CHAPTER ONE

OVERVIEW OF STUDY

1.1 INTRODUCTION

Human Immunodeficiency Virus (HIV) positive patients are at an increased risk for developing mental health problems compared with the general population (Sadock & Sadock, 2007:371). The early identification and management of symptoms of mental illness in HIV-positive patients are therefore crucial in reducing the risk of morbidity and mortality. The primary health care nurses are in the front line of caring for HIV-positive patients and spend the greatest degree of their time with these patients. In addition, they are most often the first of the professional health care workers to have contact with HIV-positive patients and thus in the best position to first identify symptoms of mental illness. Once symptoms of mental illness have been identified, the primary health care nurse would be expected to refer the HIV-positive patient to the designated psychiatric nurses working in the primary health care services.

Psychiatric nurses working in the primary health care services have observed that primary health care nurses rarely identify symptoms of mental illness among HIV-positive patients early enough. Too often, HIV-positive patients are only referred to psychiatric services when they have deteriorated significantly and become seriously mentally ill. Psychiatric nurses contend that symptoms need to be identified sooner. Thus, it is not clear whether primary health care nurses have the adequate knowledge required to identify symptoms of mental illness. The researcher will conduct a quantitative study, using Bloom’s Taxonomy as a theoretical lens, to determine primary health care nurse’s knowledge regarding symptoms of mental illness in HIV-positive patients.

1.2 BACKGROUND AND LITERATURE REVIEW

HIV/AIDS is a physical disease which presents with physical symptoms related to the patient’s compromised immune system. However, the patient can also present with symptoms of mental illness due to the effect of the virus on the brain (Sadock & Sadock, 2007:374). Symptoms of mental illness include symptoms commonly related to depression, anxiety,
mania, neurocognitive impairment and psychosis (Thom, 2009:1).

Among the mental illnesses the patient may present with, the most prevalent mental illness elicited from ninety international research studies was depression (38%) and second anxiety (29%). Furthermore, and very pertinent to this particular research study, it was found that depression (and mental illness in general) was under diagnosed in most instances among HIV-positive patients (Sherr, Clucas, Harding, Sibley & Catalan, 2011:493-527). Treisman and Angelino (2007:313-317) mentioned that the prevalence of major depression in people living with HIV is 30% in many international studies while other forms of severe mental illnesses range from 4%-23%.

Two studies from Sub-Saharan Africa (Zimbabwe and South Africa) showed high HIV infection rates (24%) among the in-patient population of various psychiatric hospitals which correspond with the high rates of HIV in the general population. In Malawi, a country with one of the highest HIV population rates in the world, there is a lack of documentation of HIV prevalence among people suffering from neuropsychiatric disorder. It has been noticed that the main focus is on HIV-related programmes and mental health is poorly prioritised (Lommerse, Stewart, Chilimba, van der Akker & Lund, 2013:1).

The misdiagnosis and consequent lack of treatment of mental illness among HIV-positive patients may result in a number of adverse outcomes including severe psychiatric morbidity, poor treatment adherence, functional decline, cognitive impairment, HIV dementia, and suicide (Steven, Kibourne, Gifford, Burnam, Turner, Shapiro & Bozette, 2003:450-460). Poor adherence to treatment (Antiretroviral drugs (ARVs)) due to misdiagnoses of mental illness may lead to the occurrence of opportunistic infections will be discussed in chapter 2.

The most common symptoms of mental illness found among HIV-positive patients are depressive symptoms (Nduna, Jewkes, Dunkle, Jama Shai & Colman (2010:2). According to a research study conducted by Nduna et al. (2010:2) in both rural and urban areas in the Eastern Cape, it was discovered that depressive symptoms among HIV-positive people are more prevalent amongst young women than in young men ranging from the ages 15 to 26. The depressive symptoms will be explicitly discussed in chapter 2.

According to Thom (2009:8), the prevalence of anxiety in people living with HIV or AIDS is higher than the prevalence of anxiety in HIV negative controls. Symptoms of anxiety will be
further discussed in chapter 2. According to Feldman and Christensen (2008:366), anxiety may be a normal response to additional stressors associated with living with HIV. Some medications are used adjunctively in HIV/AIDS, particularly corticosteroids and decongestants. These medications when used with anti-retroviral drugs can produce anxiety or agitation (Feldman & Christensen; 2008: 366). However, agitation may be due to underlying central nervous system disease caused by HIV (Feldman & Christensen, 2008:366).

