 (male): "I went off my meds I think mainly because of stupidity because I was drinking a lot… I got false ideas about sleeping better with alcohol use."

This statement by participant 1 may point toward the fact that excessive alcohol use played a role in him going off his medication.

Participant 4 also stated that he was drinking alcohol heavily during a depressive episode of his mental illness.

Participant 2 in this research stated that he uses marijuana to self-medicate some of the negative mood symptoms of Bipolar Mood Disorder as well as to help with certain side-effects of his medications such as an increased appetite.

The next section will focus on the different individual and social beliefs and attitudes of the participants in this research that impact on medication adherence which emerged from the data analysis process. This included societal and social pressure, phases of wellness, psychoeducation from mental health care practitioners as well as nature and complexity of treatment regimen.

4.3.2. Societal and Social Pressure

Participant 4 elicited responses that highlighted perceptions regarding the influence of social stigma in relation to mental illness. The outcome of such influences appear to generate increased feelings of anxiety and low mood which reinforces the social stigma of belonging to an 'outgroup' in society. Adding to this feeling of being ostracised by society, participant 4 also had the 'burden' of a lack of societal acceptance of his sexual orientation to manage:

> Participant 4 (male): "There is a big stigma attached to being mentally ill but also to being gay and this adds to my feelings of anxiety and depression."

Participant 6 stated that she was influenced to stop her medication by a friend:

> Participant 6 (female): "A friend of mine came to visit from the UK and told me she had just stopped her antidepressants. I also wanted to see if I would be ok without my medications."

Participant 1 experienced social pressure from family and friends to both stop his medication and even use substances:

> Participant 1 (male): "There are plenty of people who think they are psychiatrists… there are some people who tell you to stop taking the medication, yet are the same people who tell you to start taking it again when things go wrong… You start thinking if maybe they are right and you don't need the medication… some of my family and friends even suggested I start smoking cannabis which I will never do."

This quote from participant 1 may indicate societal perceptions of mental illness, with an indication of their misunderstandings regarding mental illness being exacerbated by the variation in their symptoms. Such misperceptions can lead to patients being encouraged towards recreational substance use as a socially desirable method of coping.

According to participant 2 in this research, he stated that he mostly adheres to his medication for his family's sake as he knows he causes them stress and harm when he is either manic or depressed:

> Participant 2 (male): "It's not for me, it's for everyone else!"

Participant 2 in this research appears to perceive adherence in relation to an external locus of control, i.e. families need for harmony as a motivating factor. It may also indicate the poor level of insight a patient has when experiencing different states of the illness.

Bipolar Mood Disorder can have severe impacts on the family and other loved ones of the affected person such as having to look after and monitor the affected person who may be engaging in risky behaviour during phases of being unwell which can disrupt normal routine, but also relationships can take strain during episodes of being unwell, and finances can be severely impacted due to impulsive behaviour during manic or hypomanic phases or need for hospitalisation.

4.3.3. Phases of Illness

Participant 5 in this research reported that during both phases of being unwell and well, she struggled to see the importance of taking her medication which resulted in poor adherence to her treatment regimen:

> Participant 5 (female): "Sometimes I feel it (the medication) is unnecessary and that my dose is too high… when you have been fine for so many years you don't know if it is the medication that is making you feel fine or if you are fine, and if the medication is actually necessary."

This quote from participant 5 speaks to the difficulty experienced by patients who suffer from Bipolar Mood Disorder in relation to how the illness unfolds both at a biochemical level and at a functional level. The uniqueness of the patient's presentation makes it hard for them to understand how the different medications used in combination help to ensure mood stability rather than eliminating all of their symptoms of mental illness in their entirety.

Participant 2 stated that when he is either in a manic or depressive episode he begins to stop seeing the importance of taking his medication as compared to when he is well in which he views medication as being a necessary part of his treatment. This coincided with participant 5 who stated that when she is unwell she feels that her views on the importance of her medication changes as she feels she loses control over what she does or thinks. Participant 1, 3, 4 and 6 in this research all stated that they perceive their medication as necessary regardless of whether they are well or unwell and that during episodes of being unwell, it is usually the adverse symptoms that encourage them to take their medication.

4.3.4. Psychoeducation from Mental Health Practitioners

In this research 2 of the participants (33,3%) stated that they received no psychoeducation from their mental health care practitioner regarding their diagnosis and the medications they are taking:

> Participant 1 (male): "The psychiatrists didn't seem to explain anything to me about it (Bipolar). They ask questions about how many 'highs and lows' you have and give medication. I understand what the medication does and how it alters the body and the brain, but only to the point that I can understand based on my own research… I think if anyone understands the brain and how it works, it would be a psychiatrist, so they

are the ones that should be informing you. I still think that psychiatrists could explain to you in a simpler way though."

Participant 5 (female): "It might be nice to have your diagnosis explained to you, not in a long story but explaining aspects of how you should live with it."

This lack of psychoeducation from mental health care providers may impact on the perception of the necessity of taking one's medication, in which a lack of information may lead to the belief that medication is unnecessary and more of a burden to one's quality of life. Furthermore, a lack of psychoeducation from one's mental health care practitioner can interfere with rapport, which may result in patients not trusting their mental health care providers and also result in poor health seeking behaviour should they feel their medication is not working for them.

4.3.5. Nature and Complexity of Treatment Regimen

In this research, only 1 participant (Participant 3) was taking just one tablet, with all the other participants taking at least three different medications as part of their treatment regimen. Participant 2 was not only taking medication for Bipolar but also for a comorbid medical condition, diabetes mellitus. Only 2 of the participants had a once a day dose of medication whereas 4 of the participants (66,67%) had a twice daily dosage, having to take different medications in the morning and night.

Participant 2 who is on 8 different medications, both for the treatment of his Bipolar Mood Disorder and diabetes mellitus stated that although he was not sure if his medications were meant to be split into two daily doses, he chooses to take all of them at night before sleeping in order to reduce his chances of forgetting to take his medications.

Amongst the participants in this research, 5 of the participants (83,3%) stated that the method which they use to remember to take their medication is by trying to incorporate it into a daily activity which they carry out every day. Participant 5 stated that she uses an alarm on her cell phone to help remind her of when she needs to take her medication. Participant 4 and 6 stated that in the past they used a weekly pill box in order to keep track of their medications but have since incorporated their medication taking into their daily routine. Although he mostly remembers to take his medication on his own, participant 1 stated that his wife also helps by reminding him to take his medication each day.

4.4.1. Self-Learning Research

In this research, all of the participants (100%) did their own form of research regarding either their diagnosis of Bipolar Mood Disorder or their medication and the side-effects they may have. All of the participants stated that they mainly researched their medication and the side-effects that may cause, possibly indicating that for these participants the side-effects of their medications were of more concern. Three of the participants (50%) stated that doing their own research was helpful to them:

> Participant 1 (male): "It doesn't really worry me now that my psychiatrist didn't explain things to me as I do the research myself. It was a problem when I was younger because I would wonder what medication I was being given and why, and if it was really necessary. Now I just use Google."

> Participant 3 (female): "I have done a lot of Googling on it (Bipolar) and it helped me. It calmed me down."

Participant 5 found doing her own research helpful as it gave her insight into the side-effects of her medication and therefore a possible reason for her symptoms of nausea:

> Participant 5 (female): "I tried to find out what was causing the nausea. After I did my research I felt better; it was nice to know what was causing it."

