

**EFFECTS OF PSYCHOEDUCATION ON MEDICATION COMPLIANCE  
AND SYMPTOM MANAGEMENT FOR CLIENTS WITH BIPOLAR  
AFFECTIVE DISORDER ATTENDING COMMUNITY PSYCHIATRIC  
CLINICS IN ETHEKWINI HEALTH DISTRICT**

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**By  
MWAWI AGNES NG'OMA**

**SUPERVISOR: Dr SARAH N. MAHLUNGULU  
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## **Dedication**

This dissertation is dedicated to my father who has been a great inspiration in my life.

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**Declaration**

I declare that this study is my own unaided work. It has never been submitted for any other purposes. All the references used have been acknowledged by means of referencing.

Mwawi Agnes Ng'oma

Signature.....*M. Ng'oma.*.....

Date.....*10/04/06*.....

This thesis has been examined and approved for submission and evaluation

Dr Sarah N. Mahlangu

Supervisor.....

Date.....

## Abstract

This study was aimed at evaluating effects of psychoeducation on medication compliance and symptom management for clients with bipolar affective disorder attending community psychiatric clinics in the Ethekewini Health District of KwaZulu-Natal Province.

A quantitative study was done using a quasi-experimental design. A one group pre-test and post-test design was used to assess the effects of psychoeducation. The population of the study were all clients with bipolar affective disorder attending Escoval House community psychiatric clinic and its satellite clinic (Austerville). Systematic sampling was used to select clients to participate in the study and a total of forty clients were selected.

Two self-administered questionnaires were used to collect data. Clients were assessed in areas of their knowledge, medication compliance and symptom management (Pre-test). The group was then exposed to six sessions of psychoeducation, and they were assessed again a week after the psychoeducation (post-test) using the same instruments. The data was analyzed using the Statistical Package for Social Sciences (SPSS). Descriptive statistics were used to analyse participants' characteristics and some selected variables. Crosstabulations, chi-squares and paired t-tests were used on dependent variables and on social variables of interest to compare the changes in scores and means respectively and lastly to determine the relationship of social variables and the dependent variables.

The findings of this study revealed that psychoeducation improved respondents' knowledge about their illness and symptom management techniques (with P-values ranging from 0.0001- 0.03), psychoeducation also improved medication compliance with P-value =0.000, but it did not affect the respondents' ability to use new techniques in managing their symptoms (with P-values ranging from 0.125- 0.75).

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## **LIST OF ABBREVIATIONS**

**DSM IV:** Diagnostic and Statistical Manual of Mental disorders, 4<sup>th</sup> Edition

**EHCPC:** Escoval House Community Psychiatric Clinic

**IMB:** Information Motivation – Behaviour Skills Model

**SPSS:** Statistical Package for Social Sciences

**WHO:** World Health Organisation

**PHC:** Primary Health Care

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## CHAPTER ONE

### 1.1 Background to the problem

Mental illnesses are chronic and persistent and require long-term treatment and rehabilitation. For many years treatment of mental illness has been custodial and institutional, focusing on treatment of symptoms. This focus changed with the realisation that mental illness causes severe disabilities that can not be managed with pharmacological treatment alone.

Additionally the role of psychotropic medication in recovery has been debated since its effects were first observed in the 1950s. At first, it was thought that medication was an all-inclusive cure for mental illness, but soon it became apparent that drugs are not enough to affect complete recovery (Weaver, 1992). Anthony, Cohen & Farkas (1990) indicate that psychiatric services have moved from the institutional, custodial era through the community (deinstitutionalisation) era to the rehabilitation era. The process of deinstitutionalisation started in America and the United Kingdom in the 1960s and it has also been introduced in other countries (Anthony et al, 1990).

Deinstitutionalisation emphasises treating clients in their community and demands that clients be hospitalised only when they cannot live outside the institution, even with a minimum level of support, or when they need 24-hour supervision or treatment. Although this process has revolutionised psychiatric patient care, especially in Europe and North America, a major criticism has been the discharge of clients who are not ready to function in the community or discharging clients to communities that are not ready to reintegrate them (Barham & Hayward, 1995). The deinstitutionalisation process is accompanied by early and high rates of discharges. In most instances short hospital stay does not allow thorough discharge preparations (Hughes, Joyce, & Stanley, 1987), and few rehabilitation programmes are used. This deinstitutionalisation and the increasing number of chronically mentally ill have led to an increase in psychiatric clients residing in the community.

This shift places high demands on the community psychiatric nurse to provide care, focusing on the rehabilitation of all the clients in the community. Schoney, Senere, Slick, & Hargreaves (1996) have indicated that this process has improved and is more planned nowadays. Increasing attention is paid to preparing patients, the community and personnel, and providing adequate services for ensuring adequate community retention of these clients.

According to Anthony & Lieberman (1986), rehabilitation is management directed at developing the strengths and abilities individuals may need at present and in future to function in the community, and specifically within a range of different environments. Rehabilitation is thus by definition a community based activity since it focuses on developing the person's ability to function in a variety of community based contexts. These range from the family environment, the living, work, social and health care environments through to the broader social systems with which the person engages (Anthony et al, 1990).

In the South African context, psychiatric services are mostly still in the deinstitutionalisation era; because the focus of care is on medical treatment and not on rehabilitation (Uys & Middleton, 2004). The shift to rehabilitation has not yet taken place. Clients have been moved to the community but the services provided are mainly medical. This movement of clients into the community alone does not necessarily increase the quality of life or level of health (Uys, 1993). There has been a growing realisation that more is needed to treat and rehabilitate mentally ill clients than medication alone.

Because most psychiatric disorders are related to severe and chronic disability the development of effective procedures for improving the long-term outcomes for patients is a necessity. The term 'psychiatric rehabilitation' is becoming routinely used in the mental health field (Anthony & Lieberman, 1986). This term implies the development and use of programmes aimed at empowering clients with knowledge and skills required for their self-care and smooth reintegration into the community.

Mood disorders are one of the most common psychiatric disorders. They include three major groups of illnesses: mania, bipolar affective disorder and major depressive disorders. As their name indicates, mood disorders are characterised primarily by a disturbance in affect. People so afflicted experience uncontrolled extremes of either elation or sadness. Serious depression affects 5% of the population at any point in time and at least 10% of people will suffer from severe depression at some point in their lives (Hatfield, 1990).

Bipolar affective disorders are severe, persistent and are major sources of personal distress and social disability. According to Hatfield (1990), clients with bipolar disorder experience mood swings, they have episodes of high and low moods which sometimes seem to be quite independent of other circumstances. Though some clients with bipolar affective disorder experience periods of higher functionality between the episodes, Soreff & McInnes (2004) still describe this disorder as a serious lifelong struggle and challenge. The mood swings in this disorder can leave a client confused, hence the need for comprehensive information and education so that they can understand these symptoms and learn how to cope. Although prior to discharge from the hospital, many psychiatric programmes offer clients education that imparts information about medication, side effects, and the proposed response to treatment, time is usually limited and the issue of long term medication management is not addressed, or, too often, psychiatric treatment regimes minimise the role of the client in self-management (Redman, 1985). The client is then mainstreamed back into the community without the skills necessary for self-reliant behaviour. Intensive and sustained efforts are therefore necessary to provide adequate information and skills to these clients in the community in order to facilitate a smooth reintegration and rehabilitate them to the highest possible level of functioning.

Clients with bipolar affective disorder are likely to need more than one type of medication during the course of the illness. This increases the risk of distressing side effects and non-compliance is common (Baldessari, Toheb & Tondo, 2000). Additionally when taking more than one type of medication at a time, people find the medication schedules confusing, they forget what they have taken and when they start feeling better they stop taking medication. In newly diagnosed manic patients, rates of partial compliance with treatment have been reported to be as high as 70%, and non-compliance rates often reach 60% on medication (Parikh, Kusumakar, Haslam, Matte, Sharma & Yatham, 1997). Owing to the non-compliant behaviour this disorder is associated with high rates of relapse. An observational study by Morris, Marshall & Harris (2002) showed that after a manic episode, 50% of people with bipolar affective disorder would relapse in the next 12 months. One third of medically treated clients diagnosed with bipolar affective disorder relapse within two years (Baldessari, Toheb & Tondo, 2000).

Bipolar affective disorder is also associated with high incidence of suicide. In a review of studies by Glick (2004), 15 studies reported that 25% to 50% of people with bipolar affective disorder attempt suicide at least once and completed suicide was more common among women. It is also estimated that an adult developing bipolar affective disorder in the 20s effectively loses 9 years of life, 12 years of normal health and of work activity. Psychosocial repercussions of such a disability are also severe (Glick, 2004).

Pharmacotherapy is the foundation of treatment for bipolar disorder. It has been used for a long time as a single mode of management. Hirschfeld (1993) states that medication to treat bipolar affective disorder has been well characterised and compliance usually results in effective control of the symptoms. Some studies have indicated that low treatment adherence is common among clients diagnosed with bipolar affective disorder and this may explain the rates of recurrence.

On the other hand, some clients keep relapsing even when they strictly follow their prescribed treatment (Colom, Vieta, Reinares, Martinez-Aran, Torrent, Goikolea, & Gasto, 2003 (b)). Relapse on medication is associated with acute stress in the form of life events and chronic stress in the form of the atmosphere in the patient's home or work place. This frequency of relapse is evidence that medication alone may not be able to optimise coping abilities or address the personal, social and functional complications of having such a major mental disorder, which indicates the potential importance of additional treatment.

Research reveals that adjunctive psychosocial interventions that are reproducible, time-limited, empirically supported and strategically target a number of critical domains, can efficiently provide additional benefit (Zaretsky, 2003). Structured teaching programs and support may be very important supplements to medication therapy. According to the Queensland report (2004), the more people are aware of their illness and how it affects their own lives and those of others, the more control they will have over their illness. This implies that, with appropriate knowledge and techniques, episodes of mental illness occur less often and are usually less severe in intensity and duration.

Literature shows that there is a high percentage of relapses among clients suffering from bipolar affective disorder and that medication non-compliance and lack of insight are some of the major reasons for relapse (Buckwalter & Kerfoot, 1982). Of all discharged clients, 80% to 90% are placed on medication. Because recurrent episodes of acute mental illness may be related to defaulting behaviours, medication compliance is an important issue for the psychiatric nurse (Collins-Colon, 1990). Although medication education is not accepted as a single variable that motivates compliance, it, along with other efforts, increases knowledge gain and enhances compliance (Collins-Colon, 1990). At the early stages of recovery, clients need to understand what is happening to them now and at a later stage of recovery, clients need to know how to cope with their symptoms and anticipate the future.

According to Scott & Pope (2002), the poor outcome of pharmacological treatment also suggests an effective gap for mood stabilisers, which has resulted in a re-assessment of the role of adjunctive psychological therapies in bipolar affective disorder. Recent randomised controlled trials show that the combination of pharmacotherapy and 20-25 sessions of an evidence based manualised therapy such as individual cognitive behaviour therapy or family focused therapy may reduce relapse rates in people with bipolar affective disorder. These approaches are however labour intensive and require a high level of therapist expertise. The use of a group psychoeducation programme may be an important, potentially more cost-effective alternative (Scott, 1995).

Psychoeducation is health education combined with counselling. The counselling component of psychoeducation deals with emotions, perceptions, coping, relaxing and self-care. Uys (1994:12) describes psychoeducation as a “wider term used for the teaching of patients and their families not only living skills, but also basic knowledge about the disease, its treatment, complications and prognosis”. The psychoeducation approach is developed out of a rehabilitation process that sees the patient as suffering from a chronic disease treated mainly on an outpatient basis (Anthony et al, 1990), which serves the goals of treatment and rehabilitation. This intervention is an effective way to close the gap between theoretical ideals and the reality of life, as even patients with the very best intentions, rarely follow prescribed regimens of care perfectly (National mental health information centre, 2003). For some clients, the intervention offers them innovative ways to control distressing symptoms and by doing so speed recovery and improve their quality of life. For others it helps reduce psychological and psychosocial barriers that inhibit effective adherence to prescribed regimens of care. Psychoeducation can be offered to individual clients, groups and families in the community as well as in hospitals.

In the Durban Metropolitan area, South Africa, community psychiatric clinics provide services to clients discharged from psychiatric hospitals and those who have mental health problems in the community. On their visits to these clinics psychiatric nurses and some nurses without psychiatric preparation, focus on the clients' medication and their adherence to clinic visits. Very little is done to provide knowledge and skills to these clients. The South African Government acknowledges that mental health services have been neglected in the past. Available services are neither appropriate nor accessible to the majority of the population (White paper for transformation of health system in South Africa, 1997 (a)). In some psychiatric services in the Metropolitan area psychoeducation interventions are not well established while in others they are not even available. Colom, Vieta, Reinares, Martinez-Aran, Torrent, Goikolea, Benabarre, Comes, Corbella, Parramon, & Corom (2003) (a) indicate that the increasing evidence of efficacy of pharmacological treatment of bipolar affective disorder has sometimes led clinicians to forget psychological interventions as an adjunctive treatment. Other possible reasons for the negligence are the several methodological pitfalls in most of the studies on psychological interventions in bipolar disorder.

Despite the shortfalls in the delivery of mental health services in the past, the Department of Health in KwaZulu - Natal is committed to ensure sustainable, co-ordinated, integrated and comprehensive mental health services at all levels, based on the Primary Health Care Approach through the District Health System. This is evidenced in the Strategic and Implementation Plan for delivery of mental health services in the province (2003), in which development and accessibility of cost effective psychosocial programmes is one of the guiding principles. The strategy for achieving this is through provision of comprehensive care for the mentally ill, including a complete and adequate service that incorporates all aspects of patients' health needs, including psychoeducation. This strategy will ensure adequate inputs and participation by clients and the community in their management and care.

## **1.2 Problem statement**

Bipolar affective disorder is associated with high incidence of relapse. According to an observational study by Morris, Marshall & Harris (2002) 50% of people with bipolar affective disorder relapsed 12 months after a manic episode and one third of medically treated clients diagnosed with bipolar disorder relapsed within two years (Baldessari, Toheb & Tondo, 2000). Medication non-compliance and lack of insight are some of the major reasons for relapse (Buckwalter & Kerfoot, 1982). This has often resulted from the clients' lack of knowledge. Literature has revealed that clients with bipolar affective disorder often express dissatisfaction with the information they receive about the disorder (Smith and Birchwood, 1990).

Psychoeducation has been proven to improve clients knowledge, their compliance to treatment and incidence of relapse are reduced in clients who comply with their medication. A study conducted by Colom et al (2003) (b) in Spain on psychoeducation efficacy in bipolar disorder, showed that psychoeducation was effective in improving compliance to treatment and preventing relapse in clients with bipolar affective disorder. Similar results were reported in studies conducted by Whiteside, (1983); Colom et al (2003) (b); Tompson, Rea & Miklowitz (2003). Psychoeducation also equips clients with knowledge and skills to cope with and manage residual symptoms.

In Durban metropolitan area (Ethekwini health district) studies have been conducted on effects of psychoeducation in combination with other skill training programmes for clients with schizophrenia and mentally ill clients in general. No study has been done to assess how psychoeducation would improve medication compliance and symptom management for clients with bipolar affective disorder. This was the reason why the researcher decided to evaluate the effects of a psychoeducational programme on medication compliance and symptom management.

### **1.3 Purpose of the study**

The purpose of this study was to evaluate the effects of psychoeducation on medication compliance and symptom management for clients with bipolar affective disorder attending Community Psychiatric Services in Ethekewini Health District of KwaZulu - Natal.

### **1.4 Objectives of the study**

The objectives of this study were to:

- (1) Assess clients' knowledge regarding the illness and medication before and after the implementation of psychoeducation programme.
- (2) Assess the symptom management skills the clients had before and after the implementation of psychoeducation programme.
- (3) Develop and implement a psychoeducational programme for clients with bipolar affective disorder.
- (4) Evaluate the effects of psychoeducation on medication compliance and symptom management.

### **1.5 Research question**

The study answered the question:

What are the effects of psychoeducation intervention on clients' knowledge about their illness, prescribed medication and symptom management and their ability to comply with prescribed medication and manage their symptom?

## **1.6 Hypothesis**

The researcher hypothesized that psychoeducation on bipolar disorder, medication and symptom management will have no significant effect on clients' knowledge, medication compliance and their ability to manage their symptoms.

## **1.7 Significance of the study**

Psychosocial interventions like psychoeducation are the cornerstone of good management of mental disorders. It is therefore important to assess whether psychoeducation interventions can be effective in the community psychiatric clinics in Ethekekwini Health District. The findings of this study will provide an insight to health professionals, especially psychiatric nurses, on effects of psychosocial management of bipolar affective disorder. This study will also provide information, which may lead to the development of an effective psychoeducation intervention strategy. Use of psychoeducation is one way of optimizing clients' treatment options while maximizing staff resources and containing costs. Studies have indicated that in an outpatient setting psychoeducation enhances medication compliance and fosters early recognition of relapse symptoms, hence minimising the risk of relapse and improving clients' quality of life in the community (Colom et al, 2003 (a)). Findings of this study could also be used by policy makers in decision making regarding service improvements or development of similar programmes in community psychiatric clinics.

## **1.8 Operational definition of terms**

**1.8.1 Bipolar affective disorder** - Refers to a mood disorder in which people experience episodes of depression and mania (an exaggerated excitement) or mania alone. Typically the individual alternates between the two extremes, often with periods of normal mood in between. In this study the term will refer to clients who were diagnosed with bipolar affective

disorder, using the Diagnostic and Statistical Manual of Mental disorders 4<sup>th</sup> Edition (DSM IV) (1994).

**1.8.2 Psychoeducation** – Psychoeducation refers to an intensive and responsive teaching process. It empowers the patient with the knowledge and skills about mental illness, its treatment and the management and how to cope with the relapse symptoms (Uys & Middleton, 2004). In this study the term psychoeducation will refer to a comprehensive teaching process where clients with mental illness specifically bipolar affective disorder will be taught about their illness, medication, relapse and relapse prevention and symptom management techniques.

**1.8.3 Symptom management** - In this study symptom management will refer to the clients' ability to identify problem symptoms and their ability to use healthy coping mechanisms in their daily lives and in seeking help to prevent relapse.

**1.8.4 Medication compliance** - In this study medication compliance will refer to clients' ability to take their medication as prescribed all the time. The words compliance and adherence have been used interchangeably by researchers who have conducted studies on effects of psychoeducation on clients with bipolar affective disorder (Gonzalez-Pinto, Gonzalez, Enjuto, Fernandez de Corres, Lopez, Palomo, Guiterrez, Mosquera & Perez de Heredia, 2004; Colom et al, 2003 & Crane et al, 1996). Medication adherence refers to clients' ability to follow medicine regimens. In this study the term medication compliance will be consistently used.

## **CHAPTER TWO**

### **Literature review**

#### **2.1 Introduction**

This chapter comprises of a description of bipolar affective disorder, a description of psychoeducation intervention and a review of relevant literature on the effects of psychoeducation for clients with bipolar affective disorder. The review is aimed at determining what is known and researched on the topic and any possible gaps in the knowledge.

#### **2.2 Bipolar affective disorder**

Bipolar affective disorder is a type of mood disorder involving both manic and depressive episodes. This disorder usually appears first in form of a manic episode. The subsequent episodes may appear in a variety of patterns: 1) Manic episode alternating with a depressive episode, with a normal period of functioning between the two for instance, initial manic episode, then normal period, depressive episode, normal period, manic and so forth. 2) Manic episode followed immediately by depressive episode followed by a period of normal functioning and so forth. In rare cases, the mood may shuttle back and forth between mania and depression with no intervals of normal functioning or depressive and manic symptoms may occur at the same time, which is known as the mixed type (DSM IV, 1994; Uys & Middleton, 2004:740).

#### **2.3 Prevalence of the disorder**

Historically epidemiological studies have indicated that the prevalence rates for bipolar affective disorder worldwide are fairly low, with the rates in the range of 1% to 2%. More recent evidence has pointed to a much higher prevalence of bipolar affective disorder than

was previously believed, with the leaders in the field of bipolar affective disorder suggesting prevalence rates of approximately 5% to 7% (Glick, 2004). This author argues that more research is needed in this area. The disorder is believed to occur in 1% of people among all age groups and it affects both sexes equally, but there is said to be a higher incidence of rapid cycling, mixed states and cyclothymia in women than in men. On the other hand, early onset of bipolar affective disorder tends to occur more frequently in men and is associated with a more severe condition (Griswold & Pessar, 2000).