Feldman and Christensen (2008:367) mention that mania can be a terrifying and a dangerous complication of HIV/AIDS. As in non HIV infected persons, mania is characterised by symptoms that display altered mood and symptoms of psychosis may be present (Feldman & Christensen, 2008:367). These symptoms will be discussed in chapter 2.

Multiple researchers (Feldman & Christensen, 2008: 367-368; Kneisl & Trigoboff (2009:299), Jonsson, Janneen & Zahir, 2012:27-28) agree that when the brain is infected with HIV virus it can result in cognitive impairment symptoms. These symptoms will be discussed in chapter 2. Jonsson et al. (2012:27-28) stated that the neuropsychological signs and symptoms resulting from HIV infection are commonly referred to as HIV associated neurocognitive disorders. HIV neurocognitive disorders are divided into 3 different syndromes namely; asymptomatic neurocognitive impairment, mild neurocognitive disorder and HIV associated dementia (Jonsson et al.,2012:27).Asymptomatic neurocognitive impairment presents with mild slowing in mental acuity and some loss of concentration but everyday functioning remains intact. This early deterioration often goes unnoticed by both patient and professional (Jonsson et al., 2012:27). The three different syndromes of neurocognitive disorders will be discussed in detail in chapter 2.

Thom (2009:8) has categorised the causes of symptoms related to mental illness as biological factors and psychological factors. According to Thom (2009:8), biological factors can result from both direct and indirect forms of neurotoxicity due to HIV invasion of the central nervous system and the sequence of immune compromise. Opportunistic conditions such as herpes simplex infection and various malignancies, as well as certain medications used to treat these conditions and antiretroviral medications can also cause mental illness (Thom, 2009:8). Under psychological factors, the major factor is the reaction of HIV-positive patient to the occurrence of the illness. The individual is faced with serious illness and possible
death. In many cases, there are additional stressors related to the stigma associated with HIV/AIDS and lack of social support for HIV-positive patients (Thom, 2009:8).

Feldman and Christensen (2008: 363) claimed that the drugs used to treat HIV and AIDS can cause adverse effects leading to the development of symptoms of mental illness. Robertson, Hollywood and Gagiano (2011:415) also confirm that Zidovudine causes the patients to experience depression, delirium, insomnia and mania while Efivarenz causes bizarre dreams and insomnia.

The early identification and management of symptoms of mental illness in HIV-positive patient is therefore crucial in reducing the risk of morbidity and mortality. The primary health care nurses are in the best position to identify mental illness early as they spend the greatest degree of their time with these patients and are most often the first of the professional health care team to have contact with HIV-positive patients.

1.3 PROBLEM STATEMENT

The problem statement identifies the specific gap needed for practice (Burns & Grove, 2011: 146). According to observations made by both the researcher and other psychiatric nurses working in the primary health care services in Nelson Mandela Bay, primary health care nurses often misdiagnose HIV-positive patients presenting with symptoms of mental illness for symptoms of physical illness. As a result HIV-positive patients are often only referred to the psychiatric services when the patient displays symptoms of severe mental illness. The underdiagnosis and consequent lack of treatment of mental illness among HIV-positive patients may result in a number of adverse outcomes including severe psychiatric morbidity, poor adherence to ARV’s, opportunistic infections, functional decline, cognitive impairment, HIV dementia and suicidal attempts often leading to death (Steven, Kibourne, Gifford, Burnam, Turner, Shapiro, & Bozette, 2003: 450-460). Early identification of symptoms of mental illness by the primary health care nurse is therefore crucial as it may significantly reduce the risk of morbidity and mortality of this vulnerable population.

Primary health care nurses are expected to identify symptoms of physical and mental illness in HIV-positive patients. However, in reference to the previous paragraphs, it is not clear whether primary health nurses have the adequate knowledge to identify symptoms of mental
illness amongst HIV-positive patients. Thus, this research study aims to determine the knowledge of primary health care nurses regarding symptoms of mental illness in HIV-positive patients.