The participants in this research all showed self-efficacy in relation to their mental illness as they all attempted to educate themselves about their mental illness and the medications they are having to take every day.

4.5. Summary of Chapter

This chapter included all the findings of this research and the interpretations of the data collected from each of the 6 participants. Responses from the data set were used to illustrate the experience of the participants in relation to specific content areas. In the next chapter of this study, an interpretation of the results of this research will be conceptualized in relation to the Theory of Reasoned Action and the Theory of Planned Behaviour with the findings also being compared to published research in this area.

CHAPTER FIVE

INTERPRETATION OF FINDINGS

5.1. Introduction

This chapter will explore the different core themes linked to the objectives of the study in relation to three constructs identified from the Theory of Reasoned Action and the Theory of Planned Behaviour namely perceived barriers (side effects, socio-economic factors etc.), beliefs and attitudes toward the behaviour as well as self-efficacy and cues to action. Furthermore, the results of this research will be interpreted in relation to relevant existing literature in order to compare the findings of this study with previous studies.

5.2. The Theory of Reasoned Action and the Theory of Planned Behaviour in Relation to Medication Non-Adherence

According to a study conducted by Ben-Natan et al., (2013), many factors related to the Theory of Reasoned Action and Theory of Planned Behaviour contributed to their participants' adherence to medication. These included their state of health, the dosing frequency of their medication, their behavioural beliefs and attitude towards the medication and its usefulness to their wellness as well as its consequences such as side effects, their behavioural intention and whether or not they chose to take their medication, the normative beliefs in the form of social pressure to take their medication and finally, their subjective norms and perception of the beliefs of people they hold close to them.

As such, it is evident that many factors play a role in the level of adherence to medication and adherence appears to be influenced by both individual beliefs and perceptions as well as the perception of the beliefs of others. The research findings of Ben-Natan et al., (2013) found a correlation between behavioural attitudes and beliefs regarding adherence to medications as well as behavioural intentions to adhere to prescribed medication. Similarly, these constructs

described by Ben-Natan et al., (2013) were found to influence medication adherence amongst the participants in this research and these factors shall be explored in more detail within this chapter.

5.3. Non-Dynamic Factors

5.3.1. Challenges in relation to Formal Diagnosis

According to the Diagnostic and Statistical Manual of Mental Disorders 5th edition, the mean age of onset of Bipolar Mood Disorder is 18 years old (American Psychiatric Association, 2013). However, in this study, the mean age of diagnosis was 32,33 years. This late diagnosis of Bipolar Mood Disorder amongst the participants in this study may be due to factors such as an individual not perceiving themselves to be unwell during manic states and resisting the need for treatment (Singh and Rajput, 2006). This may indicate the perceptions patients have regarding their mental illness in that symptoms of depression have been understood differently to symptoms of Bipolar Mood Disorder. The significance regarding their understanding emphasises the impact of knowledge about one's state and the journey they take when accessing mental health care, in relation to gaining insights into the nature and extent of their illness.

Within this research it was found that some participants first received a diagnosis of unipolar depression. Singh and Rajput (2006) state that almost 40% of Bipolar patients are initially diagnosed with depression. According to Singh and Rajput (2006), Bipolar Mood Disorder is often misdiagnosed, with 69% of patients initially misdiagnosed and a further 10% remaining misdiagnosed for up to 10 years. Singh and Rajput (2006) found that misdiagnosis does occur amongst patients with Bipolar due to most of these patients only seeking treatment for depressive symptoms. The misdiagnosis of Bipolar Disorder can have treatment complications in which often only an antidepressant is given which can even trigger manic or hypomanic episodes.

5.3.2. Specialist VS Non-Specialist Health Care Providers

Within this research, one participant was initially diagnosed by a general practitioner. According to a study conducted by Afana, Dalgard, Bjertness and Grunfeld (2002), general practitioners often do not receive comprehensive training regarding mental illness and mental

health care and that only 11,6% of patients with a mental disorder were able to be detected by general practitioners. This shows a need for general practitioners to be better trained regarding mental illness detection but also a need for mental illness diagnoses to be properly assessed and made by a psychiatric specialist. According to Singh and Rajput (2006), psychologists and psychiatrists are properly trained to treat mental illness and use specially designed assessments and interviews to evaluate and diagnose a person with a mental illness. As such, it is out of the scope of practice for a general practitioner to diagnose and treat mental illnesses such as Bipolar Mood Disorder as there lies a risk for misdiagnosis or for a mental illness to be unrecognised.

5.4. Dynamic Factors

The findings of this study confirmed that patient attitude has a major influence on human behaviour and how the engagement in certain behaviour by a person was motivated by two major factors, namely their attitude toward the behaviour as well as a social component, known as subjective norms, which is what other people believe he or she should do. This is the major principles of the Theory of Reasoned Action and the Theory of Planned Behaviour, which was found to guide the behaviour of the participants in this research. The emerging themes include perceived barriers, behavioural belief and attitude toward taking medication as well as self-efficacy and cues to action.

5.4.1. Perceived Barriers

In a study conducted by Blixen, Kanuch and Sajatovic (2016), some of the perceived barriers found to impact on medication adherence and self-management amongst their participants included medication side effects, financial difficulty and availability of medication, phases of illness and wellness as well as substance and alcohol use. These barriers implicating medication adherence were further confirmed in this research.

5.4.1.1 Medication Side-Effects

According to the Theory of Reasoned Action and the Theory of Planned Behaviour, people use rationalisation as a means to evaluate certain factors which they perceive to either be

pro's or con's for engaging in particular behaviours (Hausenblas, Carron and Mack, 1997). If the individual perceives there to be more negative consequences of a certain behaviour, then they are less likely to engage in such a behaviour. In a study conducted in Turkey by Mert, Turgut and Semiz (2015), Bipolar Mood Disorder was found to have the highest rate of medication non-adherence, with negative side-effects from medications resulting in 26,8% of the participants failing to adhere properly to their treatment regimen. Within this research, 66,6% of the participants experienced negative side-effects from their medications for Bipolar Mood Disorder which resulted in each of these participants being non-adherent to their medication in at least one point of their treatment as they perceived the negative side-effects of the medication to outweigh the benefits of being on their medication.

Kemp (2014) highlights certain common side-effects of Bipolar medications including weight gain and Parkinsonian features like shaking, much like those expressed by the participants in this study. Furthermore, Kemp (2014) states that certain medications used in the treatment of Bipolar result in sedation of the patient, which is meant to help with sleep but can also affect a persons' quality of life by contributing to weight gain and cognitive dysfunction as well as impair their social and occupational functioning. These symptoms were further confirmed in this research by four of the six participants.

Kaplan, McGlinchey, Soehner, Gershon, Talbot, Eidelman, Gruber and Harvey (2015) state that hypersomnia and elevated sleepiness throughout the day is most common in Bipolar Mood Disorder. An increase in sleep has been found to be a medication side effect in up to 37% of Bipolar Mood Disorder patients, with antipsychotic medication in particular having strong sedative properties. Furthermore, excessive sleeping is also a symptom of the depressive phase of Bipolar Mood Disorder (American Psychiatric Association, 2013). In a study conducted in the United States of America by Kaplan et al. (2015), it was found that excessive sleepiness amongst Bipolar Mood Disorder patients can be a predictor of relapse into a manic or hypomanic episode as well. In this research hypersomnia was not only found to be a side effect of medication and depression, but was also a contributing factor to non-adherence in which 50% of the participants reported symptoms of hypersomnia that not only affected their quality of life but also impaired their ability to take their medication as they would sometimes sleep through the entire day or they were too tired to take their medication.