#### **2.4 Course of the disorder**

With this illness some individuals experience a single episode during their lifetime and others can go for years and even decades free of symptoms (Johnson & Leahy, 2003). Most people with the disorder, however, experience frequent and severe episodes, despite the powerful reduction in symptoms from the use of lithium and other mood stabilising medications (Johnson & Leahy, 2003). With bipolar affective disorder relapse is normative, even among people who are taking mood-stabilising medications. It is therefore crucial that clients with bipolar affective disorder be empowered with knowledge to be able to recognise the early signs of relapse so the interventions can be instituted early to prevent complete relapse. Kusumakar, Parikh, Haslam, Matte, Sharma & Yatham (1997) also indicate that medication non-compliance is one of the major reasons for relapse in mental illness, and that understanding and acknowledging the disorder by the client, a friend or family is associated with improved treatment adherence in depression and bipolar affective disorder.

## **2.5 Psychoeducation**

Psychoeducation is not a new phenomenon in mental health. It has remained consistently popular as a tool for families and carers to enable them to make sense of what is happening to the person who is experiencing a mental illness and to help them care for that person.

It has often been used prior to or in conjunction with family therapy. It has been used less frequently in a formalised way as a tool for a person suffering from mental illness, although many mental health professionals have used the concepts of psychoeducation in working with individual clients. Some research indicates that the intervention has been used widely in hospital settings, but its efficacy in clinic setting is limited (Colom et al, 2003 (a)).

Psychoeducation works by improving the knowledge clients and their families have and providing a greater understanding of the importance and benefits of medication. Information is provided on prognosis, medication, alleviating and aggravating factors. Early signs of relapse are described and closely monitored. Clients are taught skills that change their lifestyle, enhance their therapy and assist them to live more productive and fulfilled lives. Psychoeducation reduces stress, confusion and anxiety within the family, which may in turn help the individual recover. A recent review of available literature by Gonzalez-Pinto, Gonzalez, Enjuto, Fernandez de Corres, Lopez, Palomo, Guitierrez, Mosquera & Perez de Heredia (2004) revealed that when combined with pharmacological treatment psychoeducation helps to improve adherence and that training in identification of early manic symptoms helps to improve outcomes and decreases the number of manic relapses in bipolar affective disorder.

The knowledge of correct medication use is also essential for people suffering from persistent and severe mental illness (Zind, Furlong & Stebbins, 1992). This is so because clients must frequently assume responsibility for taking their daily medication as well as monitoring their psychiatric symptoms and side effects of drugs.

This responsibility indicates the eminent need for clear and complete information about the illness and the medication to maintain independence and to enhance the safety and efficiency of medication. These aims can be achieved through proper designed programmes of psychoeducation.

In South Africa literature show that there is lack of knowledge about mental illness and that there is poor understanding of the illness by the community, hence many people do not utilise the available services (White paper for transformation of health system in South Africa, 1997, b). This is a universal problem. Literature also shows that clients with bipolar affective disorder often express dissatisfaction with the information they receive about the disorder and its treatment (Smith & Birchwood, 1990). As any other clients, these clients have a strong desire for more practical advice concerning how to cope with symptoms of their illness than the general information they receive about the illness and treatment from mental health professionals (Smith & Birchwood, 1990). In a study by Pollack (1996) on inpatients with bipolar affective disorder and their quest to understand, in a University affiliated psychiatric facility in the south western United States of America, it was discovered that many people with bipolar disorder engaged in an ongoing quest for further understanding of how to cope with and manage their illness. A review of responses about motivators in the study revealed a group of people striving to stabilize themselves and their lives and a desire for normalcy.

Giving information through psychoeducation is also one way in which the therapeutic relationship between a client and therapist can be strengthened. It has been recognised that client teaching is an essential component of nursing care, so much so that Peplau calls mental health nursing an educative and therapeutic process (Uys & Middleton, 1997). This recognition implies that nursing staff need to be equipped with knowledge and skills to be able to teach clients at all levels.

## **2.6 Effects of psychoeducation**

Some studies conducted in various parts of the world have proved that psychoeducation is effective in various ways, while other studies have provided conflicting results.

It has been discovered that psychoeducation either provided to individual clients, to a group of clients or to clients and their families have increased clients knowledge on their illness and the medication, improved medication compliance, reduced relapse rates and rehospitalisation and also improved clients' attitudes towards the prescribed medication hence improving adherence to treatment. There is considerable evidence that psychoeducation accelerates the change process (Dinkmeyer, 1991; Watkins, 1985).

A study conducted by Whiteside (1983) on hospitalised patients to determine if structured education programme with written reinforcements would statistically bring about any increase in patients' knowledge revealed that the patients in the education programme improved in their knowledge about their illness and medication. From this study therefore deduction can be made that in preparation for discharge, information and reinforcement is essential, and that a patient who has insight is likely to comply. Similar results were reported in an exploratory study by Soares, Stintzing, Jackson & Skoldin (1997) in Australia on effects of a psychoeducation package on outpatients with bipolar affective disorder. The study showed that clients who participated in psychoeducation group showed significant improvement in knowledge about illness, attitudes towards prescribed drugs, and self esteem. The utilization of psychiatric inpatient services decreased for three patients whereas the other seven did not use the service at all.

### **2.6.1 Psychoeducation and medication compliance**

Medication compliance is thought to be a major factor in preventing psychiatric hospitalisations. According to Crane, Kirby & Kooperman (1996), many clients with psychiatric disorders are hospitalised because of an exacerbation of their mental illness, stabilized with medication and then discharged home. At home, a large number fail to take their medication as properly, if at all. Relapse often occurs and rehospitalisation follows. Apart from relapse and rehospitalisation non-compliance also leads to a lot of other problems, for instance homelessness, episodes of violence, incarceration in jail or prison, and/or victimization of the clients.

Medication non-compliance can be intentional or unintentional. Some underlying factors for unintentional non-compliance include complex medication regimens that clients do not understand, inability to pay for medication, forgetfulness, and failure to understand instructions due to severity of the illness, lack of insight and lack of understanding of the illness. According to Lehne, Moore, Crosby & Hamilton (1994), 70% of non-compliance cases are intentional. It was the opinion of these authors that the clients believe that the drug is not needed as prescribed which is the primary reason of intentional non-compliance. Additionally unpleasant side effects as well as patients' denial of the presence or severity of the illness contribute to medication non-compliance (Crane et al, 1996). Non-compliance with prescribed medical regimes is not only a problem with people on psychotropic medication, it is also a problem for other medical conditions for which medication must be taken for long periods, including hypertension, diabetes, epilepsy, asthma and tuberculosis (Scott & Pope, 2002).

Client education is an initial step and clearly the favoured way to promote compliance among mentally ill individuals (Falvo, 1995). According to this author, patient education can be a key component in enabling patients to follow accurately the recommendations of health professionals. This teaching can be done in groups or individually. The use of group education has an added advantage as it enhances the learning process, as peers can share similar feelings, experiences and questions. Lassister in Stanhope and J. Lancaster (1992) noted that groups bring about changes to improve the well being of individuals. He stated that some individual changes for health are difficult if not impossible to achieve without the support and encouragement of a group. Groups have the ability to influence thoughts, choices, behaviour and values.

Many individuals meet their social needs through association with others. Mueser, Corrigan, Hilton, Tanzman, Schaub, Gingerich, Essock, Tarrier, Morey, Vogel-Scibilia & Herz (2004) also contend that when people with psychiatric disorders are given information or taught skills either by peers or health professionals they are helped take good care of themselves. Peers are able to convey the lessons they have learned from personal experience when teaching others how to manage their symptoms, whereas health professional can not.

Education interventions have shown to be effective in promoting compliance among patients with chronic mental illness. Clients cannot follow treatment recommendations if they do not understand or accept them. When the client understands the symptoms and the severity of the illness and if they have clear, explicit instructions, the client is more likely to assume increased responsibility for self care which can increase the likelihood of compliance with the medication regime (Crane et al, 1996). Psychoeducation interventions, which are aimed at medication compliance, can result in less time spent in hospitals, improve functioning in the community, greater family stability, and more satisfying and independent lives.

Psychoeducation about medication involves providing information about the type of the medication, benefits and the side effects of medication, medication management and teaching strategies for managing side effects so that clients can make informed choices about taking medication. In some studies this intervention has proved to be effective in promoting compliance with medication for clients suffering from bipolar disorder (Crane et al, 1996). A review of available literature on psychoeducation for clients with bipolar affective disorder by Gonzalez-Pinto et al, (2004) discovered that a number of studies demonstrated that psychoeducation enhances adherence to treatment, but only one study found that it improved outcomes in bipolar affective disorder. In this study psychoeducation significantly improved medication compliance among clients with bipolar affective disorder and in long run it improved quality of life for clients who were followed up for a period of 4 years (Kelly, Scott & Mamon, 1991).

Kusumakar, Parikh, Haslam, Matte, Sharma & Yatham (1997) in a review article, showed that psychoeducation offered to families and couples may be effective in improving patients' partners' knowledge about the illness, medication and social support strategies for at least 6 to 18 months. Similarly favourable results were reported by Miklowitz, George, Richards, Simoneau & Suddath (2003) in a randomised trial of family focused psychoeducation for bipolar affective disorder in Colorado, USA. After 11 months the study revealed significant effects favouring couples that received combined treatments (psychoeducation and medication). Psychoeducation provided to spouses was associated with improved medication compliance.

While psychoeducation has been known to improve clients' knowledge about the illness, improve their skills for self-medication and improving adherence to treatment in some studies, in others knowledge gain did not impact on behaviour change (on clients' compliance to medication).

Mueser et al (2004) reviewed 4 random controlled studies where all but one provided at least eight sessions of psychoeducation. In these studies, the follow up period ranged from ten days to two years and the results indicated that three of the controlled studies found that psychoeducation improved people's knowledge of mental illness, one did not. In two studies, improved knowledge had no effects on taking medication as prescribed but one study reported adherence to treatment. In summary, the research on broad based psychoeducation indicates that psychoeducation increases participants' knowledge about mental illness but does not affect the other outcomes studied, for instance, little evidence indicated that it improved taking medication as prescribed or affected other areas of functioning.

Nevertheless, the authors indicate that psychoeducation remains important because access to information about mental illness is crucial to people's ability to make informed decisions about their own treatment, and that psychoeducation is the foundation for more comprehensive programmes.

Education intervention delivered at frequent intervals is useful as part of a treatment programme for people with mental illness. Literature shows that structured education session involving both written and verbal methods followed by discussions demonstrates to be effective in improving clients' knowledge about their illness but it had no significant effect on relapse rates and clients' insight into their illness. In a literature search by Griffiths, Fernandez, Mostacchi & Evans (2004) where 21 studies were included, knowledge was assessed in 15 studies, compliance was assessed in 13 studies, relapse was assessed in 5 studies and insight was assessed in 6 studies. Those patients who were provided with multiple education sessions demonstrated a significant increase in the level of knowledge compared to those who were not. Although the clients demonstrated an increase in knowledge about the illness and medication the study also identified that there were no differences in the incidence of relapse and insight in those whom were provided education.

Though this was the case, this review provides evidence that multiple education sessions are better than single education sessions in improving knowledge relating to illness and medication.

According to Sajatovic, Davies & Hrouda (2004) adherence to treatment for bipolar affective disorder may be enhanced by interventions that directly address issues of appropriately taking medication to manage illness rather than general information. It is also recommended that for optimum outcomes, promotion of clients' adherence to treatment needs to be integrated into the medication management of bipolar affective disorder.

### **2.6.2 Psychoeducation and symptom management**

Assisting people to recover from a mood disorder is a major challenge for psychiatric rehabilitation. Continuing symptoms and recurrent episodes are not uncommon (Coryell, Scheftner, Keller, Endicott, Maser & Klerman, 1993), hence careful management of the illness is essential to control these continuing symptoms and recurrent episodes. Uys & Middleton (1997) define relapse as a return of illness symptoms to the extent that it disrupts daily activities and requires unscheduled inpatient or outpatient intervention. The symptoms clients with bipolar affective disorder experience not only disrupt daily activities but also create a lot of distress and disrupt social functioning, resulting in serious financial, physical and social consequences. For instance the clients have symptoms like impairment of judgement, which can lead to unnecessary spending sprees, sexual disinhibition and suicidal ideations (American Psychiatric Association, 1994).

Most clients who relapse show an increase in a particular set of symptoms at least two weeks before their contact with the health services, but many about six weeks before (Uys & Middleton, 1997). Early warning signs of relapse include: a) interpersonal sensitivity, b) depression, c) anxiety, d) somatic concerns, e) unusual thought content, f) paranoid ideation,

g) problems with sleep, h) difficulties in concentration. Clients need to be taught to identify these sets of symptoms before relapse takes place, although a small minority only become conscious of their symptoms as late as four days before relapse. About 50% of clients experience the same cluster of symptoms each time they have a relapse (Uys & Middleton, 1997). Sometimes the clients also experience residual symptoms that persist even after the acute phase of the illness or relapse is over, hence they need to have knowledge and skills to be able to manage and cope with these symptoms.

According to Powel, Yeaton, Hill & Silk (2001), successful illness management rests on an understanding of the diagnosis, the ability to make informed choices about treatment and the motivation to participate actively in the treatment process. Successful management usually includes asking questions, keeping records, tracking moods, recognising problem symptoms and seeking professional care when appropriate.

Symptom management information helps individuals recovering from mental illness in monitoring specific symptoms, identifying factors that are related to relapse and developing problem-specific interventions. Literature indicates that if action is taken early in the form of medication and psychosocial support, relapse can be prevented in the majority of cases (80-90%) (O' Connor, 1991). Literature has also demonstrated that as individuals with mental illness become more self-reliant and educated about illness management, relapse can be prevented or delayed and the need of hospitalisation can be reduced (Gidding, 1990). While most clients go through periods of relapse, even while under pharmacological treatment, the skills that the patients have learned and the extent of their support system can help clients successfully manage even severe symptoms so that they are minimally disruptive and distressing to their daily lives.

Investigations into the effects of psychoeducation on symptom management indicate that in experimental groups, education and skill training significantly influenced consumers' ability to monitor and manage symptoms (Backer, 1998; O' Connor, 1991).

Through education interventions consumers can be active participants in development of strategies for managing their symptoms and medication. On the other hand, other research findings indicate that although psychoeducation improves clients' ability to cope with their symptoms, hence improving their functioning, but it does not necessarily reduce relapse rates.

A study conducted by Perry, Tarrier, Morris, McCarthy & Limb (1999) in Barcelona, on effects of teaching patients with bipolar affective disorder to identify early symptoms of relapse and obtain treatment, found that there were significant improvement in overall functioning and employment in the experimental group compared with the control group. 18 months after baseline assessment, however, there were no significant changes in the number of depressive relapses.

Symptom management is also a strategy designed to help individuals with mental illness collaborate with health professionals on a regular basis. The process of skill teaching reduces their susceptibility to illness and helps them cope effectively with their symptoms. Recovery in mental illness occurs when clients are able to discover or rediscover their strengths and abilities that allow them to take control of their illness (Mueser et al, 2004). Helping clients gain mastery over their symptoms and relapse is critical in recovery as it helps them develop hope for the future and formulate personal goals. Illness management and recovery are closely related, with illness management focused primarily on minimizing people's symptoms and relapses, and recovery primarily focusing on helping people develop and pursue their personal goals.

In a review of studies by Mueser et al (2004) on controlled studies on relapse prevention programmes, four studies of coping skills were reviewed. These studies employed different approaches of coping. Despite the differences in the programmes, all the coping skills programmes produced uniformly positive results in reducing symptom severity. Thus the research evidence shows that psychoeducation focusing on skills training is effective. Family psychoeducation has also proved to be effective in helping families and clients deal with illness. Kneisl & Wilson (1992) indicate that empowerment of family members through psychoeducation increases the family's knowledge, understanding and ability to deal with the illness; it also enhances the family's chance of living a life as normal as possible. Family psychoeducation programmes inform families about the illness and treatment, creates a collaborative atmosphere between the family and professionals and encourages practical problem solving and creation of a home environment to reduce stress (Anderson, Hogarty & Reiss, 1980).

### **2.6.3 Psychoeducation and prevention of relapse and rehospitalisation**

Clients with major mental disorders, like bipolar affective disorder, have been found to suffer relapses that in most cases lead to hospitalisation. The risk of relapse after a bipolar episode remains increased throughout the client's lifetime. Moreover the risk of chronic disorder increases with every relapse the client has. Therefore relapse prevention is a primary focus in treatment of bipolar affective disorder. According to Chadwick, Birchwood & Trower (1996), symptoms of acute relapse in psychotic disorders are universally distressing, disempowering and potentially traumatic experiences. Relapse can accelerate a transition to multiple episode and chronic resistance stages. Burden and stress for families is most likely worsened with the advent of each relapse and the financial cost to the community of the treatment of relapse comprises a significant portion of the health budget (Kissling, 1992; Weiden & Olfson, 1995).

Client education has been identified as an important prevention intervention to help break the cycle of multiple relapses and psychiatric hospitalisation (revolving door syndrome). Basic education about mental illness facilitates the clients' ability to regain control over their lives and it also establishes more collaborative and less hierarchical relationships with health professionals (Corrigan, Lieberman & Engle, 1990). Although relapses and rehospitalisation can be viewed as important learning opportunities for clients and health professionals, Miller (1990) states that prolonged periods of relapses and rehospitalisation can erode a persons' sense of well being, and avoiding the disruption associated with relapse is a common recovery goal for the client as well as the health professionals.

Psychoeducation has been proven to improve clients' adherence to treatment and incidences of relapse are reduced in clients who adhere to their medication. A study conducted by Colom et al (2003) (b) in Spain, on psychoeducation efficacy in bipolar disorders over a period of 4 years, indicated that 92% in the control group had recurrences, as compared to 60% in the psychoeducation group. The researchers concluded that psychoeducation showed efficacy in preventing relapse in bipolar clients who were adherent to drug treatment. The action of psychoeducation seems to go beyond compliance enhancement and may support a tripartite model, composed of lifestyle regularity and health habits, early detection of prodromal symptoms followed by prompt drug intervention and finally treatment compliance.

Studies on individual psychotherapy indicate that some interventions may reduce the number of recurrences in bipolar clients. There has been a lack of structured, well designed, blinded, controlled studies demonstrating the efficacy of group psychoeducation preventing recurrence in clients with bipolar affective disorder.

A study on the efficacy of the group psychoeducation: the prophylaxis of recurrences in bipolar clients whose disease was in remission by Colom et al (2003) (a) in Barcelona, Spain, involving 20 weeks of treatment and 2 years of follow up, indicated that group psychoeducation significantly reduced the number of relapsed patients and it reduced time to relapses or recurrences. The number and length of hospitalisations per patient were also lower in patients who received psychoeducation, but the number of patients who needed hospitalisation was practically equal in both groups. Therefore psychoeducation may not be sufficient to help some patients avoid hospitalisation but may facilitate early detection of an episode and thereby decrease the severity of the episode.

Studies have also revealed that psychoeducation given to the clients for a short time has also proved to be effective in medication management and has significantly reduced relapse rates. In a review of studies by Kusumakar et al (1997) a six-hour psychoeducation intervention designed from a cognitive therapy perspective improved lithium compliance and clinical outcomes in a random controlled trial. In this study, patients receiving the intervention had a lithium non-compliance of 21% and significantly fewer hospital admissions than the control group, which received treatment as usual and had a lithium non-compliance level of 57%.

Family psychoeducation has equally showed similar results with individual and group psychoeducation for clients with bipolar affective disorders. A study by Tompson, Rea & Miklowitz (2003) conducted in Los Angeles, USA, on family focused treatment versus individual treatment for bipolar disorder indicated that family psychoeducation decreases relapse and readmission to hospital in people with bipolar disorders after an episode of mania. These results may not be generalisable to people with a depressive episode or those with poor medication compliance or less supportive families.