1.4 RESEARCH QUESTIONS

A research question is a clear concise interrogative statement worded in present tense, includes one or more variables, and is used to guide the implementation of the quantitative study (Burns & Grove, 2011:163).

This research problem has led to the following research questions:

- What is the knowledge of primary health care nurses’ concerning symptoms of mental illness in HIV-positive patients?
- What can be done to optimize the knowledge of primary health care nurses concerning symptoms of mental illness in HIV-positive patients?

1.5 RESEARCH AIM AND OBJECTIVES

The aim of the study is the most critical part of any research study because it directs the whole study to the desired destination. The objectives are derived from the aim of the study and are those activities that will enable the researcher to move in the direction of the desired destination (Botma, Greef, Mulaudzi & Wright, 2010:269).

1.5.1 Research aim

The research aim implies the broader, more abstract conception of something which you plan to do or achieve (de Vos, Strydom, Fouche & Delport, 2011:94).

The aim of this research study is to determine the knowledge of primary health care nurses regarding symptoms of mental illness in HIV-positive patients. The research findings will be used to develop recommendations for the purposes of optimizing primary health care nurses’ knowledge of symptoms of mental illness in HIV-positive patients.
1.5.2 Research objectives

The objectives of a research study include statements indicating what must be achieved in order to achieve the overall aim. Research objectives are therefore defined as a clear, concise, declarative statement which focuses on one or two variables and indicate whether the variables are to be identified, analysed or described (Brink, van der Walt & van Rensburg, 2012:85).

The objectives are as follows:

- To explore and describe the knowledge of primary health care nurses’ concerning symptoms of mental illness in HIV-positive patients.

1.6 CONCEPT CLARIFICATION

The concepts needing further clarity in this research study include: HIV-positive patient, identification, knowledge, primary health care nurse, primary health care services, and symptoms of mental illness.

1.6. 1 HIV-positive patient

According to Martin (2008:33), an HIV-positive patient is a patient who contracted the Human Immunodeficiency virus. The patients may develop physical and/or mental symptoms. Physical symptoms related to HIV include prolonged fever, lymphadenopathy, pharyngitis vomiting and thrush (Robert & Dunhill, 2007:102). Kneisl and Trigoboff (2009:300) assert that symptoms of mental illness may include loss of concentration, slowness of thoughts, hallucinations, spatial disorientation, poor judgement, poor insight, aggression, anxiety, depression, mood and sleeping disturbances.

In this study, an HIV-positive patient refers to the patient who contracted the HIV virus and who is experiencing symptoms of mental illness together with their physical symptoms inherent to the HIV/AIDS disease. The HIV-positive patients in this study include those who attend primary health care service regularly for management of his/ her condition and those who default treatment because of their mental illness.
1.6.2 Knowledge

Knowledge refers to information, understanding and skills that you gain through education or experience (Hornby, 2005:821). The knowledge can be either practical, medical, and/or scientific knowledge (Hornby, 2005:821). According to Alligood (2010:74), there are four types of knowledge necessary for good nursing care: empirical knowledge, personal knowledge, aesthetic knowledge and ethical knowledge (Alligood, 2010:74). Empirical knowledge gives us an understanding of the pathophysiology and what is necessary to restore homeostasis. Personal knowledge is the knowledge self-used to form a therapeutic relationship with the patient that permits the discovery of contextual details that are important to understanding (Alligood, 2010:74). Aesthetic knowledge involves creativity in tailoring interventions that are appropriate and effective for patient’s needs. Ethical knowledge is about conceptualising what actions may benefit the patient and determining how to achieve them (Alligood, 2010:74). This study will focus on all four types of knowledge as these best capture the scope and expectations of the primary health care nurse when managing an HIV-positive patient that displays symptoms of mental illness. Although the majority of the last two types of knowledge are within the scope of the psychiatric nurse, thus the reason for referring patients to the psychiatric nurse for more specialised support, the primary health care nurse also plays a supportive role in the HIV-positive patient’s management across these last two types of knowledge. More information on the scope and expectations of the primary health care nurse is outlined in the definition below in 1.6.3.