Memory and cognition have also been found to be impaired during illness phases of Bipolar Mood Disorder, with substantial decreases in ones' concentration, attention, recall memory

and executive functioning (Marvel and Paradiso, 2004). These factors can also contribute not only to forgetting to take ones' treatment but also change how a person perceives the importance of their medication during that particular phase of illness. This was evidenced in this research in which one participant stated that during a depressive phase of his illness, he stopped taking his medication and instead started self-medicating with alcohol due to impairment in his reasoning and executive functioning. Impairment in reasoning and executive functioning evidenced by this participant goes against one of the fundamental assumptions of the Theory of Reasoned Action and the Theory of Planned Behaviour which states that people make choices by use of rationality and sensibility (Hausenblas, Carron and Mack, 1997). In cases of cognitive impairment during a phase of mental illness, a person's rationality is often impaired which would therefore interfere with their ability to make sensible decisions regarding certain behaviours such as remaining adherent to their treatment regimen.

Furthermore, mood stabilisers such as Lithium, which are the main form of pharmacological treatment of Bipolar Mood Disorder, have been found to impair the memory of people with Bipolar. This was evidenced in a study by Vasile, Vasiliu, Mangalagiu and Ojog (2011), in which the memory performance and productivity of patients with Bipolar Mood Disorder were found to improve when their mood stabiliser was discontinued for a period of time. Thus the medication in which patients need to remember to take also contribute to the reason they forget to take the medication. Impairment in memory and cognition was confirmed in this research in which one participant reported being increasingly forgetful since her diagnosis of Bipolar Mood Disorder, and three more participants reporting that they sometimes forget to take their medication due to excessive sleepiness as a result of the side-effects of their medication.

Neuropsychological studies have found that medications such as mood stabilisers like Lithium can result in side-effects including emotional inadequacy and even reduce ones' productivity and creativity levels (Vasile et al., 2011). This may be why 50% of the respondents in this research state that they often do not "feel like themselves". As a result of not feeling like himself, one participant in this research admitted to abusing marijuana as a means to improve his mood. This factor shall be discussed in more detail within the theme of alcohol and substance use, however what was apparent was a sense of 'detachment' from the premorbid sense of self.

5.4.1.2. Cost and Availability of Medication

According to Hassim (2007), despite psychiatric illnesses contributing to 14% of diseases worldwide, many medical aid schemes limit psychiatric benefits. This is evidenced in how access to certain medications for the treatment of mental illnesses are limited depending on which medications are on the "Essential Drug List". Difficulties with regard to cost and availability of medication acts as a barrier to health seeking behaviour in which seeking care is delayed and needs are not met when individuals struggle to afford or acquire their medications (Institute of Medicine, 2002).

In this research 50% of the participants experienced difficulties in attaining their medications from their medical aid schemes, in which one of these participants stopped taking a prescribed mood stabiliser due to her medical aid not covering the cost of this medication. In relation to the Theory of Reasoned Action and the Theory of Planned Behaviour, this research again disagrees with the notion that decisions to act out certain behaviours are based on rational decision-making, in which sometimes even an action which a person perceives to be in their best interest is not possible to enact due to external factors which act as barriers to their decision-making process.

Evidenced from this study is that there is a need for better access to mental health medications in the private sector in South Africa, however, according to Hassim (2007), there are even fewer mental health resources available in the public sector. Not only are there few psychiatrists being hired in the public sector, but also many primary health care clinics do not treat psychiatric illnesses and there is limited access to clinics that do treat mental illness.

5.4.1.3. Alcohol and Substance Use

According to Quello, Brady and Sonne (2005), substance use disorders are often comorbid in mood disorders such as Bipolar Mood Disorder. Quello, Brady and Sonne (2005) theorise that mood disorders can place an individual at risk of developing a substance use disorder and vice versa, in which the negative affect associated with a mood disorder may result in an individual abusing substance as a means to cope whilst a substance use disorder may foster adverse mood symptoms.

Alcohol and substance use amongst the mentally ill is often perceived by the user as acting as a disinhibitor against certain symptoms of their mental illness such as anxiety and

psychological distress, however, the opposite is true in which substances such as alcohol work as a Central Nervous System depressant which can exacerbate distressing symptoms of mental illness (Quello, Brady and Sonne, 2005). Furthermore, substance use also has an impact on medication adherence amongst people with Bipolar Mood Disorder as it can impair their cognition and executive functioning (Stoner, 2017).

In this research, 66,6% of participants admitted to using substances as a means to self-medicate negative mood states such as depression and anxiety as well as a means to improve symptoms of insomnia. Furthermore, one participant was even encouraged by family to use marijuana as an alternative treatment for their Bipolar Mood Disorder. This highlights one of the motivational factors of the Theory of Reasoned Action and the Theory of Planned Behaviour, namely the subjective norms of others and how the opinions of those deemed important by a person can influence their behaviour (Hausenblas, Carron and Mack, 1997).

Substances are commonly used by individuals with Bipolar Mood Disorder as a means of self-medicating their symptoms, such examples include using marijuana as a means to calm a person if they are feeling intense aggression or anger, or stimulant drugs such as cocaine being used as a means to energise a person during a depressive episode (Stoner, 2017). According to Brady and Sonne (2002), 46,2% of people with Bipolar type I have a comorbid alcohol use disorder, whilst the rate of alcohol use disorder amongst people with Bipolar type II is 39,2%. The manic and hypomanic episodes of Bipolar Mood Disorder were found to be associated with substance use due to mania and hypomania resulting in impulsivity, increased risk-taking behaviour and disinhibition (American Psychiatric Association, 2013).

In a study conducted by Brady and Sonne (2002), it was found that substance and alcohol use amongst people with Bipolar Mood Disorder increases their number of hospitalisations and may cause the onset of a manic or depressive episode. In this research, one participant was actively using marijuana as a means to improve his negative mood symptoms as well as to try and curb his appetite which increased as a side effect of his medications and comorbid condition, diabetes mellitus. Another participant in this research stated that in his past he abused alcohol as he believed that alcohol use would help to improve his sleep, in which during a depressive phase he struggled to get a good night's rest. Furthermore, another participant admitted to previously abusing her anti-depressant medications during a hypomanic phase due to impaired judgement. Amongst the substance users in this research, two of the participants' substance use resulted in the need for them to be placed in hospital

for the treatment of their mood symptoms as well as to help them overcome their substance use disorder.

5.4.2. Beliefs and Attitudes toward the Behaviour

The Theory of Reasoned Action and the Theory of Planned Behaviour focus on the intentions of people which is how motivated they are to perform a particular health promoting behaviour such as taking their medication as prescribed (Hausenblas, Carron and Mack, 1997). Intention is highly motivated by a person's attitude towards that particular behaviour as well as their perception of the social pressure to perform that behaviour. A person's attitude toward a behaviour is also shaped by their perception of the consequences of performing a particular behaviour, either positive or negative. In this research the participants' attitudes toward taking their prescribed medication was influenced by the following: information received from practitioner, phases of illness, societal expectations and complexity of the treatment regimen.