Miklowitz, George, Richards, Simoneau & Suddath (2003) in their study of family psychoeducation and pharmacotherapy in management of outpatients with bipolar disorder revealed that clients undergoing family focused psychoeducation combined with pharmacotherapy had fewer relapses and showed greater reduction in mood disorder symptoms and better medication adherence than clients undergoing crisis management. Deductions therefore can be made from this study that psychoeducation with pharmacotherapy enhances clients' ability to manage early relapse symptoms and it also enhances drug compliance.

Studies have been conducted in South Africa on effects of psychoeducation in combination with other psychosocial rehabilitation technologies, such as skills and vocational training programmes. A study conducted by Uys (1994) on the effects of two treatment strategies (psychoeducation and living skills training) and organisational strategies in the rehabilitation of long term psychiatric outpatients in Pietermaritzburg, found that there were no indications that psychoeducation groups improved functional status, reduced the symptoms or reduced periods of hospitalisation for the clients. In this study it was however discovered that 2 clients used the information from psychoeducation to monitor their own symptoms and to report signs of pending relapse to the staff of the clinic. The relapses were averted in both cases. The study though had problems in its design, as the initial group could not be maintained hence the findings could not be generalised.

## **2.7 THEORETICAL FRAMEWORK**

Several theories and models were reviewed to put this study into perspective. The following theories of behaviour change were reviewed: Social learning theory (Bandura, 1986), Health belief model (Becker, 1978), Theories of reasoned action and planned behaviour (Fishbein & Ajzen, 1975) and a theoretical framework for psychiatric rehabilitation (Uys, 1991).

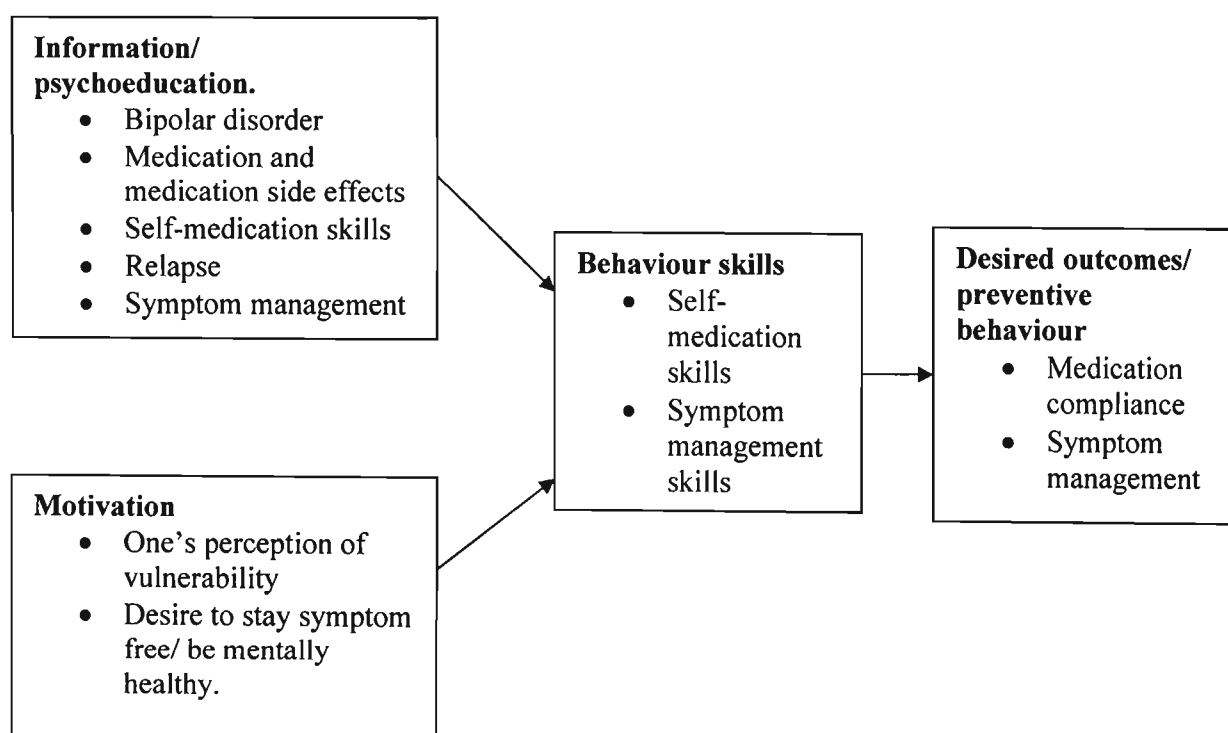
The information motivation behaviour skills models was selected for this study as it explains how information, motivation and behaviour skills influence clients' initiation and maintenance of health promoting and preventive behaviour, which is the main focus in this study.

### **2.7.1 The Information Motivation-Behaviour Skills Model (IMB)**

This model provides a general framework for understanding and promoting preventive behaviour of interest across population. It conceptualises the psychological determinants of health promoting or preventive behaviour (Fisher & Fisher, 2000).

Fisher & Fisher (1992) used the Information Motivation- Behaviour Skills (IMB) model to help change AIDS risk behaviours. According to the IMB model, information that is directly relevant to the sought after behavioural change is a prerequisite for change. Motivation for change, that is, recognising a need for change, seeking a way to change, and believing the change is possible, is also a prerequisite for behaviour change. The actual skill necessary to accomplish the change is the third prerequisite for change. Each construct- information, motivation and behaviour is thought of as being independent. According to Fisher & Fisher (1992), an individual may be very knowledgeable about the rationale for change, but lack the motivation necessary for change. Conversely, an individual may be very motivated to change but not well informed. Although this model was originally developed to help change AIDS risk behaviours, the approach is comprehensive, holistic, practical and

appropriate for people with chronic illnesses. Health related behavioural change is necessary for those with chronic diseases when symptom reduction, stabilisation and improved quality of life are the goals. Clients with mental health problems are often expected to monitor and cope with or control their symptoms, adjust to environmental demands and take medications for long periods of time, and sometimes these clients may not have information, motivation, or the prerequisite skills needed to accomplish these changes. Therefore the intervention in this study was based on this model. The three components of this model will be explained in relation to this study.



**Figure 1:** IMB model of psychoeducation adapted from IMB model of HIV prevention from Fisher & Fisher (1992).

## **Information**

One role of health practitioners is to assist clients to understand their illness, and to help them make the changes necessary for health improvement (Zimmerman, Olsen & Bowsworth, 2000). According to the IMB model, the information that is directly relevant to preventive behaviour and can be easily utilised in an individual's life is a prerequisite of health promoting and preventive behaviour (Fisher & Fisher, 2000). The information component of this model was integrated throughout the intervention, based on the reading materials given to the participants and the information given through education. The education component was aimed at providing specific information for the clients, which was related to medication compliance and symptom management. The information included specific facts about bipolar affective disorder, for instance understanding the illness, its prognosis, treatment and treatment side effects, relapse and relapse prevention, which included medication compliance and symptom management. The education equipped the participants with knowledge of their illness, its treatment, the need to comply with the treatment, relapse and how they could cope with problem symptoms in their daily lives. The knowledge clients had regarding their illness, medication and symptom management after the course comprised/reflected the information component of this model. Client education is an important component of nursing care, yet it is well known that knowledge alone does not lead to behaviour change (Babcock & Miller, 1993).

## **Motivation**

Motivation for this study intervention, is defined as a behaviour sequence (Hoster & Miller, 1989). The sequence includes moving the participants towards recognising a problem, wanting to change, searching for a way to change, and beginning, continuing, and following through with a change.

Motivation is conceptualised as coming from both the person and the person's environment, which includes others interacting with the person. According to Miller (1996), methods of enhancing motivation for change include advice, decreasing barriers to change, goal setting, and maintaining contact and social support. An individual's motivation to engage in the desirable behaviour or health promoting and preventive behaviour is an additional determinant of the behaviour. Motivation influences whether well informed individuals will be inclined to act on what they know about prevention or desired behaviour in order to remain healthy. According to the Information Motivation Behaviour model, motivation includes a) personal motivation to practise the behaviour, b) social motivation, perception of social support to perform the behaviour, and c) perception of personal vulnerability to ill health or infection (Fisher & Fisher, 2000).

In psychoeducation, the psychiatric nurse has the responsibility to assess the client for motivating factors as well as possible barriers to compliance. The education component therefore included assessing clients' motivation for obtaining symptom relief and exploring their understanding of how the medication helps control their symptoms (Crane et al, 1996) before they were given information regarding the same. This helped to inform the clients about their vulnerability to relapse, hence improving their motivation to remain symptom free. Clients' understanding of the prognosis and course of the disorder are also one of the major motivating factors in making informed decisions regarding self-care behaviours.

Active forms of learning (like clients' involvement in discussions, sharing experiences and role plays) were applied and emphasis was on encouraging and motivating clients to initiate and maintain self-care behaviours in this case, which were self-medication and symptom management. The clients' motivation was determined in terms of their behaviour change, for instance complying with medication and their ability to use skills gained in managing their symptoms.

## **Behaviour skills**

This is an additional prerequisite of health promoting or preventive behaviour. Behaviour skills determine whether even a well informed, well motivated individual will be capable of practising desired behaviour. The behaviour skills component of this model comprises an individual's objective ability of his or her perceived self-efficacy concerning performance of the behaviour (Fisher & Fisher, 2000).

In this study the behaviour skills required were self-medication skills and symptom management skills, and the ability to reinforce and maintain these skills. The information motivation model specifies that information and motivation work primarily through behaviour skills to influence the desired behaviour. In essence, effects of information and motivation are expressed mainly as a result of development and use of health promoting and preventive behavioural skills that are directly applied to the initiation and maintenance of the behaviour.

The education component of this study involved teaching clients self-medication skills, for instance writing reminders on bathroom mirrors or calendars, scheduling the medication times concurrently with meal times, and setting alarms. They were also taught symptom management techniques, for instance, relaxation techniques. Role playing and modelling were used to ensure mastery of skills. The therapist also ensured that constant feedback was given to the clients all the time to boost their esteem and confidence.

The IMB model also asserts that prevention motivation and prevention information may have a direct effect on preventive behaviour in cases where complicated behaviour skills are not necessary to effect prevention, but in this case the behaviour skills are necessary for the desired behaviour (Fisher & Fisher, 2000).

## **2.8 Conclusion**

Psychosocial interventions like psychoeducation are a cornerstone of good management of persistent mental illnesses. Reiser (2003) indicates that a well-run programme of psychoeducation would reduce client relapse rate by over 60%. No other non-pharmacological intervention was found to have this level of effectiveness. The literature reviewed indicates that psychoeducation had positive effects in increasing clients' knowledge, ability to manage their medication, reducing relapse rates and rehospitalisation. Few studies have showed that though psychoeducation increased clients' knowledge, it provided no significant differences in these areas. Studies are lacking in the areas of effects of psychoeducation on symptom management and there is little relevant literature on psychoeducation and bipolar disorder in Ethekewini Health District of KwaZulu- Natal Province.

## **CHAPTER THREE**

### **Research methodology**

#### **3.1 Introduction**

This chapter focuses on the methods that the researcher used to evaluate the effects of an educational intervention (psychoeducation) on medication compliance and symptom management for clients with bipolar affective disorder.

#### **3.2 Research design**

The researcher conducted a quantitative study using quasi-experimental design. According to Burns & Grove (1993), a quantitative study refers to a formal, objective, systematic process in which numerical data are utilised to obtain information about the world. It is a research approach that is used to describe, test relationships and examine cause and effect relationships. This design was chosen because the researcher was trying to test the relationship between training and behaviour change (medication compliance and symptom management). In this approach the researcher actively brings about the desired effect and does not passively observe the behaviour or actions. In other words the researcher is interested in making something happen, not merely observing the routine (LoBiondo-Wood & Haber, 1990). These designs are used frequently because they are practical, feasible and generalisable. They are more adaptable to real world setting than the controlled experimental design. Like true experiments, quasi-experiments involve manipulation of an independent variable but they lack either a control group or randomisation (Burns & Grove, 1993).

In this study, The One Group Pre-test Post-test Design was used. In this design one group of participants was tested at the beginning of the study in areas of their knowledge about the illness, medication and symptom management, also in areas of their ability for self-medication and ability to manage their symptoms. The group was then exposed to six sessions of psychoeducation covering the following topics: a) Bipolar affective disorder and the course of the illness, b) Medication and medication side effects, c) Self-medication skills, d) Relapse and e) Symptom management techniques. The sessions were conducted once a week and for detailed information regarding the topic covered refer appendix 2. These sessions were also supplemented by reading materials on same topics (refer appendix 3). Lastly the same group was tested again a week after the psychoeducation (post-test) using the same instruments used to pre-test their knowledge and skills.

This design has weaknesses in the sense that full experimental control is not possible (LoBiondo-Woods & Haber, 1990). But due to limitations in time and resources, the researcher was unable to conduct a full experimental study, or time series to strengthen this design. However, the researcher conducted a pilot study on 10 clients with bipolar affective disorder, who were not part of the study. The instrument was administered to these clients and two weeks later the instrument was administered again to the same clients, yielding similar results. The pilot study was used to verify if the participants will be able to understand the questions. The searcher also strove to control identified extraneous variables to determine the true nature of the relationship between the independent and the dependent variables in the investigation as far as possible.

### **3.2.1 Extraneous variables**

According to Burns & Grove (1993), extraneous variables are variables that exist in all studies and that can affect the measurement of the study variables and the examination of the relationship within the study. These variables influence both the independent variables and dependent variables, giving the impression of an existing relationship between them, when in fact both the independent and dependent variables vary because of the variation of a third variable (Brink, 2002). In this study there were some factors identified that could contaminate the experiment or affect the results. These variables could affect the clients' behaviour change like their compliance to medication and their symptom management rather than the psychoeducation they were given. The variables that were controlled for in this study were grouped into characteristics of the respondents, and external factors.

#### **3.2.1.1 Characteristics of the respondents**

- Level of education of clients might affect the learning process and how they processed the information.
- Age and gender of the respondents
- Clients' attitudes and beliefs towards the illness and medication might affect their decision as to whether to implement what they learned or not.
- Availability of support system. Some clients might have support and encouragement or reminders from families and friends to take their medication and how to cope with symptoms, unlike others.

### **3.2.1.2 External factors**

- If the clients in the experiment group were given some other sort of information or education within the period of the experiment. This could affect the results as it would be difficult to assess the effects of psychoeducation.
- Change in clients' medication within the study time. For instance a reduction or increase or change of medication to a new one might affect their compliance apart from the education they were receiving.
- How psychoeducation is provided and where might affect the results
- Relapse might occur within the experiment time.

### **3.2.2 Control of extraneous variables**

#### **3.2.2.1 Respondents characteristics**

The characteristics stated above are extraneous to the research problem, hence they should be controlled. In order to control these characteristics participants were randomly selected. According to Polit & Beck (2004), randomisation controls all possible sources of extraneous variations. Major characteristics of participants namely, gender, marital status, level of education and availability of family support were also considered in data analysis and a discussion followed on effects of these characteristics on knowledge, medication compliance and symptom management.

#### **3.2.2.2 External factors**

The main goal in controlling external factors was to achieve constancy of the research situation. Polit & Beck (2004) state that in studies involving an intervention, care should be taken to adhere to intervention protocol. Therefore to ensure that subjects in the experiment received all the information intended, a structured teaching schedule was used with previously

developed teaching materials (refer appendix 2 and 3); all lessons were provided by the same person, the researcher; and all lessons were provided in a venue which was as conducive as possible to teaching and learning.

Some of the extraneous variables identified could not be eliminated or controlled, such as change of medication, relapse and the giving of information by clinical staff. These variables will be discussed in Chapter 5 (in the discussion of the findings of the study). The baseline information which was collected before the intervention, and the post-test information collected immediately after intervention, helped to identify some of the extraneous factors which will be accounted for in discussing the findings.

### **3.2.3 Independent variable**

According to Polit & Beck, (2004) the independent variable is the variable that is believed to cause or influence the dependent variable. In the experimental research the researcher manipulates the independent variable and observes the effects on the dependent variable. In this study the independent variable was psychoeducation. Clients with bipolar affective disorder participated in six sessions of psychoeducation each lasting one hour, thirty minutes on the following topics: a) bipolar affective disorder and the course of the illness; b) Medication and medication side effects; c) Self-medication skills; d) Relapse; and e) Symptom management techniques.

### **3.2.4 Dependent variables**

The dependent variable is defined as the variable that the researcher is interested in understanding, explaining or predicting (Polit & Hungler, 1999). In this study the dependent variables are knowledge about illness, medication compliance and symptom management.

### **3.3 Study setting**

The study was conducted at Escoval House Community Psychiatric Clinic (EHPC) and at Austerville Clinic, which is a satellite clinic of Escoval House Clinic. The initial study setting was Escoval House Community Psychiatric Clinic, but in the process of recruiting participants the clinic was split into two, some clients were sent to Austerville satellite clinic, hence the two clinics. The two clinics are located in the Durban Metropolitan area of Ethekewini Health District in KwaZulu – Natal. Escoval house is located in the city centre, while Austerville clinic is located in Austerville location. These clinics serve the people of Durban Metropolitan area. The main services offered at the clinics are thorough psychiatric, social and physical assessment, treatment and referral for various services e.g. admissions of clients, referral to vocational services, and placement in workshops among other things. Escoval clinic has four other satellite clinics, namely; Newlands, Athlone Park, Emtoti, and Sherwood.

### **3.4 Population**

LoBiondo-Woods & Haber (1990), defined population as a well defined set or a group of subjects that has certain specific properties. The study population were all clients with bipolar affective disorder attending Escoval House Community Psychiatric Clinic and one of its satellite clinics (Austerville). According to the monthly records an average number of 175 clients with bipolar affective disorder attend Escoval House psychiatric clinic and Austerville clinic per month.

### **3.5 Sampling**

#### **3.5.1 Sample size**

Forty clients were selected to participate in the study. The sample size was determined from the population of 175 clients with bipolar disorder attending these clinics. Recruitment of participants was done in 4 weeks, hence the researcher had access to almost 175 clients with bipolar affective disorder who attend the clinics per month. Sample size was not statistically calculated, it was determined by the type of intervention which was implemented (psychoeducation). For group education interventions to be effective, it is recommended that the groups consist of 12 to 15 members (<http://www.group-psychotherapy.com/intro.htm-5/12/05>). This is to create a therapeutic atmosphere and have enough time for each member to work personally. However considering the population, the researcher selected 40 participants who were divided into two groups during the time of the intervention (20 participants in each group). Literature indicates that in quasi-experimental and experimental studies smaller samples are often used compared to descriptive and correlation studies (Burns & Grove, 1993), hence the sample of 40 was appropriate for the population size. A statistician was also consulted regarding the sample size. At the end of the study the sample was reduced to 38 as two respondents dropped out.

#### **3.5.2 Sampling approach**

Systematic method of sampling was used to select participants for this study. According to Lawrence Neuman (1997) systematic sampling begins with random sampling with a short cut for random selection. This type of sampling involves selecting elements at equal intervals such as every fifth, eighth or twentieth element (Brink, 2000). In order to use this type of sampling the researcher needs to know the population and sample size, which in this case was

175 and 40 respectively. Every fourth file of a client with bipolar affective disorder was selected and included in the study until the required sample was reached. Polit & Beck (2004:299) defines a sampling interval as the distance between elements chosen for the sample. This interval is reached by dividing the population by the established sample size. In this case it was 175/40. The first participant was selected randomly using a table of numbers of all clients' files pulled out at the beginning of each clinic day.

#### **3.5.2.1 Inclusion criteria**

Clients with a DSM IV (Diagnostic statistical Manual IV) diagnosis of bipolar affective disorder but stable enough to be involved in a group were included. The clients were regular clinic attendees and consenting adults of 18 years and above who were on treatment.

#### **3.5.2.2 Participants' recruitment**

Entry into the clinic was through the Registered Psychiatric Nurse in charge of the clinic. A formal written request to conduct the study was made to the clinic. Once permission to conduct the study was granted by the Department of Health and by the Registered Psychiatric Nurse in charge of the clinic, the researcher, with the help of psychiatric nurses in the clinic, approached the clients as they came for their follow up treatment. A one on one interview was conducted with the clients whose files were selected, explaining the study and its benefit. The clients who agreed to participate in a 6-week psychoeducation group and who met the study criteria, were included in the group, and they signed a consent form. Clients were then asked to report to the clinic on assigned days for the first assessment and psychoeducation sessions respectively. Incentives in form of snacks and transport money to and from the clinic were offered to participants in each and every group session to encourage attendance.