This study will be using Bloom’s Taxonomy to determine the knowledge of primary health care nurses regarding symptoms of mental illness in HIV-positive patients. Only the cognitive domain of Bloom’s Taxonomy will be used. Although the cognitive domain includes six objectives, this study will address will only be addressing four of these objectives, namely: knowledge, comprehension, application and analysis.

1.6.3 Primary health care nurse

A primary health care nurse is a professional nurse who has undergone special training to do clinical assessment, diagnose and treat minor ailments (Muller, 2009:34). This includes identifying symptoms or deficiencies in a variety of illness, as well as keeping, supplying, administering and prescribing medication as stated in the Essential Drug List (The Nursing
Amendment Act No.71, of 1981 Section 38A). These nurses are authorized to offer services under the provision of the Nursing Act (The Nursing Amendment Act No.71, of 1981 Section 38A).

Concerning the management of HIV-positive patient the primary health care nurse is expected to implement wellness programmes. The programme offers a number of helpful services, both to prevent HIV and to help patients to cope with the disease including: supportive counselling, crisis intervention, HIV pre and post-test counselling, HIV prevention and education, harm and risk reduction counselling, group prevention activities and medical referrals (Rachlis, Sondhi, Burciul, Orbinski, Cheng & Cole, 2013:2-14).

In this study the primary health care nurse is a professional nurse who is working in the primary health care services and responsible for managing HIV-positive patients health outcomes, including that of their mental health.

1.6.4 Primary health care services

According to Gwele and Sibiya (2009:32) primary health care services are a basket of services that must be available in the clinic in order to address all the needs of the community. Thus it is mandated to provide comprehensive health care services where preventative, curative and rehabilitative services are offered. All the services are interrelated, for example, if a patient is infected with HIV, the primary health care nurse is expected to work holistically in managing both symptoms of physical and mental illness presented by the HIV-positive patient.

In this study primary health care service refers to a comprehensive health care service, where the primary health care nurses are expected to manage HIV-positive patients and refer these patients to a psychiatric nurse for more specialised support when they manifest with symptoms of mental illness.

1.6.5 Symptoms of mental illness in HIV-positive patients

Martin (2008:445) defines mental illness as a disorder of one or more of the functions of the mind (such as emotion, perception, memory or thought) which causes suffering to the patient or others. Kneisl and Trigoboff (2011:300) mentioned symptoms associated with mental
illness such as loss of concentration, slowness of thoughts, hallucinations, delusions, disinhibited behaviour, spatial disorientation, poor judgement, poor insight, aggression, anxiety, suicidal behaviour, mood and sleeping disturbances. In this study the most common mental illnesses (depression, anxiety, mood disorder, cognitive dysfunction and psychosis) experienced among HIV-positive patients and their related symptoms were used to determine primary health care nurse’s knowledge. HIV-positive patients may present with mental illness or symptoms associated with mental illness for a range of reasons related to being an HIV-positive patient. Early identification of such symptoms is crucial as the lack thereof can increase the risk of morbidity and mortality.

1.7 PARADIGM

1.7.1 Bloom’s Taxonomy

The terms paradigm and theory are sometimes used interchangeably. Paradigms are general framework or viewpoint and they provide ways of looking at some aspect of social life. Theory is a systematic set to explain some aspect of social life. Thus, the theories flesh out and specify paradigm. Theories guide a researcher’s understanding by providing direction and motivation (Babbie, 2013:10).

Bloom’s Taxonomy will be used to provide a theoretical grounding for the data that will be collected and analysed during the research study. Bloom’s Taxonomy classifies educational objectives into three domains, namely: cognitive, affective and psychomotor (Hughes & Quinn, 2013) of which the researcher will use only the cognitive domain.

The cognitive domain includes six objectives, each increasingly more complex as follows: knowledge, comprehension, application, analysis, synthesis and evaluation (Bastable, 2014). However, this study will only be addressing four of the objectives of the cognitive domain, namely: knowledge, comprehension, application and analysis. The following section will further discuss the need for cognitive learning theory, especially when existing knowledge and understanding have been explored and discovered to be inadequate for practice.
1.7.1.1 Cognitive learning theory

The study will focus primarily on the cognitive domain, which has an emphasis on knowledge. Bastable (2014) states that the cognitive domain is also referred to as the “thinking” domain. Learning in this domain encompasses acquiring information and developing the intellectual capacities, mental abilities, understanding and thinking processes of an individual. Adams (2015:152) and Hess (2006:1) agree that the knowledge of an individual can be explored and described by using Bloom’s Taxonomy of cognitive learning theory and Bloom’s Taxonomy Levels with “verb cues” for effective questioning.