5.4.2.1. Psychoeducation from Mental Health Practitioners

Psychoeducation involves a mental health practitioner informing and educating a person and their family about their particular mental illness in order to help make the patient more aware of their condition and to also help the person and their family cope better and reduce the chances of relapse (Bond, 2014). Psychoeducation regarding ones' medication and the importance of taking the medication consistently also assists with improving medication adherence.

According to Bond (2014), psychoeducation is an important aspect in the treatment of people with Bipolar Mood Disorder and can improve the course of their illness by helping them to recognise the signs that they are relapsing which increases health seeking behaviour. Psychoeducation helps improve adherence and provide coping mechanisms by educating the family of the affected person about Bipolar Mood Disorder which can improve social support and reduce stigma within the family unit. Eckenrode (2017), states that medical practitioners should be able to speak to their patients in a friendly manner, refraining from using jargon that the patient will not understand and listen to the patients concerns and questions. However, often doctors have busy schedules which results in little time to thoroughly explain

a diagnosis to a patient and listen to their questions. In South Africa, there is a shortage of mental health care professionals in relation to the country's population which results in even less time for psychiatrists to thoroughly explain a patient's diagnosis to them (Schneider, Docrat, Onah, Tomlinson, Baron, Honikman, Skeen, van der Westhuizen, Breuer, Kagee, Sorsdahl and Lund, 2016).

Two of the participants in this research reportedly received no psychoeducation from their mental health care practitioners. A lack of psychoeducation to people with mental illness can have implications on their prognosis and adherence to their medication as the person was not given proper insight into their condition (Lincoln, Lullmann and Rief, 2007). This can result in an individual not understanding the importance of their medication and the need to adhere to their treatment regimen. This was seen by one of the participants in this research who received no psychoeducation, in which she often questions the necessity of her medication and considers whether or not she should stop taking her medication without consulting her psychiatrist. Furthermore, a lack of psychoeducation from one's mental health care practitioner can interfere with rapport, which may result in patients not trusting their mental health care providers and also result in poor health seeking behaviour should they feel their medication is not working for them.

It was evident in this research that the participants who received no psychoeducation from their mental health care practitioner had a poorer opinion not only of the particular mental health care practitioner who diagnosed them, but of mental health care practitioners in general, in which they perceived mental health care practitioners to be impatient and as explaining factors regarding mental illness in a manner too difficult for them to fully understand. This may reduce their desire to visit their mental health care practitioner even when it is necessary for them to receive help.

5.4.2.2. Phases of Illness

According to Cavanagh, Van Beck, Muir and Blackwood (2002), there is evidence that people with Bipolar Mood Disorder experience cognitive impairment in terms of their verbal learning, memory and executive function. Cognitive impairment is seen to occur mostly within the affective states of either a manic, hypomanic or depressive episode, however, impairment has been found to persist even in phases of wellness. Executive functioning

involves managing aspects of oneself by maintaining control and self-regulation (Murray, 2008).

Impairment in this cognition and executive functioning during states of being unwell such as a manic, hypomanic or depressive phase may result in non-adherence to one's medication as one begins to lack self-maintenance (Murray, 2008). This was evidenced in this research by two participants, one who stopped his medication during a depressive phase and the other increasing their dose of their anti-depressant during a hypomanic phase. These two participants both stated that they were not able to think clearly about their actions during these times which impaired their ability to adhere to their medication. As stated previously, this is contrary to the assumption of the Theory of Reasoned Action and the Theory of Planned Behaviour in which reasoning and sensibility are said to be used to make decisions regarding behaviour (Hausenblas, Carron and Mack, 1997). However, during phases of illness in Bipolar Mood Disorder, rationality and sensibility are often lost as a result of impaired cognition and executive functioning (Cavanagh et al., 2002).

5.4.2.3. Societal and Social Pressure

People who suffer from mental illness often face stigma and discrimination not just from society but also from those close to them such as family and friends (Corrigan, 2004). Stigma and discrimination is the result of a lack of education and understanding amongst society regarding mental illness and although therapeutic and pharmacological treatments are available to the mentally ill, stigma can have a direct impact on the mental wellbeing of people with mental illness. Stigma surrounding mental illness can act as a barrier for people with mental illness seeking treatment as well as maintaining adherence to their medication (Institute of Medicine, 2002).

In this research, one participant in particular faced social stigma not only regarding his mental illness but also regarding his sexual orientation. This participant also reported socially isolating himself from others, which may not only be a symptom of depression but may also be due to his fear of being confronted with social stigma. The outcome of such influences appear to generate increased feelings of anxiety and low mood for this participant which reinforces the social stigma of belonging to an 'outgroup' in society.

According to DiMatteo (2004), poor social support is a risk factor for negative states of mental health whilst positive social support is associated with less stress, positive affect states and change in behaviours. Social support is also associated with the ability to adjust and adapt to a mental illness. Furthermore, a study by DiMatteo (2004) found that the risk of non-adherence to medication is higher amongst individuals who lack social support or whom have negative social support structures. This was evidenced by participant 6 of this research who stopped taking her medication because her friend had done the same thing, both without the advice of their treating psychiatrists. Another participant also stated to have negative social support in which he was encouraged by friends and family to use substances such as marijuana as an alternate means to treat his Bipolar Mood Disorder.

The Mood Disorders Association of British Columbia (2017) states that Bipolar Mood Disorder can have severe impacts on the family and other loved ones of the affected person such as having to look after and monitor the affected person who may be engaging in risky behaviour during phases of being unwell which can disrupt normal routine, but also relationships can take strain during episodes of being unwell, and finances can be severely impacted due to impulsive behaviour during manic or hypomanic phases or need for hospitalisation. This was evidenced by one participant in this research who stated that he adheres to his medication as a means to "protect" his loved ones as he understands how his mental illness will affect them should he stop taking his medication. He also stated that due to not being able to work as a result of his mental illness, his mother has the financial burden of having to pay for him to be on medical aid as well as the residual fees for his medication which medical aid requires to be paid.

5.4.2.4. Nature and Complexity of Treatment Regimen

According to Toh et al. (2014), increased amounts of pills and more than one dosage per day, as well as medical comorbidities are all factors which may contribute to non-adherence to medication.

Multiple dosages per day as well as many different pills which need to be taken can be difficult to keep track of and also hard to remember (Toh et al., 2014). This further links to the previous sub-theme on phases of wellness, to which people with Bipolar Mood Disorder can experience cognitive impairment both in states of being well and unwell and this too can impact on their ability to keep track of all their medications and the dosage times each day. In

this research, 66,6% of the participants had complex treatment regimens in which multiple pills had to be taken multiple times per day. This lead to one participant choosing to take all of his medications once a day to reduce his chances of forgetting a dosage despite the instructions of his medications stipulating a split dosage.

5.4.3. Self-Efficacy and Cues to Action

In this research, participants showed self-efficacy toward their mental health by attempting to educate themselves about their mental condition and the medications they are on and also by finding strategies to ensure that they do not skip any medication doses. However, the participants in this research consisted of private mental health care patients, who therefore may have had the resources to effectively manage their illness as compared to people from the public health care sector.

Health behaviour such as adhering to one's medication is influenced by self-efficacy (Adefolalu, Nkosi, Olorunju and Masemola, 2014). Medication adherence and self-efficacy is also influenced by a person's beliefs and attitudes about a particular behaviour such as taking medication which was previously discussed as a theme in this results section. As such, self-efficacy can be defined as "people's beliefs about their capabilities to produce designated levels of performance that exercise influence over events that affect their lives" (Bandura, 1994, pg 2). Self-efficacy influences how a person thinks, feels and essentially behaves and it is highly influenced by whether or not a person feels they are able to have control over a situation and help themselves.