### 3.6 Data collection tools

Two structured questionnaires were used to collect data. Both questionnaires were in English (refer appendix 1).

1) A questionnaire developed by the researcher was used to assess the clients' level of knowledge of their illness, medication and symptom management techniques, the clients' compliance to medication, their use of symptom management techniques, and to assess if they had any form of education apart from the experimental education, or medication change within the experimental period.

2) The Goldberg mood scales (depression and mania) were used to determine the severity of symptoms of depression and mania in the clients before the independent variable was introduced and to measure the changes in severity of the symptoms after the treatment. The scales had readily coded answers and involved interviewing clients on 18 constructs. Each construct rated on a 5-point scale, with 0 meaning not at all and 4 meaning always. The number that best described the client's symptoms was allocated. This tool was adapted from Ivan Goldberg (1993).

These types of questionnaires are quick to complete and straightforward to code (for computer analysis) and do not discriminate unduly on the basis of how articulate the respondents are (Cohen, Lawrence & Morrison, 2000). These questionnaires also ensure that respondents give standard answers.

### **3.7 Validity and reliability of data collecting tools**

Validity and reliability are key characteristics of a measuring instrument or data collecting tool. According to Frank-Stromborg (1988), validity of an instrument is the extent to which a tool measures what it claims to measure.

Content validity is concerned with whether the instruments or the test items adequately sample the content area, in terms of representation and comprehensiveness (Frank-Stromborg, 1988). In this study the areas under evaluation were: a) Clients' knowledge on mental illness, medication and symptom management; b) Medication compliance; and c) Symptom management. The questionnaires were reviewed by experts in the field of mental health to ensure their validity based on their contents and relevance.

Reliability refers to consistency or repeatability of measurement made with the instrument (Frank-Stromborg, 1988). To ensure reliability of the first questionnaire developed by the researcher, a pilot study was conducted at Escoval House Community Psychiatric Clinic on 10 clients who were not part of the study. The questionnaire was administered to these clients in October, two weeks later the questionnaire was administered again to the same clients. Scores on the repeated testing were compared and the comparison was expressed by a Pearson  $r$ . correlation coefficient. The correlation yielded was 0.96, which supports the idea that the instrument has the attribute of stability. A pilot study is a small-scale study on a limited number of subjects from the same population as that intended for the eventual project (Brink, 2000). This study allows several potential problems to be predicted, for instance clarity and acceptability of the questionnaire. A few modifications were made on the questionnaires after this pilot study.

### **3.8 Data collection process**

Once the participants were recruited, the questionnaires were administered to them in a group. The researcher administered the questionnaires to participants and assisted them to understand the items in the questionnaire. The researcher also assisted the participants who could not read nor write to complete the questionnaire. All the participants in this study were English speaking, so there was no need for translations and clarifications in other home languages.

Data collection process was done in three phases:

**Phase 1.** Administration of pre-test questionnaires to participants. In this phase the researcher administered two questionnaires (described above) to a group of participants. The researcher was available to assist participants till they had completed the questionnaires.

**Phase 2.** Administration of the independent variable, which was psychoeducation for six weeks. In this phase the researcher conducted six sessions of psychoeducation, each lasting one and a half hours. The participants were divided into two groups, with 20 participants in each group, in each clinic (These participants were recruited from Escoval House Community Psychiatric Clinic, but in the process of recruitment the clinic was split and some participants were sent to Austerville clinic, hence the researcher decided to hold two groups in the separate clinics). The groups were run on separate days. This division also allowed effective teaching and learning and to allow effective group discussion. Information giving, discussions and modelling of desired skills were the teaching methods used. Participants were also supplied with reading material on all the topics covered (refer appendix 3). It was hoped that families or friends would assist those who could not read to understand the content of the reading materials. The education was conducted in the clinic waiting room in the afternoon when there were few clients coming to the clinic. A special provision was made so that other

clients coming to the clinic at this time were provided with chairs in the passage leading to the consultation rooms to avoid distractions during the psychoeducation.

**Phase 3.** Administration of post-test questionnaire to participants. In this phase the researcher once again administered the two questionnaires to the participants to test if the education had had an effect on the participants. The same process as in phase one was done. This test was administered a week after the psychoeducation lessons had ended.

### **3.9 Data analysis**

Data from the questionnaires was analysed using the Statistical Package for Social Sciences (SPSS). SPSS is a software package for analysing quantitative data. It uses statistics, that is the science of compiling facts or data of potential numerical nature, to reveal important information about the phenomena (Thomas, 1990). The analysis involved the processes of coding, entering, verifying and cleaning data, and documenting the analysis file for data processing. A statistician was consulted in data processing or analysing phase. Several tests were used for the actual analysis of data. These tests were:

- a) Descriptive statistics were used to analyse participants' characteristics and some selected variables.
- b) Chi-squares and paired t-tests were used on dependent variables of interest to compare the changes in scores and means, respectively pre- education and post- education. According to Polit & Hungler (1999), this is the procedure used to test differences in group means. It can be used with two independent groups or in a single group that yields pre-treatment and post-treatment scores.
- c) Lastly crosstabulations and Chi-squares were used for selected social variables (gender, sex, level of education and family support) and major variables of interest

(Knowledge, compliance with treatment and symptom management) to determine the relationship between social variables and these dependent variables .

### **3.10 Ethical considerations**

Anonymity and privacy were major ethical principles employed. Participants' names were not used anywhere in the study so that no any other information could be traced back to the participants. Registration numbers were used for the sake of follow up during post-tests, however only the researcher had access to these numbers and they were destroyed as soon as the study was completed. No information of any private nature was collected.

The proposal was presented to the University of KwaZulu-Natal ethical committee for clearance (refer appendix 4) and written permission to conduct the study was sought from the Department of Health, KwaZulu-Natal, and the Escoval House Community Psychiatric Clinic (refer appendix 5 and 7 respectively). Once permission was granted, individual written consents were obtained from clients, after a full explanation about the nature of the study and its benefits (refer appendix 8 for a copy of the consent). The participants were also assured that they were free to withdraw if there was anything that made them uncomfortable during the education process and counselling services were available for those psychologically affected by the process.

## **CHAPTER FOUR**

### **Presentation of the findings**

#### **4.1 Introduction**

This chapter presents the findings of the study. In this study 40 respondents were asked to complete questionnaires before and after going on a 6 weeks psychoeducation intervention.

The purpose of the data analysis was:

- 1) To compare the knowledge and skills of the participants on their illness and symptom management before and after the intervention;
- 2) To compare medication compliance and symptom management before and after the intervention;
- 3) To investigate relationships between social variables (gender, marital status, support system, level of education) and respondents knowledge, medication compliance and between social variables and symptom management.

The findings are presented in a way that characteristics of the respondents are presented first in the form of graphs and percentages displaying frequencies, followed by the comparison of respondents' knowledge and skills before and after the intervention and the presentation of a comparison of respondents' symptoms before and after the intervention.

#### **4.1.1 Sample realisation and description**

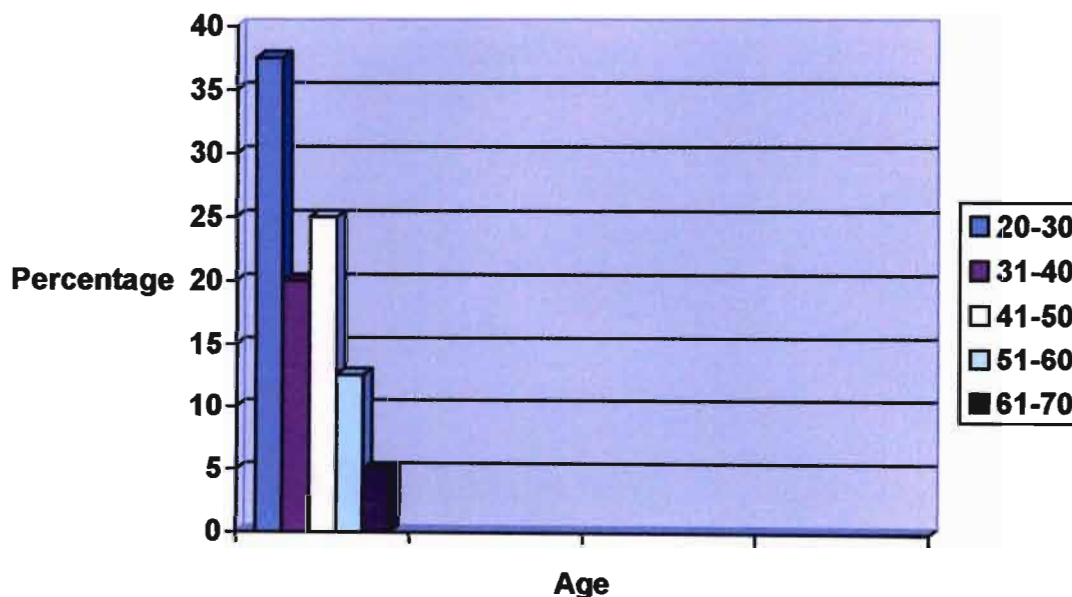
The study had 40 respondents in total. 20 respondents were drawn from Escoval house community psychiatric clinic and 20 respondents were drawn from Austerville clinic, which is a satellite clinic of Escoval clinic in the Ethekewini Health District of KwaZulu- Natal. The results of this study were similar in these two samples (from Escoval and Austerville) hence they will be combined and discussed together.

The response rate was 100% (40) pre- education and 95% (38) post- education as two participants did not turn up for post-test assessment. Though this is the case, the response rate still varied from question to question as some respondents did not respond to all questions on the pre-test as well as post-test findings.

## 4.2 Demographic data

### 4.2.1 Age

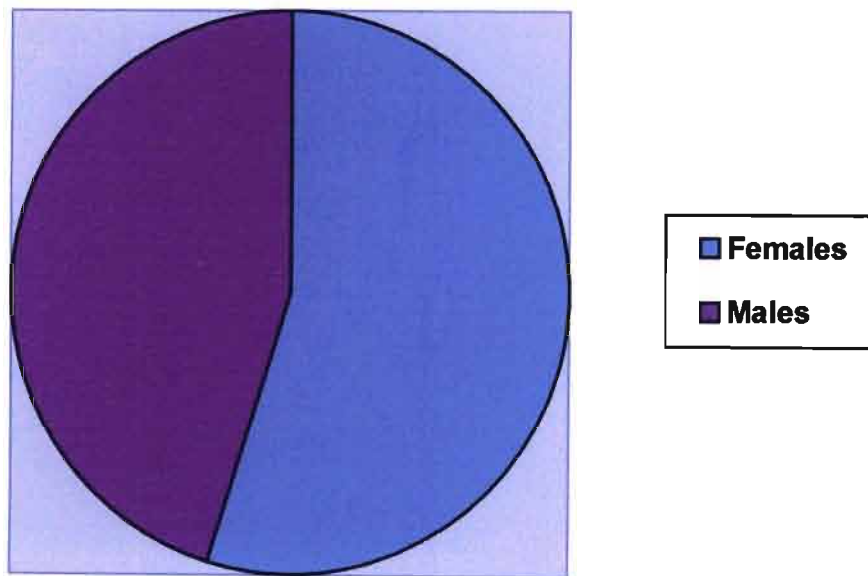
Age was categorised in 5 groups (20-30, 31-40, 41-50, 51-60, and 61-70). All 40 respondents responded to this question. The bar graph in figure 1 indicates that 15 respondents (37.5%) were in the age group 20-30, 8 respondents ( 20%) were in the age group 31-40, 10 respondents ( 25%) were in the age group 41-50, 5 respondents (12.5%) were in the age group 51-60 and lastly 2 respondents (5%) were in the age group 61-70. The majority of the respondents were between 20-30 years.



**Figure 2:** Age distribution of the respondents. (N=40)

#### 4.2.2 Gender

The group was dominated by female respondents who were 23 in number (57.5%) as against males who were 17 in number (42.5%) (Figure 3).



**Figure 3:** Gender distribution of respondents. (N=40)

### 4.2.3 Characteristics of respondents

Variable	Frequency	Percentage
<b>Year of illness:-</b>		
9-11 years	6	15%
6- 8 years	6	15%
3-5 years	15	37.5%
6 months- 2 years	12	30%
Total	39	97.5%
<b>Marital status</b>		
Married	15	37.5%
Never married	14	35%
Widowed	4	10%
Divorced	7	17.5%
Total	40	100%
<b>Level of education</b>		
Grade 5 and below	4	10%
Grade 6-7	11	27.5%
Grade 8-12	18	45%
Tertiary education	7	17.5%
Total	40	100%
<b>Occupation</b>		
Employed	18	45%
Unemployed	20	50%
Retired	2	5%
Total	40	100%
<b>Source of support</b>		
Family	23	57.5%
Disability grant/ pension	24	60%
Self support	21	52.5%
No support	2	5%
Total	40	100%

**Table 1:** Characteristics of respondents.

#### **4.2.3.1 Years of illness**

Thirty nine respondents responded to this question. The analysis indicates that of 39 respondents, 6 (15%) had the illness for 9-11 years, 6 (15%) had the illness for 6-8 years, 15 (37.5%) respondents had the illness for 3-5 years and 12 respondents (30%) have had the illness for a period of 6 month-2 years, (Table1).

#### **4.2.3.2 Marital status**

The majority of the respondents were not married at the time of the study. The analysis showed that only 15 respondents (35.5%) were married while 35 were not. 14 respondents (35%) had never been married, 4 respondents (10%) were widowed and 7 respondents (17.5%) were divorced (Table 1).

#### **4.2.3.3 Level of education**

The majority of the respondents were relatively well educated, more had had high school education than not. The analysis indicated that 7 respondents (17.5%) had tertiary education, 18 respondents (45%) had grade 8-12, 11 respondents (27.5%) had grade 6-7 and only 4 respondents (10%) had grade 5 and below (Table 1).

#### **4.2.3.4 Occupation**

The analysis indicated that the majority of the respondents were not employed at the time of study. Of 40 respondents, 18 had some form of employment, while 22 were not employed. 10 respondents (25%) had formal employment while 8 (20%) had some sort of self employment, 20 respondents (50%) were unemployed and 2 respondents (5%) were retired (Table 1).

#### **4.2.3.5 Source of support**

Source of support was divided into financial and social support. The majority of the respondents had more than one source of support. All 40 respondents responded to this question and 23 (57.5%) reported having some form of social support from family, spouse and siblings. 24 respondents (60%) were receiving disability grants or old age pensions and 21 (52.5%) were supporting themselves. 1 respondent (2.5%) reported that support was provided by the community, and another 1 (2.5%) reported no support at all (Table 1).

### **4.3 Comparison of results pre- and post- education**

Selected questions were analysed using Chi square tests (questions 1, 6, 7, 8 and 12) and paired t-tests to compare the scores pre-education and post-education. These are the main variables of interest in this study (the dependent variables). The rest have been analysed using descriptive statistics (frequencies).

#### **4.3.1 Knowledge**

The participants were asked about their knowledge of mental illness in general and their diagnosis in particular before the main variables of interest in this study. This was done because knowledge is the basis of any behaviour change, including medication compliance and symptom management.

##### **4.3.1.1 Knowledge of mental illness**

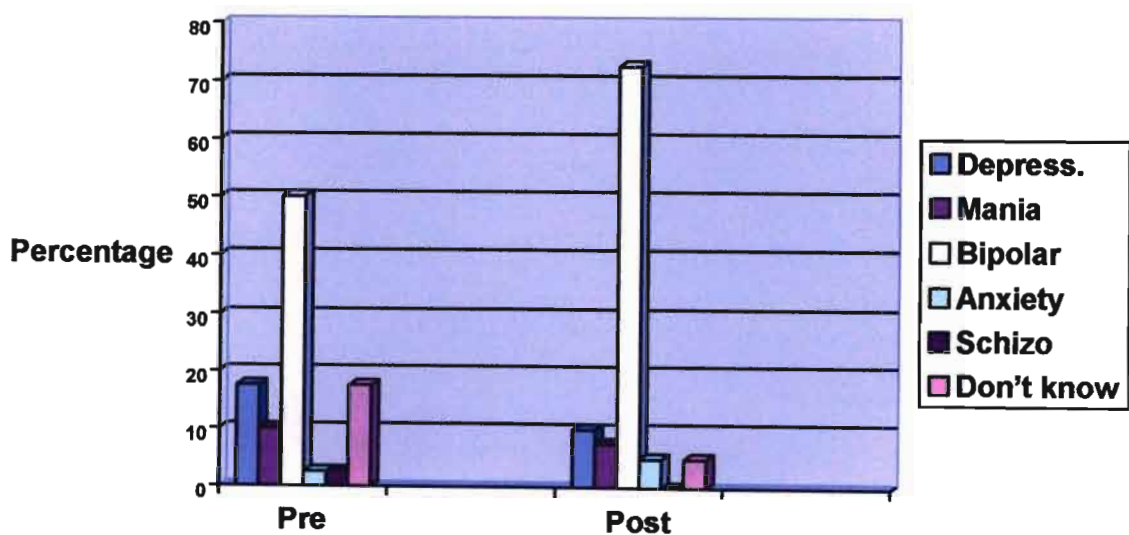
**Table 2:** A Chi square test of understanding of mental illness pre- education and post-education (Note: 'Understanding' refers to understanding of mental illness and 'Lack of' refers to lack of understanding of mental illness).

	Understanding	Lack of understanding	Total
Pre psychoeducation	21	13	34
Post psychoeducation	25	9	34

Chi-square = 30.293, df=12, p= 0.003 (< 0.05, statistically significant)

Thirty four respondents responded to this question before and after psychoeducation. The analysis indicates that psychoeducation had a significant effect on respondents' knowledge on mental illness/ psychoeducation has significantly improved respondents knowledge on mental illness with Chi-square of 30.293 and p value < 0.05.

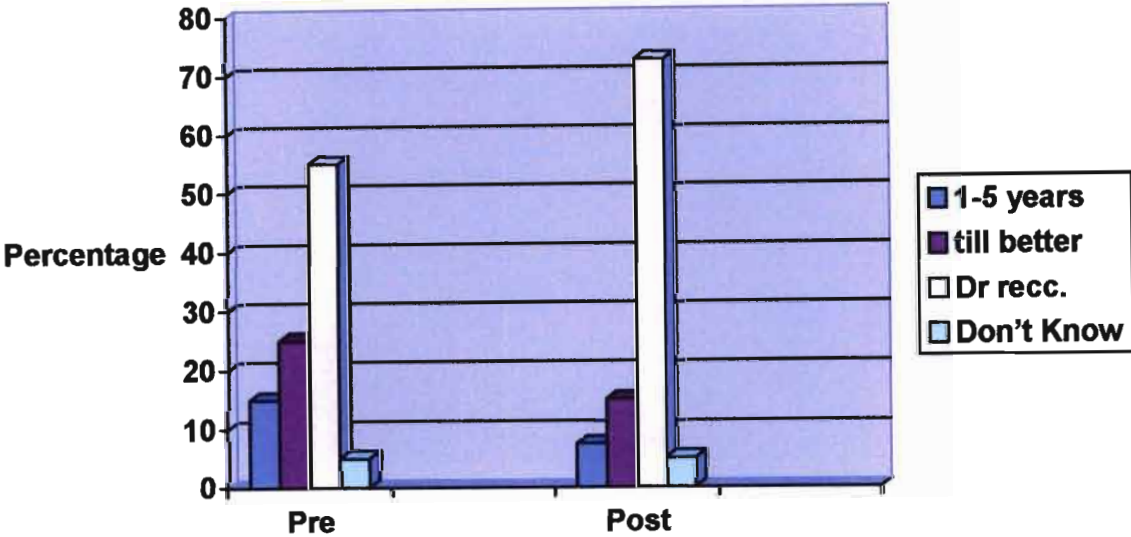
#### 4.3.1.2 Knowledge of their diagnosis



**Figure 4:** Knowledge of the diagnosis pre- education (N=40) and post- education (N=38)

Forty respondents responded to this question prior to education while only 38 responded after the education. The analysis indicates that 29 respondents (72.5%) knew their diagnosis after the education (Figure 4) whereas 20 respondents (50%) had known their diagnosis prior to going on the course. The number of respondents who did not know reduced from 7(17.5%) prior to education to 2 (5%) after the education.