According to Adams (2015:152), knowledge under Bloom’s Taxonomy of cognitive learning theory can be explored by straightforward means, for example, multiple choice or short-answer questions that require the retrieval or recognition of information. This type of questioning was used in the questionnaire. Under Bloom’s Taxonomy Levels “verb cues” can be used for questioning the respondent in order to explore knowledge and the following verbs can be used by the researcher: arrange, define, name, list, recognise, relate, state, show, identify and recall (Hess, 2006:1). The researcher utilised some of these cues in questioning the respondents in order to determine their knowledge regarding symptoms of mental illness in HIV positive patients.

Developing recommendations for the purpose of optimising primary health care nurses’ knowledge of identifying mental illness symptoms in HIV positive patients is an important part of this study. Learning will be a necessary mechanism to ensure that the knowledge of primary health care nurses regarding identification of mental illness symptoms is optimised. Braungart and Braungart (2011:52) define learning as an adjustment in the process of acquiring new knowledge or skills through experience that changes ones thoughts, feelings, attitudes, and actions. Thus, recommendations could be facilitated through in-service training with emphasis on implementation of this new information. Booyens (2008) describes in-service training as regular educational sessions aimed at continuously developing staff while he/she is rendering a service to the clients in an institution. She also states that in-service training is linked to staff members acquiring, maintaining and increasing their knowledge. The implementation and learning thereof is most effective when there is understanding of this new information prior to implementation and after implementation an evaluation of practise.
1.8 RESEARCH DESIGN

According to Nieswiadomy (2012:324), a research design is an overall plan for gathering information in a research study. The researcher will discuss the quantitative, exploratory, descriptive and contextual design of the study in more detail in chapter 3.

1.9 METHODOLOGY

Brink, van der Walt and van Ransburg (2012:199) state that research methodology informs the reader of how the investigation was carried out, in other words, what steps were taken to solve the research problem or to answer the research question. Burns and Grove (2011:58) describe the research methodology as a means of how to conduct the study and usually include the research population, sampling, data collection and analysis, pilot study, reliability and validity. The research methodology will be comprehensively discussed in chapter 3.

1.9.1 Research population

The research population is a complete set of individuals or objects that possess common characteristics of interest to the researcher (Nieswiadomy, 2012:37-38). The research population is that group of people who form the focus of the study (Brink et al., 2012:131). The target population for this study includes primary health care nurses currently working with HIV-positive patients in primary health care services in South Africa. The most reasonably accessible portion of this population would include primary health care nurses who are currently working with HIV-positive patients in primary health care services in the Nelson Mandela Bay (n=250).

1.9.2 Recruitment of participants

Sampling of the participants was not a necessary exercise because the researcher had access to the entire study population. A census survey was used to collect data on all primary health care nurses (n=241). The remaining (n=9) participants were used for the pilot study. This type of survey can be conducted when data is collected from all the members of the study population (SatPac, 2014). The researcher conducted the study in all three sub-districts (A, B and C) of the Nelson Mandela Bay. Sub-district A, B and C has a total of 52 clinics, with a total of 250 primary health care nurses. Making allowance for those who may be unwilling or
unavailable to participate, the researcher aimed to collect data from a minimum of 160 participants for the study as was suggested by the statistician.

1.9.3 Data collection instrument

The research instrument (self-administered structured questionnaire) was developed for the purposes of this study and comprised of three separate sections namely: A, B and C: Section A requested demographic information from the participants, section B determined participants’ self-rated knowledge regarding mental health care and section C determined the knowledge of participants regarding the symptoms of mental illness in HIV positive patients.