5.4.3.1. Self-Learning Research

According to Bandura (1994), having self-efficacy helps to enhance an individual's feeling of accomplishment which allows them to feel capable of facing and overcoming particular challenges. In turn, having self-efficacy also enhances the chance of people not giving up even if they face a setback and recovering quickly after, such as in the case of a relapse in mental health. The participants in this research all showed self-efficacy in relation to their mental illness as they all attempted to educate themselves about their mental illness and the medications they are having to take every day.

5.4.3.2. Ways of Remembering to take Medication

According to Barfod, Sorensen, Nielsen, Rodkjaer and Obel (2006), "I simply forgot" is the most common reason that people who are on medication miss a dose. As previously mentioned, forgetfulness is made even more common amongst people with Bipolar Mood Disorder who can experience cognitive impairment in their memory during both episodes of illness and wellness (Cavanagh et al., 2002). Children's Mercy (n.d) list a few methods which can help a person keep track of as well as remind them to take their medications including:

- Taking the medication with an activity which is carried out every day such as brushing your teeth,
- Set an alarm on a clock or cell phone device,
- Using a weekly pill box which help compartmentalise your medications,
- Leaving some extra pills in a bag which you carry every day in case you leave home without having taken your medication,
- Leave your medication with a caregiver or family member should you not manage to remember to take the pills on your own,
- Leave the medication in an easy accessible and visible spot,
- Placing a reminder note somewhere you will see it every day and,
- Recording each dose of medication on a calendar so you can be sure that you have taken your daily dose (Children's Mercy, n.d).

Most participants in this research relied solely on their ability to remember to take their medication each day through trying to incorporate it into a daily routine activity. One participant had social support in the form of his wife reminding him to take his medication whilst another set a daily alarm on her cell phone to help her remember her medication. For these participants, the act of choosing a particular method to remind them to take their medication may have helped participants feel a sense of self-efficacy and control over their mental illness, however, the fact that they have a mental illness which sometimes impairs their cognition and reasoning results in patients having a loss of control over their actions. This was evident in this research in which two participants were non-adherent to their medication during a phase of illness. Thus regardless of the many methods available to

people to help them remember to take their medication, these methods prove irrelevant in times of mental illness when a person is not able to use reasoning and sensibility.

5.5. Summary of Chapter

This chapter included an interpretation of the findings of this research in relation to the Theory of Reasoned Action and the Theory of Planned Behaviour and a comparison between the results of this research and existing research were given. In the next chapter of this study, the conclusions of the findings as well as the limitations and suggestions for further research shall be presented.

CHAPTER SIX

CONCLUSION, LIMITATIONS AND RECOMMENDATIONS

6.1. Introduction

The final chapter of this dissertation will include a short summary, conclusion as well as the limitations of this study, followed by some recommendations for future research.

6.2. Study Summary and Conclusions

The aim of this research was to explore some of the factors that contribute towards poor patient adherence to Bipolar Mood Disorder medication treatment regimens. Amongst the participants in this research, several themes emerged as factors which act as barriers to non-adherence to psychotropic medication. These themes were medication side-effects, cost and availability of medication, substance and alcohol use, societal and social pressure, forgetfulness, phases of wellness, psychoeducation from mental health care practitioners, nature and complexity of the treatment regimen as well as self-efficacy behaviours.

The result of this study provided insights into the lived experiences of patients in treatment for Bipolar Mood Disorder. The sample under study (private mental health care patients) were considered to be better resourced for care than mental health patients in the public health sector. However, challenges still prevailed within multiple domains of managing Bipolar Mood Disorder. An example of a gap in the mental health care system described by the participants in this research was their difficulties in acquiring their prescribed medications through their medical aid schemes. Furthermore, participants described a lack of psychoeducation regarding their diagnosis from their mental health care practitioners which resulted in poor insight into their mental illness and thus poor adherence.

A predominant theme that emerged from the study was the experience of medication side-effects which they described as being difficult to tolerate. This was exacerbated by a general

lack of knowledge gleaned from participants regarding the treatment, course and prognosis of Bipolar Mood Disorder. Majority of the participants felt that it was their primary treating practitioner's (psychiatrist) responsibility to inform them of the above. The resultant effect was that majority of the participants justified non-adherence to medication use autonomously, as a consequence of negative side-effects rather than the decision being mediated between practitioner and patient. The research results demonstrated some form of self-efficacy (self-learning), whereby participants acquired multiple sources of information from online websites that assisted them in understanding the phases on their illness (symptoms) and medication side-effects which helped alleviate feelings of anxiety in relation to their treatment.

The nature and complexity of the medication regimen was also identified as a barrier to treatment adherence in this research, with majority of the participants taking at least 3 different pills each day. This contributed towards perceived treatment non-adherence as a result of medication being taken not according to what was prescribed from their treating practitioner (inappropriate combinations and/or omission of certain doses). From the results, it appears that majority of the participants were more comfortable with taking all their medication routinely at a specific time of day, rather than using adhering to the prescription.

Another common theme amongst the participants in this research was the use of substances such as alcohol and marijuana. Majority of the participants used substances as a means to cope with the negative symptoms of their Bipolar Mood Disorder such as sleeplessness, in which alcohol was used to try and bring about sleep. Majority perceived and experienced substances/alcohol as having sedating effects. Another area of discussion surrounded the use of substances in an attempt to self-medicate the side-effects of some of the medications such as by attempting to counter-act the weight gain effect that mood stabilisers have by smoking marijuana to curb the appetite.

The participants in this research expressed how the symptoms of their Bipolar Mood Disorder such as hypersomnia often resulted in doses of their medication being missed due to being too tired and sleeping throughout the day, resulting in doses of their medication being missed. Surprisingly however, majority of the participants in this research stated that regardless of whether they are well or unwell, they always recognise the importance and need for their medication. In the researchers' opinion, this insight into the importance of needing their medication may be due to this group of participants' appraisal of their illness state (more

specifically their negative symptoms) which may also function as a cue to action (use of medication) as an available means to stabilise the illness.

Social influence was identified as a significant factor towards non-adherence as many participants, who valued the opinions of close family and friends, made health behaviour decisions (use of narcotic substances) to alleviate symptoms such as insomnia. Social judgements of mental illness being a sign of human weakness have been perpetuated by a lack of knowledge regarding the nature and treatment of Bipolar Mood Disorder (Crowe, Averett, Glass, Dotson-Blake, Grissom, Ficken, Holland and Holmes, 2016).

6.3. Limitations

The limitations of a study refer to how the particular research design employed by the researcher may have influenced the interpretation of the findings. One of the main limitations of this study was the sample size in which only 6 participants could be used. Furthermore, all of the participants were private mental health care users and as such, no information regarding health services in the public sector could be explored. The limitations of this study and the effect they may have had on the research results are listed below:

6.3.1. Data Collection Method (face-to-face open-ended interviews)

According to Szolnoki and Hoffmann (2013), face-to-face interviews have several advantages such as a higher response rate and interview flexibility as participants often feel more comfortable speaking to a researcher face-to-face than having to fill in answer forms or online surveys. However, a major disadvantage of this data collection method is the possibility of bias. Furthermore, face-to-face interviews are time consuming, both for the participant and the researcher. Although the researcher attempted to make every effort to try and meet a participant in a place of their convenience and choice as well as attempted to keep each interview at a maximum of 25 minutes each, most people the researcher attempted to secure for an interview declined or kept rescheduling the meeting date as they did not have time to participate. This resulted in a delay in the data collection process but also resulted in a fewer number of participants than the researcher would have liked. A greater amount of participants would have made the results of this study more transferable.