**4.3.1.3 Duration of taking medication**

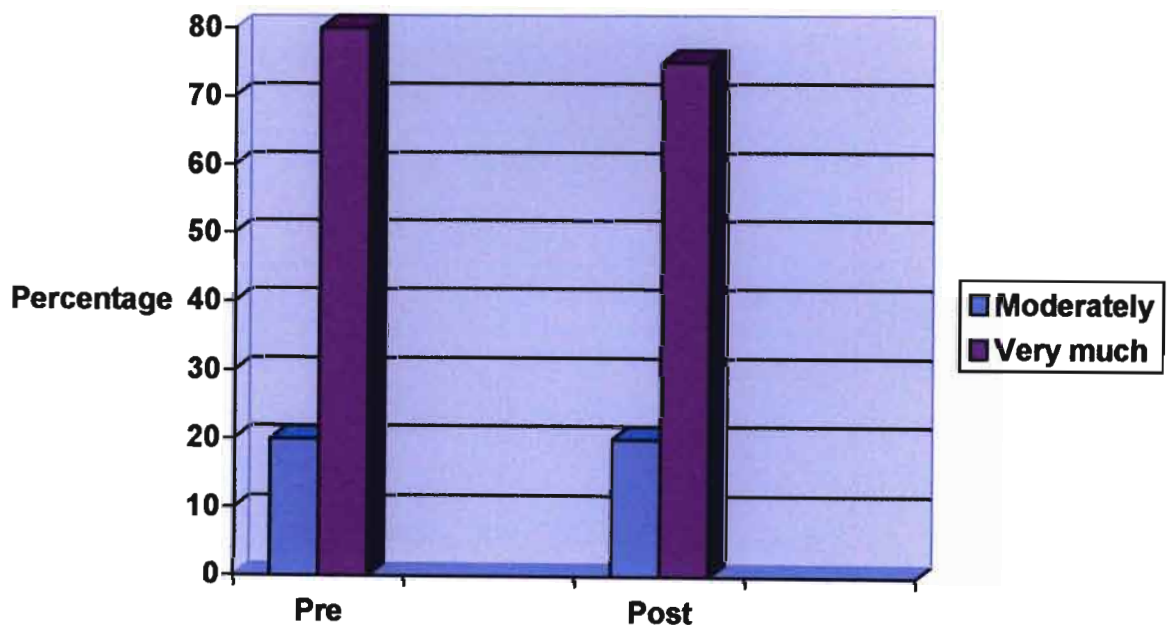


**Figure 5:** Duration of taking medications pre- education (N=40) and post- education (N=38)

Forty respondents responded to this question prior to education, while only 38 responded after the education. The analysis indicates that 6 respondents (15%) felt that they would take the medication for a period of one – five years, prior to education while only 3 (7.5%) felt this way after the education. 10 respondents (25%) felt they would continue taking their

medication until they recovered (until they got better) prior to the education, while 6 respondents (15%) felt this way after the education. 20 respondents (55%) felt they would continue taking their medication until their doctor recommended otherwise prior to education while 29 respondents (72.5%) felt this way after the education. The majority of the respondents, more than half, 55% (prior) and 72.5% post education felt that they would continue taking medication until their doctor recommended otherwise (refer Figure 5).

#### 4.3.1.4 Perceived effects of medication



**Figure 6:** Perceived effects of medication pre- and post- education (N=40 and 38 respectively)

All respondents, 40 (100%) felt that the medication they were taking was helpful. There was no significant change on scores prior to education and after education. 8 Respondents (20%) perceived moderate effects prior to education and the same number of respondents, 8, (20%)

perceived moderate effect after the education. 32 respondents (80%) stated that medication helped them very much prior to education and 30 respondents (75%) stated the same after education. 2 respondents did not respond to this question after education (Figure 6).

#### 4.3.1.5 Knowledge about symptom management techniques

This question had 13 variables (symptom management techniques, 10 of these techniques were positive techniques of managing symptoms and were encouraged in psychoeducation while 3 were negative techniques hence they were discouraged), These 13 variables were analysed separately.

**Table 3:** presents a summary of Chi-square tests for the 13 tests (in order from most significant to most insignificant)

Symptom management technique	'no' to 'yes' changes	p-value	Significant change
Deep breathing exercises	14 out of 15	0.0005	Yes
Meditation	11 out of 11	0.0005	Yes
Yelling at voices	10 out of 10	0.001	Yes
Working / occupying self	8 out of 8	0.0039	Yes
Taking a warm bath	6 out of 6	0.0156	Yes
Talking to someone	5 out of 5	0.03125	Yes
Seeking professional help	5 out of 5	0.03125	Yes
Taking a walk	3 out of 3	0.125	No
Listening to music	2 out of 2	0.25	No
Isolating oneself	1 out of 1	0.5	No
Taking medication	1 out of 2	0.75	No
Using alcohol	None		No
Using drugs	None		No

From the above table, the analysis indicates that the course has been successful in improving the participants' knowledge on 7 ways of managing symptoms out of 10 positive ways of managing symptoms with the p values ranging from 0.0005 to 0.03125, and it did not influence their knowledge on the three negative ways of managing symptoms with p values of 0.125, 0.25 and 0.75 which was expected.

#### 4.3.2 Medication compliance

**Table 4:** Chi square test of medication compliance 2 weeks prior to psychoeducation and post- education.

	<b>Missed Medication</b>	<b>Did not miss medication</b>	<b>Total</b>
Pre psychoeducation	14	24	38
Post psychoeducation	10	28	38

Chi-square= 16.503, df= 2, p = 0.000 (< 0.05, statistically significant)

Thirty eight respondents responded to this question before and after psychoeducation. The analysis indicate that psychoeducation significantly improved respondents compliance to their medication with Chi-square of 16.503 and p value <0.05.

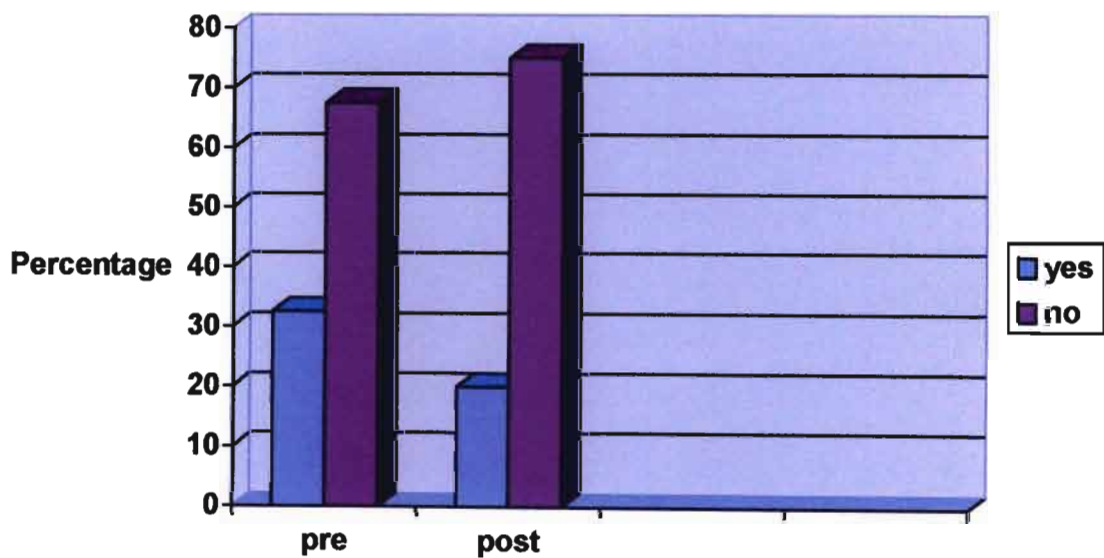
##### 4.3.2.1 Reasons for missing medication

Four (4) of the 5 respondents who missed medication prior to going on the course but not on the course indicated that it was due to not having medication, they had missed their appointment date at the clinic, hence did not have the medication and 1 did not feel like taking

the medication. The respondent who did not miss taking medication prior to going on the course but did miss taking it while on the course did not give a reason for this action.

Since the main reason for a change in taking medicine (for those who previously missed it) appeared to be availability, it does not seem that being on the course as such caused the change in reasons why respondents missed medication.

#### 4.3.2.2 Change of medication

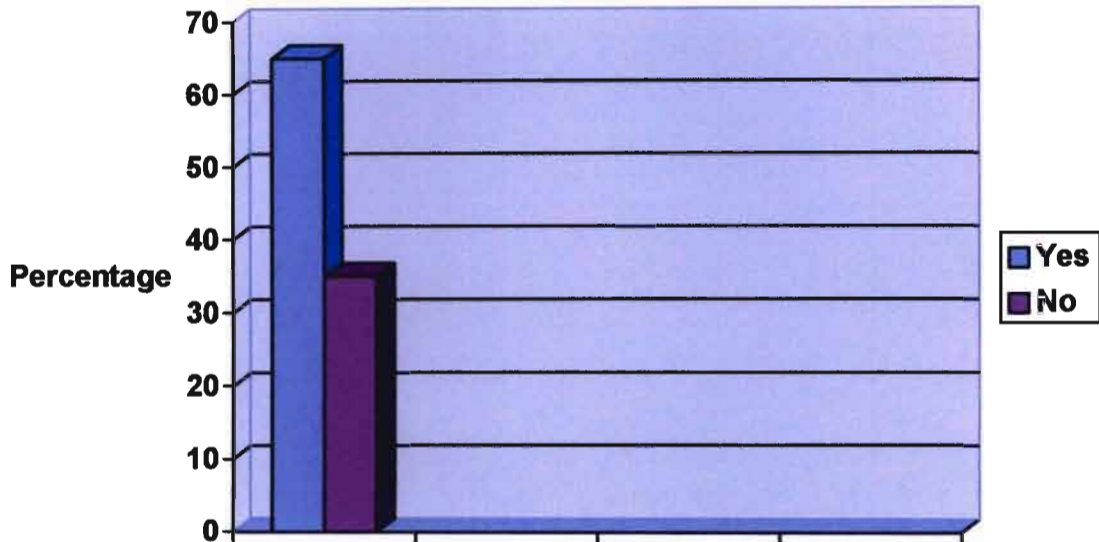


**Figure 7:** Change of medication 6 weeks prior to education and 6 weeks during education. (N=40 and N=38 respectively).

The analysis indicates that 13 respondents (32.5%) reported a change in their medication 6 weeks prior to education and 8 respondents (20%) reported a change in their medication during the education period (Figure 7).

### 4.3.3 Symptom management

#### 4.3.3.1 Relapse



**Figure 8:** Recurrence of symptoms (relapse) (N=40)

The analysis indicates that majority of the respondents had relapsed one time during their illness. Of 40 respondents who answered this question, 26 respondents (65%) had periods of relapse at one point in the course of the illness and 14 respondents (35%) had not relapsed.

#### 4.3.3.2 Use of symptom management techniques

Way of management	'no' to 'yes' changes	p-value	significant change
Deep breathing exercises	0 out of 1	0.5	No
Meditation	0 out of 1	0.5	No
Yelling at voices	None		No
Working / occupying self	0 out of 2	0.25	No
Taking a warm bath	None		No
Talking to someone	0 out of 1	0.5	No
Seeking professional help	1 out of 2	0.75	No
Taking a walk	None		No
Listening to music	None		No
Isolating oneself	None		No
Taking medication	0 out of 3	0.125	No
Using alcohol	None		No
Using drugs	None		No

**Table 5:** Summary of results for changes in ways of managing symptoms (from pre- to post-course).

The analysis from table 5 indicate that in none of the above was there a significant change (before going on the course to after going on the course) in the way respondents managed their symptoms with p values > 0.05.

### 4.3.3.3 Relationship between knowing symptom management techniques and using them

The values of the phi correlation coefficient between knowing symptom management techniques and using them are given in the table below.

Symptom management technique	Pre- course	Post- course
Talking to someone	0.756	0.408
Listening to music	0.629	0.507
Deep breathing exercises	0.653	0.028
Yelling at voices	0.695	0.223
Taking medication	0.429	0.052
Seeking professional help	0.929	0.500
Meditation	0.671	0.088
Working / occupying self	0.714	0.320
Taking a warm bath	0.671	0.182
Taking a walk	0.591	0.475
Isolating oneself	0.442	0.509
Using alcohol	0.906	0.898
Using drugs	1	1

**Table 6:** phi correlation coefficient between knowing symptom management techniques and using the techniques to manage the symptoms of illness.

When interpreting the phi coefficients, the values in table 6 should be considered together with the (questions on knowledge of symptom management techniques and use of them) cross tabulations for the pre- and post- education responses (table 7).

**Pre course counts    Post course counts**

<b>Symptom management technique</b>		<b>00</b>	<b>01</b>	<b>10</b>	<b>11</b>	<b>00</b>	<b>01</b>	<b>10</b>	<b>11</b>
Talking to someone	1	10	0	4	16	7	0	14	14
Listening to music	2	12	1	5	12	13	1	9	12
Deep breathing exercises	3	17	1	4	8	4	1	23	7
Yelling at voices	4	28	0	1	1	22	0	12	1
Taking medication	5	3	1	5	21	2	2	13	18
Seeking professional help	6	10	1	0	19	5	0	9	21
Meditation	7	23	1	2	4	13	2	16	4
Working / occupying self	8	13	0	5	12	8	0	18	9
Taking a warm bath	9	23	2	1	4	21	3	8	3
Taking a walk	10	15	2	4	9	18	2	7	8
Isolating oneself	11	17	7	1	5	23	6	1	5
Using alcohol	12	23	1	0	6	29	1	0	5
Using drugs	13	28	0	0	0	33	0	0	0

**Table 7:** Knowledge of symptom management techniques and use of the techniques pre- and post- course responses.

**Key:**

00 – Did not know and did not use.

01 - Did not know but did use.

10 – Did know and did not use.

11 – Did know and did use.

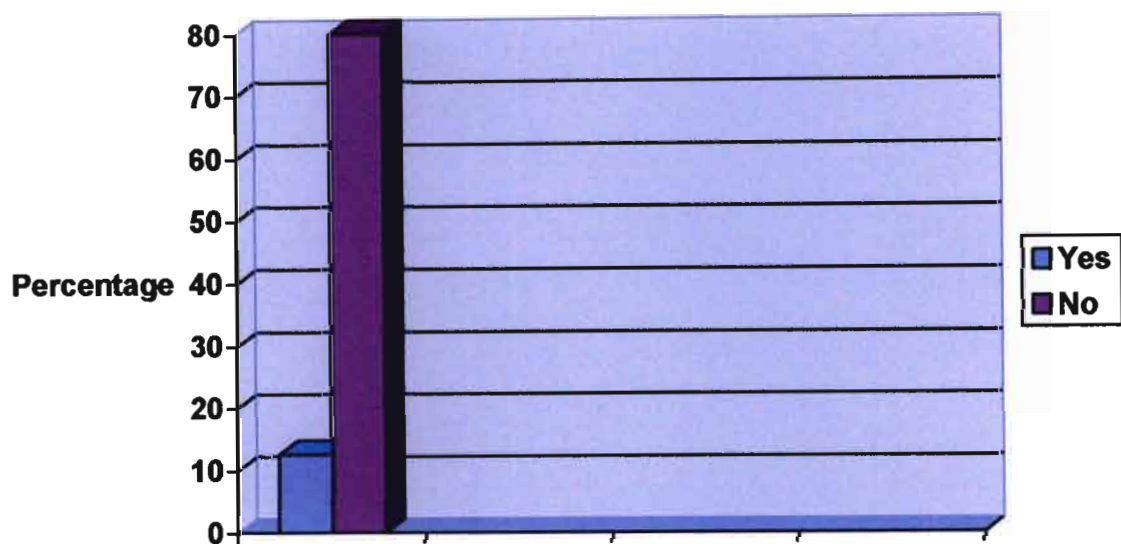
From table 6 it can be seen that the pre- course phi coefficients are much larger than the post- course ones. The reason for this is that (with the exception of “isolating oneself”) the counts at the same codes (00 and 11) are much greater than those at the different codes (01 and 10) in the case of the pre- course counts. High counts at same codes and low counts at different codes increase the value of phi. For the post- course counts there is a substantial increase in the 10 (did know and did not use) category. Such an increase will decrease the value of phi. For the following ways of managing symptoms this increase in the 10 (did know and did not use) category resulted in a decrease in the 00 (did not know and did not use) category : **talking to someone, deep breathing exercises, yelling at voices, seeking professional help, meditation and working / occupying self**. The difference between the 2 categories is in the change from “did not know” to “did know”. Although their decision on use (did not use) is the same for both categories, it is based on “did not know” (no knowledge) in the pre- course cases and on “did know” (some knowledge) in the post-course cases. Therefore the course appears to have been informative on at least these above mentioned ways of symptom management.

In some of the other ways of managing symptoms (**listening to music, taking medication, taking warm bath, taking a walk**) there is also an increase in the 10 category count, but these increases are more as a result of there being 5 more respondents (35 versus 30) who answered the post- course questions 6 and 12 than the corresponding pre- course ones. Most of these 5 extra respondents belong to the 10 category. Therefore it would be more difficult to attribute these changes to going on the course.

The respondents’ views on “**isolating oneself**” as a way of managing symptoms of illness were not altered by attending the course (the higher count at the 00 category for the post- course table is as a result of the 5 extra respondents).

The respondent had a strong views on the **use of alcohol** (high counts in the “did not know and did not use” category pre and post course) and **use of drugs** (all counts in the “did not know and did not use” category pre- and post- course) as a way of managing symptoms of illness.

#### 4.3.3.4 Additional education within the experiment period



**Figure 9:** Additional education apart from experimental psychoeducation during the 6 weeks period (N=37)

The analysis indicates that few respondents had any education concurrently with psychoeducation. 5 respondents (12.5%) indicated that they received some form of education regarding their illness and medication from the clinic staff during the same period they were undergoing psychoeducation. 32 respondents (80%) reported that they did not receive any type of education apart from the psychoeducation conducted by the researcher.

#### 4.4 Relationship between social variables and knowledge, medication compliance and symptom management

The social variables considered have all been categorised in 2 categories. These are family support (have, do not have), education (grade 7 or below, grade 8 or above), gender (male, female) and marital status (married now, not married now).

##### 4.4.1 Understanding of mental illness

Variable	Chi-square pre-course	significant	Chi-square post- course	significant
family support	0.163 (0.686)	No	0.152 (0.697)	no
Education	1.652 (0.199)	No	0.629 (0.428)	no
Gender	2.947 (0.086)	yes <sup>1)</sup>	0.152 (0.697)	no
Marital status	3.304 (0.069)	yes <sup>2)</sup>	1.654 (0.198)	no

**Table 8:** Social variables and understanding of mental illness

##### 1 Gender

	PRE		Total
	Understanding	Lack of Understanding	
GENDER male	7	8	15
female	15	5	20
Total	22	13	35

**Table 9:** Gender and understanding of mental illness.

Before going on the course, a higher proportion of females (15) than males (7) had a good understanding of mental illness. This situation changed after going on the course, when a number of males changed their interpretation of mental illness.

## 2 Marital Status

		PRE		Total
		Understanding	Lack of Understanding	
MARITAL STATUS	not married	10	10	20
	now married	12	3	15
Total		22	13	35

**Table 10:** Marital status and understanding of mental illness.

Before going on the course, a higher proportion of married respondents (12) than not married respondents (10) had a good understanding of mental illness. This situation changes after going on the course when a number of not married subjects changed their interpretation of mental illness.

### 4.4.2 Knowledge and use of symptom management techniques.

The 4 variables of interest are the number of ways of managing symptoms of illness known before going on the course, the number of ways of managing symptoms of illness known after going on the course, the number of ways of managing symptoms of illness used before going on the course and the number of ways of managing symptoms of illness used after going on the course.

#### 4.4.2.1 Knowledge : pre- versus post- course (question 6)

The mean numbers of symptom management techniques known pre- and post- course are 4.81 and 6.93 respectively. A paired t-test shows that the course resulted in a significant increase in the mean number of symptom management techniques known ( $t = 5.27$  with a p-value of 0.000008).