1.9.4 Data collection method

Burns and Grove (2011:52) describe data collection as the precise systematic gathering of information relevant to the specific objectives of the study. Permissions were granted by all relevant bodies namely; Nelson Mandela Metropolitan University, Department of Health and District office. Participants were physically contacted by the researcher and information about the research study was clearly conveyed to the participants. Questionnaires personally distributed to primary health care nurses’ by the researcher and within 48 hours collected with the assistance of the facility managers.

1.9.5 Pilot study

According to Botma, Greef, Mulaudzi and Wright (2010:275), a pilot study only tests some aspects of studies such as the usability of the measuring tool and recording forms. A pilot study is normally done on a few participants that meet the inclusion criteria and for the purposes of determining the clarity, ambiguity in the instrument; and if there are potential embarrassing or/and culturally sensitive issues present in the instrument (Botma et al., 2010:275). A pilot study was conducted on 9 primary health care nurses. Three clinics within each of the three sub-districts were randomly selected. There participants within each of these three clinics were further randomly selected. The findings from the pilot study were not included in the main study but rather used to ensure quality control of the research instrument.
1.9.6 Data analysis

Brink, van der Walt and van Rensburg (2012:177-178) mention that data analysis entail categorizing, ordering, manipulation and summarizing the data and describing it in meaningful terms. The researcher, together with the statistician, used descriptive and inferential statistics to analyze and interpret the data using Statistica version 13. Findings were explained by using tables, graphs and pie charts. Correct interpretation of the research findings was critical as this generated new evidence which could be used to optimize clinical practice and also contribute to furthering research in the field (Polit & Beck, 2012:60).

1.9.7 Reliability and Validity

Reliability and validity are fundamental measurements of an instrument to ensure that the findings are credible and trustworthy (Brink, van der Walt & van Rensburg, 2012:169). In chapter 3 the researcher will discuss in detail how reliability and validity were maintained throughout the study.

1.10 ETHICAL CONSIDERATION

The researcher is guided by fundamental ethical principles during the research process such as justice, autonomy, beneficence and non-maleficence (Brink, van der Walt & van Rensburg, 2012:32-38). The aforementioned ethical principles informed consent and ethical consideration are comprehensively discussed in chapter 3.

1.11 CONCLUSION

Knowledge of symptoms of mental illness in HIV positive patients is an important prerequisite for early detection of mental illness. Early detection of mental illness can prevent poor adherence to treatment, morbidity and mortality. Thus the aim of this study was to explore the primary health care nurses’ knowledge regarding symptoms of mental illness in HIV positive patients in Nelson Mandela Metropolitan primary health care services. The following chapter will entail the literature review.
CHAPTER TWO
LITERATURE REVIEW

2.1. INTRODUCTION

The research study overview was discussed in chapter one. A literature review is aimed at providing a clearer understanding of the problem that has been identified for a particular study, and a good literature review places a research study in context (De Vos et al, 2011: 134-135). The researcher will place emphasis on literature that delves deeper into exploring mental illness in HIV positive patients.

2.2 BACKGROUND AND LITERATURE REVIEW

HIV/AIDS is a physical disease which presents with physical symptoms related to the patient’s compromised immune system. However, the patient can also present with symptoms of mental illness due to the effect of the virus on the brain (Sadock & Sadock, 2007:374). Symptoms of mental illness include symptoms commonly related to depression, anxiety, mania, neurocognitive impairment and psychosis (Thom, 2009:1). The aforementioned symptoms of mental illness common in HIV positive patients will be comprehensively discussed.

2.2.1 Prevalence of mental illness in HIV positive patients internationally

According to Sherr, Clucas, Harding, Sibley and Catalan (2011: 493-527) ninety studies have been conducted internationally exploring the prevalence of mental illness in HIV-positive patients. The geographical location of studies included United states (n=63), Canada (n=4), Spain (n=3), UK (n=2), Switzerland (n=2), Brazil (n=2), Italy (n=2), Germany (n=2), Hong-Kong (n=2), the Netherlands (n=2), Japan (n=1), Belgium (n=1), South Africa (n=1), Nigeria (n=1), Kenya (n=1) and Tanzania (n=1). Among the mental illnesses identified, the most prevalent mental illness elicited from all these research studies was depression (38%) and second anxiety (29%). Furthermore, and very pertinent to this particular research study, it was found that depression and mental illness in general was under diagnosed in most instances among HIV-positive patients (Sherr, Clucas, Harding, Sibley & Catalan, 2011:493-527). Treisman and Angelino (2007:313-317) mentioned that the prevalence of major depression in people living with HIV is 30% in many international studies while other severe mental illnesses, like bipolar mood disorder and neurocognitive disorder range from 4%-
23%. As many as 50% of these patients do not receive treatment for mental illness.