However, despite this limitation, this research achieved its aim in identifying barriers to medication adherence amongst people with Bipolar Mood Disorder and it gave insight into what these barriers are from the actual people who experience them every day. The semi-structured, face-to-face nature of the interviews allowed the researcher to probe the participants for more information as well as allowed the participants the comfort of being interviewed in a place of their choice which influenced the type of information they shared with the researcher, with some even sharing sensitive information such as substance use which helped with the richness of the results of this research.

6.3.2. Generalisability of Findings

The ability of the results of this research to be generalised to other contexts or settings was affected by its few participants (6 in total). Furthermore, this research focused only on the barriers to medication adherence amongst people with Bipolar Mood Disorder, and as such the views expressed by the participants in this research may not be the same as individuals with other forms of mental illness. Another limitation in relation to the generalisability of the results of this research is that this research specifically focused on private mental health care users, and as such their views and experiences of barriers to medication adherence may differ from public mental health care users.

6.3.3. Theory Driven VS Data Driven Research

This research made use of a theory-driven approach, in which the main assumption of this approach is that data is given meaning when it is interpreted in relation to an existing theory (The Verbose Stoic, 2014). The data collected in a research study can either confirm or invalidate the theory being employed. In this research, the Theory of Reasoned Action and the Theory of Planned Behaviour were used to place the data collected from the participants into context. In comparison, a data-driven approach is focused on gathering large amounts of data, from which a theory is then generated based on that data. A limitation to the use of a theory-driven approach is that the theory employed guides the type of data collected, whereas a data-driven approach often gathers more data. As such, the theory-driven approach used in this research may have hindered the ability for more aspects regarding medication non-adherence to be uncovered and explored.

6.4. Recommendations for Further Research

This research uncovered certain areas in relation to medication non-adherence which may benefit from further exploration. These include:

- *Private VS Public mental health care sector*

This research contained participants who were all private sector mental health care users. Despite having access to benefits such as medical aid and private treatment, the participants in this research still experienced service difficulties such as payment problems related to their medical aid schemes as well as a lack of proper psychoeducation regarding their mental illness and medications from their mental health care practitioner. As such, it would be interesting to explore the experiences of mental health care users in the public sector and perhaps compare their experiences with those in the private sector and evaluate what areas in both of these sectors need targeting in order to better the treatment of mental health care users.

- *Lack of psychoeducation from mental health care practitioners and its impact on the prognosis of people with mental illness.*

An important theme which emerged from this research was how poor psychoeducation regarding diagnosis and medication impaired the participant's insight and thus their adherence to their medication. It would be beneficial to further explore how else the lack of proper psychoeducation from a mental health care practitioner can impact on the mental health and prognosis of people with mental illness.

- *A qualitative exploration of the barriers to adherence to psychotropic medication in other mental illness diagnoses*

This research specifically focused on Bipolar Mood Disorder due to its difficult treatment regimen and types of medications used, however, it would also be beneficial to explore some of the barriers to medication adherence within other diagnoses such as Schizophrenia. A qualitative study would be beneficial as majority of the studies regarding psychotropic

medication non-adherence thus far have been quantitative and it is necessary to explore the personal experiences of mentally ill regarding their treatment regimens.

- *Non-adherence to other forms of treatment such as psychotherapy*

The aim of this research was to explore barriers to pharmacological treatments amongst people with Bipolar Mood Disorder, however, there are other aspects of treatment other than medication including individual therapy, group therapy and even electroconvulsive therapy. The barriers which result in non-adherence to these other forms of treatment may contribute more information regarding the nature of non-adherence to treatment amongst the mentally ill.

- *Perceived State of Detachment*

  Within this research, 50% of respondents reported that they often do not "feel like themselves". This outcome/symptom should be explored further in future research. It is not quite clear as to what was implied by this response in this research, however what was apparent was a sense of 'detachment' from the premorbid sense of self.

- *Legitimacy of Information Acquired via Online Websites by Patients with Mental Illness and its Impact on Anxiety Reduction*

  Whilst it was not the scope of the current research, it would be useful if future research was able to identify the legitimacy of information acquired via online websites so as to assess the nature of information searched for and whether this information contributes to a reduction in patient anxiety and whether the perception of the meaningfulness of this information reduces patient anxiety.

6.5. Self-Reflection

This research topic was chosen due to the researcher's personal experience with a loved one regarding her own difficulties with non-adherence to psychotropic medication. This was something that the researcher did not fully understand, as she could not comprehend why someone would stop taking something which was supposed to make them feel mentally well. Essentially, the researcher wanted to be able to put herself in the shoes of people who take

chronic medications daily for severe mental illness and try to see from their perspective what some of the contributing factors are which result in non-adherence.

This research allowed the researcher the opportunity to see that non-adherence is multifaceted and is impacted by so many factors other than the mental illness itself. The mentally ill in South Africa and globally seem to face barriers at every point of their treatment, from medications which make them feel physically ill every day, to problems with service delivery, to family and societal pressure and stigma which places pressure on them to want to be "normal". The researcher felt that this research helped in not only being able enter the world of people with Bipolar Mood Disorder and identify their difficulties with psychotropic treatment regimens and the mental health care system in South Africa, but it has also expanded the researchers' empathy towards the daily struggles faced by people with mental illness and the strength and resilience they have to continue to try and fight these barriers.

To conclude, the researcher would like to end with a quote from a famous Bipolar Mood Disorder sufferer, Carrie Fisher:

"I'm fine, but I'm Bipolar. I'm on seven medications, and I take medication three times a day. This constantly puts me in touch with the illness I have. I'm never quite allowed to be free of that for a day."

- *Carrie Fisher*

(BP Magazine, 2016).

6.6. Summary of Chapter

This chapter included a short summary and conclusion of the results of this research as well as the limitations of this study, followed by some recommendations for future research. This chapter was ended with a self-reflection from the researcher regarding the research process.

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APPENDICES

APPENDIX 1 – SEMI-STRUCTURED INTERVIEW SCHEDULE:

a) Interview Questions

- **Screening Question**

Have you missed a dose of your medication for the treatment of major depression/ Bipolar Disorder in the past week and/ or have you missed three or more doses of your medication in the past month?

YES ☐

NO ☐

(Please note that the following questions are the structured questions for the interview and that unstructured questions and probes may be used where applicable in each individual interview. Examples of probing questions have been supplied herewith)

General Questioning

1. Could you please tell me a little about yourself?

***Probe:** Current age

Marital/relationship status

Highest level of education

Currently employment status

Diagnosis

Age of first diagnosis

2. How long have you been on treatment (medication and/or psychotherapy)?

3. In the past month how many times have you missed taking your medication?

   ***Probe:** Which ones and for what period of time where they not taken*

Core Theme: Perceived Barriers (Side effects, socio-economic factors etc.)