#### 4.4.2.2 Use : pre- versus post- course (question 12)

The mean numbers of symptom management techniques used pre- and post- course are 4.19 and 3.94 respectively. A paired t-test shows that the course resulted in a significant decrease in the mean number of symptom management techniques used ( $t = 1.488$  with a p-value of 0.074 is weak evidence in favour of a decrease).

### 4.4.3 Symptom management and social factors

#### 4.4.3.1 Knowledge (pre- and post- course) for different social variables (question 6)

The tables below give a summary of the results of t-tests for difference between means for knowledge of symptom management techniques pre- education and post- education for the 4 social variables that were considered.

Time	Mean (support)	mean (no support)	T	p-value	significant
Pre- course	5.07	4.67	0.508	0.616	No
Post- course	6.71	6.59	0.139	0.890	No

**Table 11a** – Family support

Time	Mean (grade 7 -)	mean (grade 8 +)	T	p-value	significant
Pre- course	3.78	5.35	-2.364	0.026	Yes
Post- course	5.00	7.67	-3.656	0.001	Yes

**Table 11b – Education**

Time	Mean (male)	mean (female)	T	p-value	Significant
Pre- course	4.09	5.33	-1.574	0.127	No
Post- course	6.07	7.11	-1.252	0.220	No

**Table 11c – Gender**

Time	Mean (married)	mean (not married)	t	p-value	significant
Pre- course	5.20	4.68	0.750	0.460	No
Post- course	6.33	6.82	-0.661	0.533	No

**Table 11d – Marital status**

From tables 11 a, b, c and d, the analysis indicated that the only significant variable was education. The subjects that were better educated (grade 8 or higher) knew of more ways of managing symptoms of illness than those that were less educated (grade 7 or less).

**4.4.3.2 Use of symptom management techniques (pre- and post- course) for different social variables (question 12)**

The tables below give a summary of the results for t-tests for difference between means for use of symptom management techniques pre- education and post- education for the 4 social variables that were considered.

<b>Time</b>	<b>Mean (support)</b>	<b>mean (no support)</b>	<b>T</b>	<b>p-value</b>	<b>significant</b>
Pre- course	4.26	4.33	-0.072	0.943	No
Post- course	3.63	3.35	0.267	0.791	No

**Table 12a – Family support**

<b>Time</b>	<b>Mean (grade 7 -)</b>	<b>mean (grade 8 +)</b>	<b>T</b>	<b>p-value</b>	<b>significant</b>
Pre- course	3.09	4.87	2.102	0.044	Yes
Post- course	2.15	4.26	2.058	0.047	Yes

**Table 12b – Education**

<b>Time</b>	<b>Mean (male)</b>	<b>mean (female)</b>	<b>T</b>	<b>p-value</b>	<b>Significant</b>
Pre- course	3.79	4.65	-0.893	0.379	No
Post- course	3.60	3.43	0.162	0.872	No

**Table 12c – Gender**

Time	mean (married)	mean (not married)	t	p-value	significant
Pre- course	4.15	4.38	-0.229	0.820	No
Post- course	3.23	3.65	-0.389	0.700	No

**Table 12d – Marital status**

Tables 12 a, b, c, and d, showed that the analysis indicated that the only significant variable was education. The subjects that were better educated (grade 8 or higher) used more ways of managing symptoms of illness than those that were less educated (grade 7 or less).

#### 4.4.4 Medication compliance

The tables below give a summary of results for medication compliance pre- and post-education for the 4 social variables that were considered.

**Tables 13a – Family support**

(i) Pre- course

		FAMILY SUPPORT		Total
		Do not have	Have	
PRE	no	11	14	25
	yes	6	9	15
Total		17	23	40

Chi-square = 0.061 with a p-value of 0.864.

(ii) Post- course

		FAMILY SUPPORT		Total
		Do not have	Have	
POST	no	12	16	28
	yes	5	5	10
Total		17	21	38

Chi-square = 0.152 with a p-value of 0.697.

**Tables 13b – Education**

(i) Pre- course

		EDUCATION		Total
		grade 7 or lower	grade 8 or higher	
PRE	no	6	19	25
	yes	9	6	15
Total		15	25	40

Chi-square = 5.184 with a p-value of 0.023<sup>1)</sup>.

(ii) Post- course

		EDUCATION		Total
		grade 7 or lower	grade 8 or higher	
POST	no	8	20	28
	yes	7	3	10
Total		15	23	38

Chi-square = 5.293 with a p-value of 0.021<sup>1)</sup>.

**Tables 13c – Gender**

(1) Pre- course

		GENDER		Total
		Male	Female	
PRE	no	10	15	25
	yes	7	8	15
Total		17	23	40

Chi-square = 0.171 with a p-value of 0.68.

(ii) Post- course

		GENDER		Total
		male	Female	
POST	no	10	18	28
	yes	7	3	10
Total		17	21	38

Chi-square = 3.503 with a p-value of 0.061<sup>2)</sup>.

**Tables 13d – Marital status**

(i) Pre- course

		MARITAL STATUS		Total
		not married		
		now	married	
PRE	no	14	11	25
	yes	11	4	15
Total		25	15	40

Chi-square = 1.202 with a p-value of 0.273.

(ii) Post- course

		MARITAL STATUS		Total
		not married		
		now	married	
POST	no	16	12	28
	yes	8	2	10
Total		24	14	38

Chi-square = 1.654 with a p-value of 0.198.

Tables 13 a, b, c and d, pre- and post- course show that the analysis indicated the following:

- 1) Respondents with a grade 7 or lower education were more likely to miss medication for the previous 2 weeks than those with a grade 8 or higher education.
- 2) Males were more likely to miss medication (than females) in the 2 weeks prior to the end of the course.

#### 4.5. Changes in symptoms of depression and mania

Severity of symptoms was measured using Goldberg mood scales (Goldberg mania and Goldberg depression scales). In these scales a difference of five or more scores in the scale from one assessment to the other is significant. The tables below presents changes in symptoms experienced by clients prior to education and after education.

**Paired Samples Statistics**

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Total score for depression	11.30	37	11.580	1.904
	Total score for depression	10.05	37	10.314	1.696
Pair 2	Total score for mania	9.39	38	10.569	1.715
	Total score for mania	9.08	38	10.294	1.670

**Table 14:** (Paired sample statistics) of symptoms of depression and mania pre- and post-education (Means, standard deviation and paired sample results)

	Paired Differences					T	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pair 1 Total score for depression - Total score for depression	1.24	2.629	.432	.37	2.12	2.877	36	.007
Pair 2 Total score for mania - Total score for mania	.32	1.141	.185	-.06	.69	1.705	37	.097

**Table 15:** t- test (Paired samples test) of depression and mania scores pre- and post- education

For pair 1 (depression score before and after education)  $t=2.877$ ,  $df=36$  and  $p < 0.05$  (or  $p=0.007$ ). This tells us the change in depression score before and after treatment is statistically significant i.e. average depression score before treatment (11.3 refer table 14) is statistically different from average score after treatment (10.05).

For pair 2 (mania score before and after education)  $t=1.705$ ,  $df=37$  and  $p=0.097$ . This tells us the change in mania score before and after treatment is not statistically significant. For the difference in score to be significant  $p$ , (significance level) must be less than 0.05. That is, average mania score before treatment (9.39 refer table 14) is not statistically different from average score after treatment (9.08).

## **4.6 Conclusion**

This chapter presented the findings of the study in areas of; participants' knowledge, medication compliance and symptom management. The analysis also included the relationship between selected social variables and dependent variables namely, knowledge, medication compliance and symptom management. Major findings of this study will be discussed in the following chapter (chapter 5)

## **CHAPTER FIVE:**

### **Discussion, Conclusion and Recommendations**

#### **5.1 Introduction**

In this chapter the researcher will discuss major research findings as presented in the preceding chapter (Chapter 4), in relation to relevant literature. The discussion will also be guided by the Information, Motivation and Behaviour Skills model which guided this study. Recommendations will also be made with regard to psychoeducation intervention as well as suggestions for further research.

This study aimed at evaluating effects of psychoeducation on medication compliance and symptom management for clients with bipolar affective disorder attending community psychiatric clinics in Ethekwini Health District. The participants were drawn from Escoval House and Austerville community psychiatric clinic. The objectives of this study were to:

- assess clients' knowledge regarding the illness and the medication before and after implementation of psychoeducation programme,
- assess symptom management skills the clients had before and after implementation of psychoeducation programme,
- develop and implement a psychoeducational programme for clients with bipolar affective disorder, and
- evaluate the effects of psychoeducation on medication compliance and symptom management.

Social demographic factors will be discussed first, in terms of their relationship with dependent variables in this study namely, knowledge, medication compliance and symptom management, followed by the objectives as stated above.

## **5.2 Social demographic factors**

In this study a few social variables were selected and tested to investigate their relationships with knowledge, medication compliance and symptom management, because if they weren't they would contaminate the rest of the study. The selected social variables were gender, marital status, family support and education level. These social variables will be discussed in relation to knowledge, medication compliance and symptom management.

### **5.2.1 Relationship of social variables (gender, marital status, family support and level of education) and knowledge, Medication Compliance and Symptom Management.**

#### **5.2.1.1 Gender**

The study had 23 (57.5%) females and 17 (47.5%) males (Figure 3). Though the number of female respondents is not equal to the number of male respondents, the difference is not statistically significant and this corresponds with literature that indicates that the disorder affects both sexes equally (Griswold & Pessar, 2000). The findings of the study revealed that gender had no impact on the respondents knowledge, medication compliance and symptom management with p values  $< 0.05$  (0.696, 0.061 and 0.872 respectively). These p values are greater than the set p value ( $<0.05$ ) hence they are statistically not significant.

#### **5.2.1.2 Marital status**

The study revealed that more than half of respondents 25 (62.5%) were not married. They were divorced, never married or widowed. Only 15(37.5%) were married (Table 1). The study also revealed that marital status had no influence on the respondents' knowledge about their illness, their compliance to treatment and their knowledge and use of symptom management techniques to cope with their illness with p values  $< 0.05$  (0.198, 0.198, and 0.700

respectively). These p values are greater than the set p value ( $<0.05$ ) hence they are statistically not significant.

### **5.2.1.3 Family support**

Source of support was divided into social and financial support. The majority of respondents had more than one source of support. 23 respondents (57.5%) reported having some form of social support either from family/parents, spouse or siblings. 24 (60%) were receiving a disability grants, 21 (52.5%) were supporting themselves and only 2(5%) reported having no support at all (Table1). The variable of interest was family support.

Availability of support, especially from family members, is associated with a high level of functioning and better illness management. According to Delgard, Bjork & Tambs (1995), families can be important in providing support to clients in terms of supporting their treatment, helping individuals identify early warning signs and encouraging them to seek professional help. It has also been shown that social and environmental factors, such as social support, may also moderate the effects of bipolar affective disorder. The findings of this study, however, revealed that the availability of family support did not impact on the respondents' knowledge, their compliance to treatment or symptom management with p values  $< 0.05$  (0.697, 0.697 and 0.791 respectively). These p values are greater than the set p value ( $<0.05$ ) hence they are statistically not significant.

### **5.2.1.4 Level of education**

All 40 respondents (100%) had some form of education. The study revealed that majority of respondents had had high school education. 18 respondents (45%) had gone up to grade 8-12, 7 (17.5%) had tertiary education. while 11(27.5%) had gone up to grade 6-7 and only 4(10%) had only gone up to grade 5 (Table 1).

The findings of this study revealed that respondents' level of education had no influence on respondents' knowledge, with a Chi square of 0.428 (Table 8). This is surprising because in this study the majority of respondents were literate and one would expect that they would have a better understanding level. On the other hand, this can be attributed to the fact that a lot of respondents had a better understanding of mental illness even before going on the course, and that there were only 6 respondents who changed their interpretation.

On the other hand, the findings of the study revealed that level of education had a significant influence on respondents' knowledge and use of symptom management techniques, with a p-value of 0.001 and 0.047 respectively (Table 12b) after the course. These p-values are statistically significant as they are  $<0.05$ , a set p-value, meaning that there is a high probability of level of education influencing the respondents' knowledge on symptom management techniques and use of these techniques.

Respondents' level of education also had a significant influence on their ability to take their medication as prescribed, with a Chi square of 5.293 and p-value of 0.021 (Table 13 b ii). This p-value is statistically significant, meaning that the probability that level of education influences medication compliance is high. This study revealed that respondents with grade 7 and lower were more likely to miss medication than respondents with grade 8 and above.

According to Johansson, Oleni & Fridlum (2002), education empowers people with greater sense of control and understanding of health and illness. This was established in a study the authors conducted in Sweden on patients' satisfaction with nursing care. Therefore it was not surprising to note that respondents with better education (grade 8 or higher) knew more ways of managing their symptoms and used them than their counterparts.

### **5.3 Discussion of the findings in relation to the objectives of the study**

#### **5.3.1 Knowledge of the illness**

Knowledge of the respondents will be discussed in this chapter to provide a background to other independent variables studied, which are medication compliance and symptom management.

The findings of this study revealed that psychoeducation improved the respondents' knowledge of mental illness in general with  $p$  value  $> 0.05$ . The study also revealed a significant change in respondents' knowledge of their diagnosis after the education. 29 respondents (72.5%) knew their diagnosis after the education, unlike only 20 (50%) who knew their diagnosis prior to the education (figure 4). The study also revealed that the number of respondents who did not know their diagnosis reduced from 7 to 2 after the education.

In these two variables, the study revealed that psychoeducation improved/ increased respondents' knowledge. This corresponds with a study conducted by Whiteside (1983) which aimed at determining if structured education programme with written reinforcements would statistically bring about any increase in the clients' knowledge. It revealed that clients in the education programme improved their knowledge about illness and medication than those in the control group. Similar results were reported in an exploratory study by Soares et al (1997) in Australia on the effects of a psychoeducation package on outpatients with bipolar disorder. The study showed that clients who participated in the psychoeducation group showed significant improvement in knowledge about illness, attitudes towards prescribed drugs, and self esteem.

### **5.3.2 Knowledge of symptom management techniques**

The study revealed that psychoeducation increased respondents' knowledge and skills on symptom management techniques. Of 10 positive ways of managing symptoms, namely: deep breathing exercises, meditation, yelling at the voices, working/occupying self, taking a warm bath, talking to someone, seeking professional help, taking a walk, listening to music and taking medication, the study revealed that there was a significant change in 7 techniques (where the respondents acquired knowledge and skills on these techniques after education). The p-values in all these 7 techniques were  $<0.05$  which indicates that they were statistically significant (Table 3).

The study also revealed interesting results in the sense that out of 3 negative ways of managing symptoms namely: isolating self, using alcohol and using drugs, there was no significant change in respondents' perceptions prior to education and after the education. Managing symptoms by isolating oneself had a p-value of 0.5, which is statistically not significant. Whereas on managing symptoms by using alcohol and drugs, none of the respondents identified them as techniques of managing symptoms prior to education or after education. These results were expected, as these techniques were discouraged during the psychoeducation.

The Information, Motivation and Behaviour model contends that information that is directly relevant to the desired behavioural change is a prerequisite for change and that the actual skill necessary to accomplish the change is the third prerequisite for change (Fisher & Fisher, 1992). In this study, respondents were empowered with necessary knowledge and skills so that they could manage/cope with their symptoms. This improvement or increase in knowledge is the first step towards achieving the desired behaviours in this study namely medication compliance and symptom management.

#### **5.4 Medication compliance**

The findings of this study revealed that psychoeducation improved respondents' compliance with their medication with  $p$  value  $< 0.05$  (0.000) (Table 4). The findings revealed that out of 38 participants who responded to this question 28 complied with their medication throughout the psychoeducation period, unlike only 24 who did so before the education (Table 4). The findings also revealed that 5 respondents who missed medication prior to education did not miss their medication during education and 1 respondent who did not miss the medication prior to education missed the medication during the education (Table 4).

Literature indicates that bipolar affective disorder may involve long periods of remission between episodes and sometimes everyone can be lulled into a false sense of security (Watkins, 1985). This fosters denial of the illness and premature medication cessation. Research has also been conducted to ascertain causes of non-compliance. Knowledge deficit, side effects and patient/therapist relationships have been identified as major causes of non-compliance (Chen, 1991). Therefore client education on the course of the illness and its management is very important so that clients are aware that periods of remission do not necessarily mean that they have fully recovered from the illness. This might explain the participants improved compliance with their treatment during this study period. All participants were stable enough hence they needed to understand the course of their illness and the importance of complying to prescribed medication. Client education also fosters the client/nurse relationship. The nurses' ongoing assessment and understanding through the education process is the key to promoting medication compliance. Through the use of the therapeutic relationship, both the nurse and the client share the responsibility for medication compliance, additionally, promoting medication compliance requires the clients' understanding of their illness and need for medication (Forman, 1993).

Kemp & David (1996) contend that in mental illness, insight has been associated with compliance (insight is defined as awareness of the illness, an ability to recognise symptoms as part of an illness and acceptance of treatment). Therefore earlier findings of this study that revealed that psychoeducation increased respondents' understanding about their illness are important in this regard. Additionally all respondents reported that the treatment they were taking was helpful. After education, it was also noted that a higher proportion of respondents (72.5%, refer figure 5) reported that they would stick to the prescribed regimens unless advised by their doctors. This knowledge gain and insight might continue influencing the respondents' compliance to treatment in the long run.

Falvo (1995) contends that patient education can be a key component in enabling patients to follow accurately the recommendations of health professionals. This corresponds with the findings of a review of available literature on psychoeducation for clients with bipolar affective disorder by Gonzalez-Pinto et al (2004), which discovered that a number of studies demonstrated that psychoeducation enhances compliance to treatment, and one study found that it improved outcomes in bipolar disorder. In the same review, one study by Kelly & Scott (1991), deduced that psychoeducation significantly improved medication compliance among clients with bipolar affective disorder.

On the other hand there are some studies that have reported conflicting results. A review of literature by Mueser et al (2004) where in two studies reviewed, improved knowledge had no effects on taking medication as prescribed although one study had reported adherence to treatment. Similarly, a study by Stricker et al (1986) on educating patients with schizophrenia about psychiatric medication, showed that at a 35 week follow up, there was no difference in compliance or attitudes towards treatment observed between the experiment group and the control group. A similar study by Smith et al (1992), evaluated a group education intervention.

The study aimed at examining the effect of residual psychotic symptom on knowledge acquisition by people with schizophrenia. Findings were similar to those reported by Stricker et al (1986), where no significant improvement in patients' compliance or insight was observed in either group, though both groups showed an increase in knowledge about their medication. Both these studies suggest that whilst educational interventions are effective in improving patients' knowledge, they have very little impact on compliance with medication.

#### **5.4.1 Reasons for defaulting on treatment**

According to Lehne et al (1994), Medication non-compliance can be intentional or unintentional. Some underlying factors for unintentional non-compliance include complex medication regimens that clients do not understand, inability to pay for medication, forgetfulness, unpleasant side effects, failure to understand instructions due to severity of the illness, lack of insight and lack of understanding of the illness. Clients cannot follow treatment recommendations if they do not understand or accept them. When the clients understand their symptoms and the need for medication and also if they have clear, explicit instructions, they are more likely to assume increased responsibility for self care, which can increase the likelihood of compliance with the medication regime (Crane et al, 1996).

This study revealed that only one respondent missed the medication intentionally, (he did not feel like taking the medication) whereas the other five respondents stated that the reason for missing their medication prior to education was that they did not visit the clinic when they were supposed to, hence they did not have the medication. In this study psychoeducation also influenced or increased responsibility for self care in the five respondents, because it was discovered that during the six weeks period of psychoeducation they did not miss their medication.

Change in medication regimens or complicated regimens are some of the major reasons for non-compliance to treatment (Lehne et al, 1994). In this study however only 8 respondents (20%) reported that their medications were changed during the psychoeducation period. This number is too low to have influenced the respondents' overall compliance to treatment.

#### **5.4.2 Attitudes towards medication**

All 40 respondents (100%) felt that the medication they were taking was helping them. The education did not necessarily impact on the respondents' perceptions on the effects of medication. 8 respondents perceived moderate effects prior to going on the education and after education. 32 respondents thought the medication helped them very much prior to the education and 30 felt this way after the education. 2 respondents did not respond to the question after the education (Figure 6).