### 2.2.2 Prevalence of mental illness in HIV positive patients in Sub-Saharan Africa

Two studies from Sub-Saharan Africa (Zimbabwe and South Africa) showed high HIV infection rates (24%) among the in-patient population of various psychiatric hospitals which correspond with the high rates (21%) of HIV in the general population (Lommerse, Stewart, Chilimba, van der Akker & Lund, 2013:1). In Malawi, a country with one of the highest HIV population rates (25%) in the world, there is a lack of documentation of HIV prevalence among people suffering from neuropsychiatric disorder (Lommerse et al, 2013:2). It has been noticed that in Malawi the main focus is on HIV-related programmes and that mental healthcare is poorly prioritised (Lommerse et al, 2013:2-3). According to Lommerse et al. (2013:2) in countries like Malawi where prevalence of HIV is high, the main focus of an HIV related programme is usually on prevention of somatic complications of HIV; and mental illness is not given priority. Lommerse et al. (2013:2-3) suggested that HIV programmes should include neuropsychiatric illness programmes in order to attend to mental illness problems related to HIV. According to Breuer, Myer, Struthers and Joska (2011:101-122) studies of the prevalence of mental illness in HIV positive patients were also conducted in Nigeria, Kenya, Uganda, Senegal, South Africa and Zimbabwe. The highest prevalence of mental illness in the form of depression amongst HIV positive patients was 59% in Nigeria, 54.3% in Uganda and 50.4% in South Africa (Breuer et al, 2011-104). The lowest prevalence of mental illness in the form of depression amongst HIV positive patients was 23% in Zimbabwe, 20% in Kenya and 18% in Senegal (Breuer et al, 2011-104).

### 2.2.3 Prevalence of mental illness in HIV positive patients in the Eastern Cape

In a study conducted in the Eastern Cape by Nduna, Jewkes, Dunkle, Jama Shai and Colman (2010:2) it was elicited that the most common symptoms of mental illness found among HIV-positive patients are depressive symptoms. Studies conducted in both rural and urban areas of the Eastern Cape revealed a high prevalence of depressive symptoms amongst young HIV positive women as compared to young HIV positive men ranging from the ages 15 to 26 (Nduna et al, 2010:2). One meta-analysis study suggested that the prevalence of depression among HIV-positive patients is at least double than in the general community (Thom, 2009:8). According to Thom (2009:8) the direct and indirect form of neurotoxicity due to HIV
invasion of subcortical areas including temporal lobes of the brain are the seats of emotions or mental disorder. Opportunistic conditions such as herpes simplex infections as well as certain medication used to treat these conditions and antiretroviral medication can cause depression and anxiety (Thom, 2009:8). The prevalence of depression and anxiety in people living with HIV is similar to that in people suffering from other serious, chronic and life threatening life conditions (Thom, 2009:8). A major factor is the psychological reaction to having such an illness; the individual is faced with the reality of serious illness and possible death at an early age (Thom, 2009:8). In many cases, there are additional stressors related to the stigma associated with HIV and lack of social support for the infected individual (Thom, 2009:8).

2.2.4 Symptoms of depression in HIV positive patients

As with non-infected depressed patients, the depressive symptoms include depressed mood, anhedonia, feelings of worthlessness and hopelessness, disturbances in sleep and appetite, weight loss or gain, fatigue, psychomotor slowing, agitation and preoccupation with morbid thoughts (Feldman & Christensen, 2008:367). Cordova (2013:94-96) mention the depressive symptoms in a descriptive manner, namely: depressive mood most of the day; significant weight loss when not dieting or weight gain; markedly diminished interest or pleasure in all, or almost all, activities most of the day; insomnia or hypersomnia nearly every day; feeling of worthlessness or excessive or inappropriate guilt nearly every day; recurrent thoughts of death, recurrent suicidal ideation without a specific plan or a suicide attempt or a specific plan for committing suicide. In addition, the risk of suicide attempts and suicide is significantly higher among HIV-positive patients when compared with the general population as well as patients with other chronic diseases, such as diabetes and chronic obstructive pulmonary disease (Schade, Van Grootheest & Smit, 2013:1) and Cordova (2013:94-96).