4. What would you say was the reason for not taking your prescribed medication?

   ***Probe:** availability, cost, side-effects, illness/wellness, not remembering, vegetative shifts, other – use of alcohol/substances etc.)*

5. In the past year how many times were you admitted for inpatient treatment due to your mental state?

   ***Probe:** do you think this may have been due to not taking certain medications, loss of treatment efficacy, manic state, depressed state, other side-effects or illness states)*

Core Theme: Behavioural Beliefs and Attitude toward the Behaviour

6. Describe medication and/or psychotherapy treatment regimen – times of day taking meds

   ***Probe:** Which medications are you/ have you taken?*

   How many pills for Bipolar Disorder do you take per day?

7. a) Are you aware of and understand the necessity of taking your medication?
   b) Are you aware of and understand the implications of not taking your medication?

***Probe:** Did your mental health care practitioner explicitly explain to you the importance of taking your medications as prescribed?*

***Probe:** When you are adherent to your medication regimen, how do you feel in terms of wellness?*

***Probe:** When you have not taken your medication, how do you feel in terms of wellness?*

***Probe:** When you are well, do you feel that your medication is important to take as prescribed by your practitioner?*

***Probe:** When you are unwell, do you feel that your medication is important to take as prescribed by your practitioner?*

Core Theme: Self-Efficacy and Cues to Action

8. Did you do any of your own personal research regarding your diagnosis as well as the importance involved in taking your medications as prescribed?

   ***Probe:** What did you learn?*

9. What do you think may help you keep track of and encourage you to take your medication at the correct time and dosages?

General Questioning

10. Did you find this interview and its questions understandable?

    a) If you responded no, please specify where you encountered a problem.

11. Is there anything else you wish to add or clarify?

***APPENDIX 2* – CONSENT FORMS**

School of Applied Human Sciences
Discipline Psychology
College of Humanities
University of KwaZulu-Natal
Howard College Campus
Durban, South Africa

a) Information sheet (English)

Date: _____

A qualitative study exploring the dynamics of patient adherence to psychotropic medication use amongst adult patients with Bipolar Disorder.

Dear Participant

I am a Masters' student in Clinical Psychology at the University of KwaZulu-Natal (Howard Campus). I am required to do a research dissertation as part of my training. My research is on the dynamics of client adherence to psychotropic medication use amongst adult patients with Bipolar Disorder.

Research is just the process to learn the answer to a question.

You are being invited to consider participating in a study that involves research to aid in understanding dynamics experienced by individuals leading to difficulty in adhering to prescribed medication. The purpose of this research is to identify these factors that hinder adherence, and essentially aid in planning an intervention method(s).

The study involves the single administration of an interview which will first consist of a section on biographical information. Thereafter, a set of semi-structured questions and possibly others if necessary will be asked relating to your Bipolar Disorder and the medication you take for its maintenance. It should take about 15 minutes for you to answer the questions I will be asking you.

Your answers will be recorded on a prepared questionnaire sheet; however, the interview will be recorded using an electronic device for the purpose of documenting your true thoughts and ideas and to ensure that none of the results of this study are fabricated.

The study will not provide any direct benefits to you, the participant, but it will help in gaining more knowledge on the dynamics that hinder adherence experienced by Bipolar Disorder clients.

Participation in this research is strictly ***voluntary*** and you may withdraw your participation at any point of the study.

Participants will not be asked to provide their name or address. All of the information that you provide will be kept ***confidential*** and ***anonymous***. When working with the information provided, participants will be assigned numbers to ensure that confidentiality and anonymity is upheld.

The researcher will be available to discuss any issues or concerns that you may have as they arise. Confidentiality of your personal/ clinical information will be protected at all times.

In the event of any problems or concerns/ questions, you may contact the researcher or the supervisor of the study, Mr Sachet Valjee.

If you have any queries regarding the rights of research respondents, please contact Ms. Phumelele Ximba in the Humanities and Social Science Research Ethics Office.

Contact Details:

Supervisor:	Ethics Officer:	Researcher:
Mr. Sachet Valjee	Ms. Phumelele Ximba	Elizabeth Colton
031 260 7613	031 260 3587	084 381 4758
Valjees@ukzn.ac.za	XIMBAP@ukzn.ac.za	
212541567@stu.ukzn.ac.za		

Regards,

Elizabeth Colton.

Information Sheet (isiZulu):

School of Applied Human Sciences
Discipline Psychology
College of Humanities
University of KwaZulu-Natal
Howard College Campus
Durban, South Africa

IFOMU LOKUZIBOPHEZELA

Ikhasi Elinolwazi Oludingayo

Ucwaningo olulandela umgudu we-qualitative study olumayelana nokwehluka kwezindlela iziguli esezikhulile ezamukela ngayo uhlelo lokwelashwa kwesifo esibizwa nge- Bipolar kusetshenziswa ubuchwepheshe bemishanguzo yengqondo.

Mhlanganyeli/Mbambiqhaza

Ngingumfundi owenza iziqu ze-Masters in Clinical Psychology enyuvesi yaKwaZulu-Natal (Howard Campus). Kufanele ngenze ucwaningo njengengxenye yokuqeqeshwa kwami. Ucwaningo lwami lumayelana nokwehluka kwezindlela iziguli esezikhulile ezamukela ngayo uhlelo lokwelashwa kwesifo esibizwa nge- Bipolar kusetshenziswa ubuchwepheshe bemishanguzo yengqondo.

Ucwaningo luyindlela yokufunda ukuphendula imibuzo.

Uyamenywa ukuba ube yingxenye yabazobamba iqhaza kulolu cwaningo oluhlanganisa ukusiza ukuqonda kabanzi ngezinkinga zabantu ezibenza bangalandeli kahle indlela yokuthatha imithi ngendlela efanele.

Inhloso yalolu cwaningo ukuveza izinto eziyizingqinamba bese kuvezwa nezinhlelo zokusiza. Ucwaningo luhlanganisa ne-inthaviyu yomuntu ngamunye ehambisana nolwazi ngaye. Emva kwalokho, kunemibuzo ehleliwe neminye engaqhamuka uma kunesidingo, ehambisa ne- Bipolar Disorder kanye nemithi ethathwayo ukuze ukwazi ukuyithiba. Kufanele kuthathe imizuzu engu-15 ukuphendula imibuzo engizokubuza yona.

Izimpendulo zakho zizobhalwa ephepheni lemibuzo yenhlolovo elungisiwe, kodwa, le-inthaviyu izoqoshwa ngesiqophamazwi ngenhloso yokugcina imicabango nemibono yakho eyiqiniso nokuthi ingabi bikho imiphumela yalolu cwaningo engelona iqiniso.

Ucwaningo aluzoba nanzuzo kuwena njengomhlanganyeli kulo kodwa luzokusiza uthole ulwazi oluningi ngezinkinga ezihlangabezana neziguli ze-Bipolar Disorder.

Abukho ubungozi ekubambeni iqhaza kulolu cwaningo.

Ukubamba iqhaza kulolu cwaningo ***akuphoqiwe*** nhlobo futhi ungahoxa ekubambeni iqhaza noma inini. Uma ukhetha ukuba ukubamba iqhaza uzokhokhelwa ngesikhathi sakho osichithile kulolu cwaningo.

Ababamba iqhaza ngeke bacelwe amagama noma amakheli abo. Konke ozokukhuluma kuzogcinwa ***ngendlela eyimfihlo*** futhi ***kungazi muntu ngakho***. Uma sekusetshenzwa ngolwazi olunikeziwe, abahlanganyeli balolu cwaningo bazonikezwa izinombolo ezizoqinisekisa ukuthi akuzukwaziwa ukuthi luphuma kubo.