On the other hand, the findings of the study revealed that education had a significant effect on respondents' views on how long they felt they needed to take their medication. 22 respondents (55%) felt they would follow their doctors' recommendations prior to education and 29 (72.5%) felt this way after the education (Figure 5). The number of respondents who felt they would only take the medication for a period of 1-5 years or till they felt they have recovered also decreased after education for instance from 6 (15%) to 3(7.5%) and 10(25%) to 6 (15%) respectively. This is very important as it indicates the participants' determination to adhere to prescribed medication. McDaniel in Ringel (1997) contends that urging people to behave in a way they otherwise would not behave will work only if they grasp the rationale to do so. The author states that people feel helpless when confronted with illness, the sicker they are, the more willing they are to comply, as they get well, they stop taking the medication. This might be true in this study where all respondents were stable enough hence they needed to understand the rationale for continuing to take their medication. The change in

respondents' view towards taking of medication will have a great long term impact on respondents' compliance to treatment.

## **5.5 Symptom management**

### **5.5.1 Symptom management techniques**

The findings of this study revealed that there was no significant change in symptom management techniques used by the respondents prior to education and after education (Table 5). After education, there were some changes in techniques used by respondent to manage their symptoms, but these changes were not statistically significant. Of 13 techniques of symptom management there were changes in 6 techniques namely: deep breathing exercise, meditation, working/occupying self, talking to someone, seeking professional help and taking medication, with p-values which were higher than the set p-value of 0.05 which meant that the values were not statistically significant. For instance the p-value for deep breathing exercises was 0.5, for meditation the p-value was 0.5, p-value for working/occupying self was 0.25, p-value for talking to someone was 0.5, p-value for seeking professional help was 0.75 and p-value for taking medication was 0.125. This means that the probability of respondents using new ways of managing their symptoms after education is low. Though this was the case, following results of changes on respondents' symptoms of depression after education indicates the likelihood that they were able to manage or cope with their symptoms more effectively after the psychoeducation. Additionally the fact that there was an improvement in respondents' knowledge about symptom management techniques (which is one of the prerequisites for change, according to the Information, Motivation and Behaviour Skills model by Fisher & Fisher (1992)) indicated that respondents were more equipped with knowledge and skills to enable them to manage their symptoms.

Several investigations that examined clients' recognition of symptoms, signs of relapse and self care strategies, indicated that these variables significantly influenced the consumer's ability to monitor and manage symptoms (Baker, 1998; Hamera, Peterson, Young & Schaumloffel, 1992; Novacek & Raskin, 1998; O'Connor, 1991). Literature also suggests that active symptom monitoring is important in preventing symptoms of relapse and that consumers can be active participants in the development of strategies for managing their symptoms and medication through education interventions (Backer, 1998; O'Connor, 1991).

The results of this study in the area of use of symptom management techniques are not surprising as there were no major relapses during the education period, hence although the respondents had new knowledge and skills on symptom management techniques, the chances of using the new skills were low.

The findings also revealed that prior to education 26 respondents (65%) reported to have had an episode/episodes of relapse at one point during their illness (refer figure 8). This might be attributed to the fact that bipolar affective disorder, like other mental health disorders, is a chronic and persistent illness (Hatfield, 1990).

### **5.5.2 Changes in symptoms of Depression and Mania**

According to Perry, Tarrier, Morris, Limb & McCarthy (1999), psychoeducation offers clients and families a conceptual and practical approach to the illness and its treatment and increases satisfaction with the treatment and adherence. Brief psychoeducation can enhance adherence and identification of the early warning signs of the illness. Perry et al (1998) found that teaching clients to recognize the early symptoms of mania and depression and to seek treatment increased the time to first relapse and improved social functioning. People suffering from a serious mental health problem often experience prodromal or residual symptoms after an acute phase of an illness or an episode. Apart from identification of these symptoms and

seeking treatment, education also helps clients identify new strategies to cope with these symptoms.

This study revealed interesting results on the effects of psychoeducation on respondents' symptoms. Psychoeducation reduced symptoms of depression experienced by respondents before the course. The paired sample test (Table 15) revealed a p-value of 0.007. (This p-value is statistically significant -  $<0.05$ ). This means that there is a high probability that psychoeducation did influence respondents' coping abilities. The paired sample statistics also revealed that the average score for depression before psychoeducation was 11.30 which is statistically different from the average score after psychoeducation which was 10.05 (Table 14). This can be attributed to the fact that with the education respondents were more knowledgeable on how to manage/cope with their depressive symptoms.

Mueser et al (2004), contends that symptom management is a strategy designed to help individuals with mental illness collaborate with health professionals on a regular basis. The process of skill teaching reduces their susceptibility to illness and helps them cope effectively with their symptoms. It is not surprising therefore that with frequent contact during the psychoeducation period respondents managed to deal with depressive symptoms. It is also known that a combination of psychotherapy and pharmacology may allow clients to achieve a better symptomatic and functional recovery and to improve their quality of life (Colom & Vieta, 2004). The findings of this study are also similar to a study by Michalak Erin, Yatham Lakshmi, Wan Dante & Lam Raymond (2005) on impact of time limited psychoeducation group therapy upon perceived quality of life among patients with bipolar disorder in British Columbia. This study discovered that group psychoeducation was associated with improved quality of life in terms of general satisfaction and in relation to levels of physical functioning.

In the current study, however, it was noted that the education did not have any impact on manic symptoms experienced by the respondents. The paired sample test revealed a p-value of 0.097 (Table 15) which is not statistically significant, meaning that there is a low probability that psychoeducation would influence respondents' ability to cope with symptoms of mania. The paired sample statistics (Table 14) also revealed that the mean score for mania before education was 9.39 and after psychoeducation the mean score was not statistically different - 9.08. These results are similar to results found by Magandla (1991) in Umtata, South Africa, on a study on effects of discharge preparation programme (which involved education) on rehabilitation of schizophrenia clients. The study revealed that the intervention did not show any significant differences on symptom level, readmission rates and level of functioning.

#### **5.6 Limitations of the study**

The study was limited to one community psychiatric clinic (Escoval House) and one of its satellite clinics (Austerville) in Ethekewini Health District of KwaZulu – Natal. These two clinics are located in the Durban metropolitan area, serving clients who reside within the city and a few who reside in other locations but are working within the city. When reviewing the results therefore one has to bear in mind the fact that the study was conducted in clinics in a metropolitan area. The study sample may not be truly representative of all the catchment population of the clinics.

The study also had some methodological pitfalls in the sense that not all participants attended all six sessions. 12% of respondents attended four sessions and some questions were not completed, especially during the post-test. Another methodological pitfall is that the pre-test assessment would influence the responses given in the post-test assessment as some of the respondents would be aware of what the expected responses were.

The design also had some pitfalls in the sense that it lacked control group, though the participants were randomly selected hence the findings of this study could not be generalised to the general population.

### **5.7 Implications for health services**

Group psychoeducation on illness, medication and symptom management is very important as it is a major way of empowering the clients with knowledge and skills to help them manage their illness and cope with problem symptoms. At the same time it is the best way of involving the clients in their illness management. Acquisition and mastery of knowledge and skills in the illness, medication and illness management skills are very important for clients living in the community as they increase the likelihood of clients' participation in treatment at this level.

The findings of this study have implications for improvement in community psychiatric services. Psychoeducation programmes were not available in this study setting. The results of this study indicate an increase in respondents' knowledge, improved compliance and an improvement in symptoms of depression which might impact on their general well being. This therefore indicates the need for community psychiatric clinics to plan and implement psychoeducation programmes for their clients on a regular basis. Policy makers need to ensure that the clinics are well staffed to ensure effective implementation of this kind of intervention. Mental health nurses play a major role in providing education to clients and help them manage their medication more effectively; hence they need to be well prepared for this role from their training and through periodic in-service education.

## 5.8 Conclusion

The findings of this study indicate strong evidence that group psychoeducation increased/improved respondents' knowledge and medication compliance. The findings also revealed that there was a significant improvement in the symptoms of depression experienced by respondents after psychoeducation.

On the other hand, the findings also indicated that this knowledge gain did not affect the respondents' ability to use new techniques of managing their symptoms. These findings may not be surprising as there were no major relapse during the psychoeducation period. Nevertheless, psychoeducation remains important because access to information about mental illness is crucial to people's ability to make informed decisions about their treatment and psychoeducation is the foundation for more comprehensive programmes.

This study also revealed that psychoeducation reduced respondents' depressive symptoms. Though respondents did not indicate a change in how they managed their symptoms after the education, there is likelihood that with the education they were able to cope more effectively with symptoms of depression. The findings of this study contradict what was hypothesized, that psychoeducation on bipolar disorder, medication compliance and symptom management would have no significant effect on clients' knowledge, medication compliance and their ability to manage their symptoms. However when interpreting the findings of this study one has to bear in mind that participants level of education had an impact on knowledge, medication compliance and symptom management.

All in all, this study revealed that psychoeducation about mental illness, medication and symptom management for clients with bipolar affective disorder, improves respondents' knowledge and medication compliance, but it did not affect the respondents' ability to manage their symptoms.

## **5.9 Recommendations**

### **5.9.1 Recommendations for Nursing Research**

- The researcher recommends that there is need for long term studies on effects of psychoeducation (studies that can follow up the respondents for a longer period of time) to determine if education would have any long term effects. Long term studies would also enable the evaluation of some variables like how psychoeducation would affect clients' relapse rates and rehospitalisation or length of hospital stay, which could not be evaluated in the current study.
- More research is also needed on effects of psychoeducation for inpatients with bipolar disorder in South Africa.
- There is need for other forms of psychoeducation to be researched in the South African setting, for instance individual psychoeducation and family psychoeducation.

### **5.9.2 Recommendations for Health Services**

- For programmes like psychoeducation to be effective they need to be ongoing and nurses need special preparation to conduct such programmes.
- A review of nursing staff level is crucial at this point in community psychiatric clinics, as planning, implementation and evaluation of any rehabilitation programme would require adequate staff in clinics.
- Policies and procedures also need to be in place to enable provision of comprehensive care to clients.
- Periodic evaluation of services is necessary to ensure sustainability of programmes, and quality assurance.

- Psychiatric nurses also require ongoing orientation and reorientation through in-service education, to update their knowledge and skills.
- Community psychiatric clinics need to refocus the attention of care (from medical treatment to rehabilitation) since it is evident that more psychosocial rehabilitation programmes are required in the recovery of mentally ill clients.

### **5.9.3 Recommendations for Nursing Education**

- Nursing institutions need to include psychosocial rehabilitation, which includes psychoeducation, in their syllabus for psychiatric nurses at all levels.
- Patient education should be a major part of education in all fields of nursing.
- Psychiatric impairments among clients may require modification of the usual teaching strategies. A variety of approaches enhances the success of an education programme for clients.

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## APPENDIX 1: DATA COLLECTION INSTRUMENTS

### Questionnaire –1

#### *Section A: Demographic Data*

Enter your age in years in the box provided

Enter the year you were first diagnosed in the box provided

*In each of the questions that follows, mark your answer with an x*

Sex:

Male	<input type="checkbox"/>
Female	<input type="checkbox"/>

Marital status:

Married	<input type="checkbox"/>	Widowed	<input type="checkbox"/>
Never married	<input type="checkbox"/>	Divorced	<input type="checkbox"/>

Level of education:

Grade 5 and below	<input type="checkbox"/>	Grade 8-12	<input type="checkbox"/>
Grade 6-7	<input type="checkbox"/>	Tertiary education	<input type="checkbox"/>

Occupation:

Self employed	<input type="checkbox"/>	Sheltered employment	<input type="checkbox"/>
Civil service	<input type="checkbox"/>	Unemployed	<input type="checkbox"/>
Private sector	<input type="checkbox"/>		<input type="checkbox"/>

Source of support (*Mark all that apply to you*):

Family	<input type="checkbox"/>	Community	<input type="checkbox"/>
Disability grant	<input type="checkbox"/>	None	<input type="checkbox"/>
Self support	<input type="checkbox"/>		<input type="checkbox"/>

**Section B: knowledge about mental illness, medication and symptom management**

**Question 1:** Mark with an x against all statements that describes your understanding of mental illness?

An illness affecting thoughts, feelings and behaviour	
Nerves	
Abnormal behaviour	
Do not know	

**Question 2:** What type of mental illness are you suffering from?

Depression		Anxiety	
Mania		Schizophrenia	
Bipolar disorder		Do not know	

**Question 3:** What medication are you taking? (*Mark all that apply to you*) and in the dotted lines indicate how often you take the medication you have marked.

Lithium .....		Cipramil .....	
Carbamazepine .....		Imipramine .....	
Fluanxol .....		Clozapine .....	
Clonixol .....		Vaproic acid .....	
Largactil .....		Disipal .....	
Amitriptyline .....		Do not know	
Any other add: .....		Any other add: .....	

**Question 4:** For how long are you going to take the medication?

One year		Till the doctors recommend to stops	
One- five years		Do not know	
Till I get better			

**Question 5:** Is the medication helping you?

Not at all	
Just a little	
Moderately	
Very much	

**Question 6:** What ways of managing symptoms of your illness do you know?

*(Mark all that you know)*

Talking to someone		Working/ occupying self	
Listening to music		Taking warm bath	
Deep breathing exercises		Taking a walk	
Yelling at voices		Isolating oneself	
Taking medication		Using alcohol	
Seeking professional help		Using drugs	
Meditation		Do not know any	

**Section C: medication compliance**

**Question 7:** Have you missed your medication in the past two weeks?

Yes	
No	

**Question 8:** If the answer to question 13 is yes, what was the reason for missing your dose?

Forgot to take medication		Missed appointment date	
Had no medication		Did not feel like taking medication	
Medication made me sick		Was feeling better	

**Question 9:** have your medication been changed, dosage reduced or increased in the past six weeks?

Yes	
No	

**Section D: symptom management**

**Question 10:** Has the illness reoccurred since you got sick?

Yes	
No	

**Question 11:** What symptoms did you first experience when your illness reoccurred?

Lack of concentration		Unusual thoughts	
Irritability		anxiety	
Hearing voices		Feelings of depression	
Difficulties to sleep		<b>Any other, add :</b> .....	

**Question 12:** What do you do to cope with these symptoms?

Talking to someone		Working/ occupying self	
Listening to music		Taking warm bath	
Deep breathing exercises		Eating	
Yelling at voices		Taking a walk	
Taking medication		Isolating oneself	
Seeking professional help		Using drugs and alcohol	
Meditation		Do not know any	

**Question 13:** Have you received any type of education in the past six weeks?

Yes	
No	

## Questionnaire – 2

### Goldberg Depression Scale

(Indicate the extent to which you felt or behaved during the past week, by circling one of the numbers that follows it. Using the following scale:

0= not at all                      1= just a little                      2= moderately  
 3= quite a lot                      4= always

(1) I do things very slowly	0	1	2	3	4
(2) My future seems hopeless.	0	1	2	3	4
(3) It is hard for me to concentrate on reading	0	1	2	3	4
(4) The pleasure and joy has gone out of my life	0	1	2	3	4
(5) I have difficulty making decisions	0	1	2	3	4
(6) I have lost interest in aspects of my life that used to be important to me.	0	1	2	3	4
(7) I feel sad, blue and unhappy.	0	1	2	3	4
(8) I am agitated and keep moving around.	0	1	2	3	4
(9) I feel fatigued.	0	1	2	3	4
(10) It takes great effort for me to do simple things	0	1	2	3	4
(11) I feel that I am a guilty person who deserves to be punished	0	1	2	3	4
(12) I feel like a failure.	0	1	2	3	4
(13) I feel lifeless..... more dead than alive.	0	1	2	3	4
(14) My sleep has been disturbed.....too little, too much or broken sleep	0	1	2	3	4
(15) I spend time thinking of how I might kill myself	0	1	2	3	4
(16) I feel trapped or caught.	0	1	2	3	4
(17) I fell depressed even when good things happen to me.	0	1	2	3	4

### Goldberg Mania Scale

(Indicate the extent to which you felt or behaved during the past week, by circling one of the numbers that follows it. Using the following scale:

0= not at all                      1= just a little                      2= moderately  
 3= quite a little                      4= always

(1) My mind has never been sharper.	0	1	2	3	4
(2) I need less sleep than usual	0	1	2	3	4
(3) I have so many plans and new ideas that it is hard for me to work	0	1	2	3	4
(4) I feel a pressure to talk.	0	1	2	3	4
(5) I have been particularly happy.	0	1	2	3	4
(6) I have been more active than usual.	0	1	2	3	4
(7) I talk so fast that people have a hard time keeping up with me.	0	1	2	3	4
(8) I have more new ideas than I can handle.	0	1	2	3	4
(9) I have been irritable.	0	1	2	3	4
(10) Its easy for me to think of jokes and Funny stories.	0	1	2	3	4
(11) I have been feeling like “the life of the party”	0	1	2	3	4
(12) I have been full of energy.	0	1	2	3	4
(13) I have been thinking about sex.	0	1	2	3	4
(14) I have been feeling particularly playful.	0	1	2	3	4
(15) I have special plans for the world.	0	1	2	3	4
(16) I have been spending too much money.	0	1	2	3	4
(17) My attention keeps jumping from one idea to another.	0	1	2	3	4
(18) I find it hard to slow down and stay in one place.	0	1	2	3	4

(This scale has been adopted from Ivan Goldberg, 1993)

## APPENDIX 2: TEACHING SCHEDULE FOR PSYCHOEDUCATION

**TOPIC:** Bipolar affective disorder

**PARTICIPANTS:** Clients with a diagnosis of Bipolar Affective Disorder aged 18 years and above.

**PLACE:** Escoval House Community Psychiatric Clinic and Austerville clinic.

**TIME FRAME:** 1 hour 30 minutes per session

**DATE:** 30<sup>th</sup> November 2004 – 15th February 2005

**FACILITATOR:** M.A. Ng'oma, (Researcher)

SESSION	TOPIC	CONTENT	TIME	METHOD OF TEACHING	MATERIAL/ RESOURCES NEEDED
One	Bipolar disorder	-What is bipolar disorder -Causes of the disorder -Course of the disorder -Signs and symptoms	1.30pm – 3.00pm	-Lecture -Discussions	-Handouts for clients -Flip charts and markers
Two	Medication	- Common medication used and dosages -Effects of medication -Side effects -Managing side effects	1.30pm – 3.00pm	-Lecture and -Discussions	-Flip charts and markers -Handouts (reading materials for clients)
Three	Self medication	- Storage of medication and -Self medication skills -Adherence to meds.	1.30pm – 3.00pm	-Lecture -Discussions -Demonstrations -Group work	-Flipcharts and markers -Handouts for clients -Calendar -Medicine bags/bottles

Four	Relapse	<ul style="list-style-type: none"> <li>-What is relapse</li> <li>-Early warning signs of relapse</li> <li>-What to do when symptoms reappear.</li> </ul>	1.30pm – 3.00pm	<ul style="list-style-type: none"> <li>-Lecture</li> <li>-Discussions</li> </ul>	<ul style="list-style-type: none"> <li>-Flipcharts and markers</li> <li>-Handouts for clients</li> </ul>
Five	Symptom Management	<ul style="list-style-type: none"> <li>-What are symptom management techniques</li> <li>-Positive and negative ways of managing symptoms</li> <li>-How to use individual symptom management techniques</li> </ul>	1.30pm – 3.00pm	<ul style="list-style-type: none"> <li>-Lecture</li> <li>-Discussions</li> <li>-Demonstrations</li> <li>-Role plays</li> </ul>	<ul style="list-style-type: none"> <li>-Flipcharts and markers</li> <li>-Handouts for clients</li> </ul>
Six	Symptom Management	<ul style="list-style-type: none"> <li>-Use of individual symptom management techniques CT</li> <li>-General discussions on Bipolar disorder</li> </ul>	1.30pm – 3.00pm	<ul style="list-style-type: none"> <li>-Lecture</li> <li>-Discussions</li> <li>-Demonstrations</li> <li>-Role play</li> </ul>	<ul style="list-style-type: none"> <li>-Flipcharts and markers</li> <li>-Handouts for clients</li> </ul>

## **APPENDIX 3: READING MATERIAL ON BIPOLAR AFFECTIVE DISORDER**

### **LIVING WITH BIPOLAR DISORDER**

This brochure is intended to provide information for people afflicted with Bipolar Affective disorder on the nature of their illness, its treatment or management, relapse and relapse management and symptom management.

Such information is very important for people suffering from any form of mental illness including Bipolar disorder. There is a lot of stigma and prejudice about psychiatric illnesses and in most cases clients lack information about their illness. Additionally the cooperation of well informed clients and their relatives in the treatment is even more important than it is for many other illnesses.

### **WHAT IS BIPOLAR DISORDER**

Bipolar disorder (Manic – depressive illness) is a mood disorder, which means that the symptoms are disturbances or abnormalities of the mood. Major depression is a more common illness, the symptoms of which are mainly those of low mood. Bipolar disorder involves episodes of both serious mania and depression. The person's mood swings from excessively high and irritable to sad and hopeless and then back again, with periods of normal mood in between

### **COURSE OF THE DISORDER**

Bipolar Affective Disorder is the third most common mood disorder after major depression and dysthymic disorder. It affects about 1% of adults during their life time. Symptoms typically begin during adolescence and earlier adulthood and continue to recur throughout life. Men and women are equally likely to develop this disabling illness. The consequences of

this illness can be devastating and may include marital break-ups, unemployment, alcohol and drug abuse. Bipolar illness is often complicated by co-occurring alcohol or substance abuse.

## **MANAGEMENT OF THE ILLNESS**

Effective treatments are available that greatly reduce the suffering caused by the disorder and can usually prevent the devastating complications.

### **1) Medical treatment of bipolar disorder**

Many patients do not respond to at least one drug, and many show no response to several.

This means that combination of treatment is often a rule because a combination of different drugs with different methods of action can be more effective without increasing the risk of side effects. Medications used to treat Bipolar disorder are usually known as mood stabilisers. These medications can be used alone, but are often used in combination with antipsychotic medications, antidepressants, anti anxiety medications. Some medication used to treat bipolar disorder are anti convulsants which are used to treat epilepsy, but have been found to be also valuable to treat mood disorders (AstraZenaca, 2001, <http://www.mental-health-matters.com/articles/article.php?artid> )

All of these medications require regular blood testing but for different reasons and at different intervals. It is very important to let your prescribing Doctor know if you are taking any other medications due to their particular interactions with a number of other medications. The following are mood stabilisers used in South Africa at the moment:

- **Lithium Carbonate** – it is a mood stabiliser used as initial treatment for bipolar disorder and as an ongoing treatment to prevent re occurrence of symptoms. It has both an anti-manic and anti-depressive effect.
- **Carbamazepine (Tegretol)** – This medication is used to treat epilepsy. It is important to note that the enzymes that break down Carbamazepine (Tegretol) can increase or

decrease the effects of other drugs and in some cases can counteract their effect. This is why your doctor needs to know what other medication you are taking. This medication acts by limiting the activity at the synapse. These are the areas in the brain where messages are transmitted. This produces a calming effect on both physical and feeling states of the person. It has a sedative effect, Muscle relaxant and mood stabilising effects.

- **Sodium Valproate (Epilim or Valpro)** – Most commonly used in epilepsy. It is often used in rapid cycling disorder where moods swing quickly and frequently between feeling high and depressed. Sodium Valproate can be used alone or with other medication including antipsychotic and antidepressants. It is particularly important to let your doctor know of any other medication you are taking because of Sodium Valproate's effects on other medications.

**NOTE:** It is always important to avoid alcohol and marijuana while taking medication as you will get affected more quickly. You may become dizzy and risk injury by falling. Your judgment will also be affected. Alcohol increases the effect of medication and the medication increases the effect of alcohol. (AstraZeneca, 2001, <http://www.mental-health-matters.com/articles/article.php?artid> ) Take time to allow your medication to work. It takes time for an illness to develop and takes time for medication to take effect.

### **Medication side effects**

Before starting a new medication for bipolar disorder, always talk to your psychiatrist and or pharmacist about possible side effects. Depending on the medication, side effects may include weight gain, nausea, tremors, reduced sexual drive or performance, anxiety, hair loss, movement problems or dry mouth. Be sure to tell the doctor about all the side effects you

notice during treatment. He or she may be able to change the dose or offer a different medication to relieve them. Your medication should not be stopped or changed without the psychiatrist guidance.

## **2) Psychosocial management of bipolar disorder**

As an addition to medication psychosocial treatments are helpful in providing support, education and guidance to people with bipolar disorder and their families. Psychosocial interventions commonly used for bipolar disorder are cognitive behaviour therapy, psychoeducation, family therapy and newer techniques like interpersonal and social rhythm therapy (Jamison, 1995).

- **Cognitive behaviour therapy** helps people with bipolar disorder learn to change inappropriate or negative thought patterns and behaviours associated with the illness.
- **Psychoeducation** involves teaching people with bipolar disorder about the illness and its treatment, and how to recognise signs of relapse so that early intervention can be sought before a full blown illness episode occurs. Psychoeducation also may be helpful for family members.
- **Family therapy** uses strategies to reduce levels of distress within the family that may either contribute to or result from the ill persons symptoms.
- **Interpersonal and social rhythm therapy** helps people with bipolar disorder both to improve interpersonal relationships and to regularise their daily routines. Regular daily routines and sleep schedules may help to protect against manic episodes.

## **SIGNS AND SYMPTOMS OF BIPOLAR DISORDER**

Bipolar disorder involves cycles of mania and depression. According to Jamison (1995), these two mood states can be thought as opposite ends of a range. At one end is severe depression;

then moderate depression; mild and brief mood disturbance (that many people call ‘the blues’); normal mood; hypomania (a mild form of mania); and at the other extreme is mania.

Some people with untreated bipolar disorder have repeated depressive episodes and only an occasional episode of hypomania. In the other extremes, mania may be the main problem and depression may occur only infrequently.

Recognising several mood states is essential so that the person who has manic-depressive illness can obtain effective treatment and avoid the harmful consequences of the disease (Jamison, 1995)

***Signs and symptoms of mania include:***

- Excessively ‘high’ or euphoric feeling
- Increased energy, activity, restlessness, racing thoughts, and increased talkativeness
- Overly- inflated self- esteem
- Extreme irritability and distractibility
- Reduced need for sleep
- Unrealistic beliefs in ones abilities and power
- Uncharacteristically poor judgement
- A sustained period of behaviour that is different from usual
- Increased sexual drive
- Abuse of drugs, particularly cocaine, alcohol and sleeping medication
- Provocative, intrusive or aggressive behaviour
- Denial that anything is wrong

***Signs and symptoms of depression include:***

- Persistent sad, anxious or empty mood
- Feelings of hopelessness or pessimism
- Feelings of inappropriate guilt, worthlessness or helplessness
- Loss of interest or pleasure in ordinary activities including sex
- Loss of energy, a feeling of fatigue or of being slowed down.
- Difficulty thinking or concentrating, remembering, making decisions
- Restlessness or irritability
- Difficulties sleeping or oversleeping
- Loss of appetite and weight or weight gain.
- Repeated thought of death and suicide; suicide attempts. (Jamison, 1995).

**RELAPSE**

After recovering from an episode of your illness. There is a chance that you may not have any further symptoms. There is also a chance that you may have a relapse.

**Being prepared**

It is important to be prepared for another episode of illness, even if it never happens.

Preparing does not mean you are being pessimistic or assuming that you will become ill again. It means knowing what to do just in case, so that you can get on with the rest of your life

**RELAPSE**

Relapse is said to occur when the symptoms of your illness worsens or when previous symptoms return. Many people have experienced one or more relapses of their illness. These

relapses are exacerbations of their illness, particularly in their positive symptoms. A relapse may or may not require hospitalisation. After a relapse you may still experience persistent symptoms. Persistent symptoms are experienced more or less constantly, and do not indicate that you are about to become very unwell.

### **WARNING SIGNS OF RELAPSE**

Before relapse happens people often experience changes in their symptoms or in some aspect of their behaviour, thought and feelings. These changes are called warning signs, they are indications that a relapse may be eminent.

Some warning signs are common and include feeling suspicious or irritable, feeling very tired or unusual energetic and sleep changes. Other warning signs are highly individualised and include all sorts of changes to your behaviour, mood and thoughts.

If you can identify your warning signs as early as possible you may be able to take action such as reducing your stress level, consulting your mental health worker, or doctor earlier than you had intended, or increasing your medication temporarily. Either or all of these may avert the relapse or reduce its severity (Royal Brisbane Mental Health Services 2001). It is important that you learn to distinguish warning signs from any persistent symptoms, and from medication side effects you may be experiencing.

### **IDENTIFYING WARNING SIGNS**

People often experience a fairly specific and individualised series of changes in their behaviour, thoughts and mood before a relapse. This series of changes has been called a relapse signature. Identifying the relapse signature in as much detail as possible is important for relapse prevention. Many people have their own individual early warning signs that they and their families can recognise.

Some commonly early warning signs are:

- Feeling anxious or worried
- Feeling tense or restless
- Feeling depressed or unhappy
- Feeling unsafe or threatened
- Feeling paranoid-thinking that people are talking about you
- Feeling irritated, quick tempered or aggressive
- Experiencing problems with concentration
- Experiencing eating or appetite changes
- Changes in substance abuse- alcohol or drug taking
- Problems sleeping
- Withdrawing socially – staying home
- Feeling anxious about going out or going to work
- Hearing voices
- Experiencing racing thoughts or disordered thoughts.
- Having mood swings – becoming excited or high
- Feeling suicidal
- Dwelling in the past events
- Playing your music loud or not able to watch TV

These signs are different for everyone, it is important to work out which signs may be relevant to you. It is useful to do this with someone who knows you well, like a family member or a mental health worker. It is also important to have a plan of what to do should any of these signs appear.

## **SEEKING HELP FROM OTHERS**

Sometimes another person notices that you are unwell and may mention their concerns to you, before you have realise yourself that you are becoming unwell. Thinking back on your past relapse, you may be able to identify the warning signs that you did not recognise as warning signs at the time. In other words sometimes it is difficult to identify all you early warning signs yourself. Remember the earlier your warning signs are detected, the greater the likelihood that you can prevent relapse, or reduce its severity.

## **IDENTIFYING A HELPER**

It is important to have a helper to assist you in identifying your warning signs of relapse, help to monitor the severity of your warning signs and agree to tell you if they think you are becoming unwell. A helper should be someone you consider supportive, interested and trusted. Someone who knows something about your illness, has noticed your warning signs in the past, has helped you when you have been ill before, can see you frequently for instance once a week and someone who would be willing to help you in this way.

## **STRATEGIES TO COPE WITH EARLY WARNING SIGNS**

There are a range of strategies you may find helpful in dealing with warning signs or relapse symptoms. They may involve doing something or not doing something, they involve using stress management techniques and distraction activities. According to Royal Brisbane Mental Health Services (2001) these are some of strategies you can use:

- Reduce stress and stimulation
- Do some relaxation – relaxing activities, exercising, playing sport, stay calm, deep breathing exercises
- Use self talk

- Use some diversion – Distraction – listening to music, put on ear phones, meditation, watching TV, talk to someone, taking a walk, occupying yourself with work
- Initiate social contact
- Do some reality testing
- Note peoples advice
- Try some suppressive techniques – wear and flick a rubber band on your wrist
- Seek assistance – tell someone, a friend, your doctor or your case manager
- Think positively
- Keep taking your medication
- Get more sleep
- Plan your day

It is important to develop an action plan. You may like to work with out with your mental health worker. Decide which strategies have worked for you and which you are willing to try. Remember that some coping strategies work sometimes and some don't. Always have a back up as part of your plan.

## REFERENCES

-Inner North Royal Brisbane Mental Health Services (2001) <http://www.mental-health-matters.com/articles/article.php?artid>

- AstraZenaca, 2001, <http://www.mental-health-matters.com/articles/article.php?artid>

-Jamison, K.R. (1995) An unquiet Mind, Division of Random House INC.

-Ameen, S. & Ram, D. (2001) Psychosocial Approaches in Treatment of Bipolar Disorder <http://www.psyplexus.com/excl/pamb.html> Retrieved on 16/07/04

## APPENDIX 4: Ethical Clearance



### RESEARCH ETHICS COMMITTEE

UNIVERSITY OF  
KWAZULU-NATA

Student: MWALI AGNECC NG'OMA

Student No: 200279405 Qualification: COURSE WORK MASTERS DE

Research Title: EFFECTS OF PSYCHOEDUCATION ON MEDICATION  
(MENTAL HEALTH)

(COMPLIANCE AND SYMPTOM MANAGEMENT FOR CLIENTS WITH  
BIPOLAR DISORDER ATTENDING ESCOVAL HOUSE COMMUNITY  
PSYCHIATRIC CLINIC

A. The proposal meets the professional code of ethics of the Researcher:

YES

NO

B. The proposal also meets the following ethical requirements:

	YES	NO
1. Provision has been made to obtain informed consent of the participants.	✓	
2. Potential psychological and physical risks have been considered and minimised.	✓	
3. Provision has been made to avoid undue intrusion with regard to participants and community.	✓	
4. Rights of participants will be safe-guarded in relation to:		
4.1 Measures for the protection of anonymity and the maintenance of confidentiality.	✓	
4.2 Access to research information and findings.	✓	
4.3 Termination of involvement without compromise.	✓	
4.4 Misleading promises regarding benefits of the research.	✓	

Signature of Student: M. Ng'oma Date: 26/10/04

Signature of Supervisor: [Signature] Date: 26/10/04

Signature of Head of School: [Signature] Date: 26/10/04

Signature of Chairperson of the Committee: [Signature] Date: 27/10/04

### Faculty of Community & Development Disciplines

Postal Address: Durban 4041, South Africa

Telephone: +27 (0)31 260 3139

Facsimile: +27 (0)31 260 2458

Email: khonyid@ukzn.ac.za

Website: www.ukzn.ac.za

Operating Campuses:

Edgewood

Howard College

Medical School

Pietermaritzburg

Westville

## Appendix 5: Letter of request to Department of Health Kwa Zulu-Natal



The Director,  
Department of Health,  
KwaZulu- Natal Province,  
Private Bag X9051,  
Pietermaritzburg, 3200.

Dear Sir/ Madam,

### REQUEST TO CONDUCT A STUDY AT ESCOVAL HOUSE COMMUNITY PSYCHIATRIC CLINIC- DURBAN

I hereby request to conduct a study at Escoval House Community Psychiatric Clinic in Durban Metropolitan area. I am a student studying towards a Masters Degree in Nursing (Mental Health) at University of KwaZulu-Natal. The title of the study is: **Effects of Psycho education on Medication Compliance and Symptom Management for Clients with Bipolar Disorder Attending Escoval House Community Psychiatric Clinic.** The study will involve six weeks session of education and participants will be asked to fill out two questionnaires at the beginning of the study and after the teaching session to evaluate if the education has had any effects.

The following documents are enclosed therein:

- A copy of my proposal including questionnaires
- The ethical clearance from the University's ethical committee.
- A letter to the participants

Your consideration will be greatly appreciated.

Yours Faithfully

Mwawi Agnes Ng'oma ..... *M. Ng'oma* .....

Dr Sarah Mahlangu (Supervisor) ..... *S. Mahlangu* .....

### School of Nursing, Howard College Campus

Postal Address: Durban, 4041, South Africa

Telephone: +27 (0)31 260 2499

Facsimile: +27 (0)31 260 1543

Email:

Website: [www.ukzn.ac.za](http://www.ukzn.ac.za)

Founding Campuses:

■ Edgewood

■ Howard College

■ Medical School

■ Pietermaritzburg

■ Westville

# Appendix 6: Permission Letter from Department of Health, Kwa Zulu - Natal

11-NOV-2004 08:47 FROM: SPECIAL SUPPORT SERV 033 3454433

TO: 0312601543

P:2

PROVINCE OF KWAZULU-NATAL  
HEALTH SERVICES

ISIFUNDAZWE SAKWAZULU-NATALI  
EZEMPILO

PROVINSIE KWAZULU-NATAL  
GESONDHEIDSDIENSTE

PRIVATE BAG X 9051  
PIETERMARITZBURG  
3201



330 LONGMARKET STREET  
PIETERMARITZBURG  
3201

TELEPHONE  
DURING (033) 3952111

FAX: 033 345 4433

REFERENCE : 0/2/3/R  
ENQUIRIES : Ms N Sithole  
EXTENSION : 3123

10 NOV 2004

Ms Mwawi Agnes Ng'oma  
University of KwaZulu -Natal  
School of Nursing  
Howard College Campus  
DURBAN  
4041

Dear Ms Ng'oma

## APPLICATION TO CONDUCT RESEARCH ON EFFECTS OF PSYCHO EDUCATION ON MEDICATION COMPLIANCE AND SYMPTOM MANAGEMENT FOR CLIENTS WITH BIPOLAR DISORDER ATTENDING ESCOVAL HOUSE COMMUNITY PSYCHIATRIC CLINIC

Your undated letter faxed on 03 November 2004 refers.

Kindly be advised that authority is granted for you to conduct research regarding "effects of psycho education on Medication Compliance and Symptom Management for clients with Bipolar Disorder attending Escoval House Community Psychiatric Clinic", provided that the following is agreed to:

- (a) Prior approval is obtained from Head of the relevant institutions;
- (b) Confidentiality is maintained;
- (c) The Department is acknowledged;
- (d) The Department receives a copy of the report on completion; and
- (e) The staff and patients are not inconvenienced and service delivery not affected.

Yours faithfully

  
SUPERINTENDENT-GENERAL  
HEAD : DEPARTMENT OF HEALTH  
NINM/Uthungulu district Ithumalo

## Appendix 7: Request letter to health services manager



2 November 2004

The Nursing Services Manager,  
Escoval House Community Psychiatric Clinic,  
Durban, 4001.

Dear Sir/ Madam,

### **REQUEST TO CONDUCT A STUDY AT ESCOVAL HOUSE COMMUNITY PSYCHIATRIC CLINIC- DURBAN**

I hereby request to conduct a study at Escoval House Community Psychiatric Clinic in Durban Metropolitan area. I am a student studying towards a Masters Degree in Nursing (Mental Health) at University of KwaZulu-Natal. The title of the study is: **Effects of Psycho education on Medication Compliance and Symptom Management for Clients with Bipolar Disorder Attending Escoval House Community Psychiatric Clinic.** The study will involve six weeks session of education and participants will be asked to fill out two questionnaires at the beginning of the study and after the teaching session to evaluate if the education has had any effects.

The following documents are enclosed therein:

- A copy of my proposal including questionnaires
- The ethical clearance from the University's ethical committee.

Your consideration will be greatly appreciated.

Yours Faithfully

Mwawi Agnes Ng'oma ..... 

Dr Sarah Mahlangu (Supervisor) .....   
**School of Nursing, Howard College Campus**

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Founding Campuses:

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■ Howard College

■ Medical School

■ Pietermaritzburg

■ Westville

## Appendix 8: Consent letter



Dear participant,

I am a student, studying towards a masters degree in Mental Health Nursing at the University of KwaZulu- Natal. I am required to conduct a research study as part of this course. The study is looking at how education can help you manage the medication and the problems you have due to your illness. I will teach you about the illness you have and its treatment and management. Your name has been randomly selected for inclusion in this study. You have an option to participate or not to participate. Your decision will not affect any type of care or treatment you receive at this clinic and you are free to withdraw any time you decide to do so. Your name will not be used anywhere in the study or in the report. The results of the study will be for academic purposes, and may be used for future planning of programmes in this clinic. You will be asked to complete 2 questionnaires and participate in a six weeks programme of education. You will be provided with transport money to and from the clinic on the day of lessons. Your decision to participate in the study will be greatly appreciated.

Yours truly

Mwawi Agnes Ng'oma ..... *M. Ng'oma* .....

Supervisors' Signature ..... *[Signature]* .....

Participant Signature: .....

Date: .....

### School of Nursing, Howard College Campus

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Telephone: +27 (0)31 260 2499

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Founding Campuses:

■ Edgewood

■ Howard College

■ Medical School

■ Pietermaritzburg

■ Westville

To whom it may concern: 20

I have edited for English

language usage the thesis

written by Ms. M. A. Nq'oma on

The Effects of Psychoeducation  
on Medication compliance and  
Symptom Management for clients  
with Bipolar Affective Disorder in  
The Ethekwini Health District

R. Iv. Cadman

17.6.2005