Umcwaningi uzohlale etholakala kalula ukuxoxa noma yingani engaqhamuka. Imininingwane ngawe nolwazi olunikezile kuzoba yimfihlo ezovikelela ngaso sonke isikhathi. Uma kunezinkinga noma imibuzo, ungathintana nomcwaningi noma u-Supervisor walolu cwaningo, uMnu. Sachet Valjee. Uma kuneminye imibuzo ephathelene namalungelo akho ngalolu cwaningo ngicela uthinte u Nksz. Phumelele Ximba osehhovisi le- Humanities and Social Science Research Ethics Office.

Imininingwane Yabangathintwa:

Supervisor:	Ethics Officer:	Researcher:
Mr. Sachet Valjee	Ms. Phumelele Ximba	Elizabeth Colton
031 260 7613	031 260 3587	084 381 4758
Valjees@ukzn.ac.za 212541567@stu.ukzn.ac.za	XIMBAP@ukzn.ac.za	

Ozithobayo,

Elizabeth Colton.

***APPENDIX 3* - Declaration of Informed Consent (English):**

I have been informed about the study entitled "A qualitative study exploring the dynamics of client adherence to psychotropic medication use amongst adult patients with Bipolar Disorder".

I have received, read and understood the written information about the study.

I understand everything that has been explained to me.

I understand the purpose and procedures of the study.

I have been given an opportunity to ask questions about the study and have had answers to my satisfaction.

I understand and declare that my participation in this study is entirely voluntary and that I may withdraw at any time and that the information that I provide will be anonymous and confidential and will only be used for research purposes.

I hereby ***consent/ do not consent*** to have this interview recorded.

If I have any further questions/ concerns or queries related to the study I understand that I may contact the researcher, supervisor or ethics administrator.

If I have any questions or concerns about my right as a study participant, or if I am concerned about an aspect of the study or the researchers then I may contact:

Supervisor:	Ethics Officer:	Researcher:
Mr. Sachet Valjee	Ms. Phumelele Ximba	Elizabeth Colton
031 260 7613	031 260 3587	084 381 4758
Valjees@ukzn.ac.za 212541567@stu.ukzn.ac.za	XIMBAP@ukzn.ac.za	

Declaration of Informed Consent (isiZulu):

Isiqinisekiso Sokwaziswa Ngocwaningo:

Ngazisiwe ngocwaningo olumayelana "Nokwehluka kwezindlela iziguli esezikhulile ezamukela ngayo uhlelo lokwelashwa kwesifo esibizwa nge- Bipolar kusetshenziswa ubuchwepheshe bemishanguzo yengqondo"

Ngiyitholile, ngayifunda futhi ngayiqonda imininingwane ebhalwe phansi ngalolu cwaningo.

Ngiyakuqonda konke engikuchazeliwe.

Ngiyayiqonda inhloso nenqubo elandelwayo uma kwenziwa ucwaningo.

Nginikiwe ithuba lokubuza imibuzo ngocwaningo futhi ngathola izimpendulo ezingigculisile.

Ngiyaqonda futhi ngiyaqinisekisa ukuthi ukubamba iqhaza kwami kulolu cwaningo akuphoqiwe nokuthi ngingahoxa noma nini nanokuthi ulwazi engilunikezayo aluzuveza igama lami futhi luzosetshenziselwa ucwaningo kuphela.

Nginika ***imvume/ Anqivumi*** ukuba le-inthaviyu iqoshwe.

Uma ngineminye imibuzo/ imibono noma izikhalo eziphathelene nocwaningo ngiyaqonda ukuthi ngingathinta umcwaningi, u-supervisor noma abaphethe kulo mnyango.

Uma nginemibuzo noma izikhalo ngelungelo lami njengobambe iqhaza kulolu cwaningo, noma uma kukhona engingakuzwa kahle okuphathelene nocwaningo noma ngomcwaningi ngingathinta:

Supervisor:	Ethics Officer:	Researcher:
Mr. Sachet Valjee	Ms. Phumelele Ximba	Elizabeth Colton
031 260 7613	031 260 3587	084 381 4758
Valjees@ukzn.ac.za	XIMBAP@ukzn.ac.za	
212541567@stu.ukzn.ac.za		

APPENDIX 4 - Ethical Clearance Letter

UNIVERSITY OF KWAZULU-NATAL
INYUVESI YAKWAZULU-NATALI

11 April 2017

Ms Elizabeth J Colton 212541567
School of Applied Human Sciences – Psychology
Howard College Campus

Dear Ms Colton

Protocol reference number: HSS/1541/016M
Project title: A qualitative study exploring the dynamics of patient adherence to psychotropic medication use amongst adult patients with Bipolar Disorder.

Full Approval – Committee Reviewed Protocol

With regards to your response to queries received 06 April 2017 to our letter of 10 November 2016, the Humanities & Social Sciences Research Ethics Committee has considered the above mentioned application and the protocol has been granted **Full Approval.**

Any alterations to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project; Location of the Study, Research Approach/Methods must be reviewed and approved through an amendment /modification prior to its implementation. Please quote the above reference number for all queries relating to this study. Please note: Research data should be securely stored in the discipline/department for a period of 5 years.

The ethical clearance certificate is only valid for a period of 3 years from the date of issue. Thereafter Recertification must be applied for on an annual basis.

Best wishes for the successful completion of your research protocol.

Yours faithfully

.....
Dr Shenuka Singh (Chair)

/px

cc Supervisor: Sachet Valjee
cc Academic Leader Research: Dr Jean Steyn
cc School Administrator: Ms Ayanda Ntuli

Humanities & Social Sciences Research Ethics Committee
Dr Shenuka Singh (Chair)
Westville Campus, Govan Mbeki Building
Postal Address: Private Bag X54001, Durban 4000
Telephone: +27 (0) 31 260 3587/8350/4557 **Facsimile:** +27 (0) 31 260 4609 **Email:** [redacted] / [redacted] / [redacted]
Website: [redacted]

***APPENDIX 5* - Gatekeepers Letter**

DR T.B. VIRANNA

MBChB (Natal) FCPsych (SA)

SPECIALIST PSYCHIATRIST

Pr. No.: 0136080

CONSULTING ROOMS:
ROOM 204
CHATSMEAD GARDEN HOSPITAL
80 WOODHURST DRIVE
CHATSWORTH
4092

P.O. BOX 561290
CHATSWORTH
4030

TELEPHONE:
ROOM: 031 401 9034
TELEFAX: 031 401 9154
EMERGENCY: 078 400 5176

26 September 2016

To Whom it May Concern

Re: Gatekeeper permission to conduct study - A qualitative study exploring the dynamics of patient adherence to psychotropic medication use amongst adult patients with Bipolar Disorder- (Candidate – Ms. Elizabeth Colton)

I, Dr T.B. Viranna (Specialist Psychiatrist), give consent to the above candidate to conduct semi-structured interviews with a sample of my outpatients who have been treated for Bipolar Mood Disorder. I will instruct the candidate on who to include in the final sample of ten patients, as per inclusion criteria in her research proposal. This research will be conducted outside of my working practice, with informed consent to participate becoming the responsibility of the researcher. All information and identifying details will be kept confidential during this study.

For any further information, please contact myself or the project supervisor – Mr Sachet Valjee (031 260 7613/ 0835569045)

Kind regards

Dr T.B. Viranna

Specialist Psychiatrist