Depression may be more difficult to diagnose in the presence of HIV/AIDS for several reasons. The manifestation of depression, and particularly vegetative symptoms commonly associated with it such as fatigue, weakness, weight loss and loss of libido, overlap with the constitutional symptoms commonly attributed to HIV infection or its complications. Depression that occurs as a result of HIV central nervous system infection often co-exists with cognitive impairment that may also be the result of this infection (Thom, 2009:8). Meel (2013:2) claims that patients suffering from HIV may become depressed and suicidal when
they and their families are discriminated against. Cooperman and Simoni (2005:150) mention that substance use, unemployed and social isolation are common among individuals with HIV and have shown to predict suicidality. HIV infected patients with depression and depressive symptoms are likely to abuse alcohol, as well as drugs such as amphetamine, cannabis and cocaine (Schade et al., 2013:1).

2.2.5 Symptoms of anxiety in HIV positive patients

According to Thom (2009:8), the prevalence of anxiety in people living with HIV or AIDS is higher than the prevalence of anxiety in HIV negative controls. Feldman and Christensen (2008:367) assert that anxiety related to HIV in the infected patient may include symptoms like poor concentration, restlessness, pre-occupation or intrusive thoughts, insomnia (particularly trouble falling of asleep) and fatigue. Branch and Wilson (2010:125) claim that anxiety will include difficulty in concentration, racing thoughts, heart pounding, sweaty palms and wobbliness in the legs. According to Feldman and Christensen (2008:366), anxiety may be a normal response to additional stressors associated with living with HIV. Withdrawal from nicotine, alcohol, drugs, or overuse of caffeine may exacerbate symptoms of anxiety (Feldman & Christensen, 2008:366). Some medications are used adjunctively in HIV/AIDS, particularly corticosteroids and decongestants. These medications can produce anxiety or agitation (Feldman & Christensen; 2008: 366). However, agitation may be due to underlying central nervous system disease caused by HIV (Feldman & Christensen, 2008:366).

2.2.6 Symptoms of mania in HIV positive patients

Feldman and Christensen (2008:367) mention that mania can be a terrifying and a dangerous complication of HIV/AIDS. As in non HIV infected persons, mania is characterised by hyperactivity and psychomotor restlessness, euphoric or irritable mood, insomnia and a perceived decrease for a need to sleep, pressured or rapid speech, grandiosity or paranoia, racing thought and distractibility to name a few (Feldman & Christensen, 2008:367). A family history of an affective disorder or alcoholism may be present (Thom; 2009:8). Mania is normally associated with cognitive impairment and lower CD4 counts (David, Fleminger, Kopelman, Lovestone & Meller, 2009:417).
2.2.7 Symptoms of neurocognitive impairment in HIV positive patients

Multiple researchers (Feldman & Christensen, 2008:367-368; Kneisl & Trigoboff (2009:299); Jonsson, Janneen & Zahir (2012:27-28) agree that when the brain is infected with HIV virus, cognitive impairment can result with symptoms such as difficulty with judgements, poor planning, inability to make decisions and poor memory. The symptoms can significantly influence the individuals functioning. Jonsson et al. (2012:27-28) stated that the neuropsychological signs and symptoms resulting from HIV infection are commonly referred to as HIV associated neurocognitive disorders. HIV neurocognitive disorders are divided into 3 different syndromes namely; asymptomatic neurocognitive impairment, mild neurocognitive disorder and HIV associated dementia (Jonsson et al, 2012:27). Asymptomatic neurocognitive impairment presents with mild slowing in mental acuity and some loss of concentration but everyday functioning remains intact. This early deterioration often goes unnoticed by both patient and professional (Jonsson et al, 2012:27).

Cordova (2013:286-289) has discussed symptoms of mild and serious neurocognitive disorder in HIV positive patients under six cognitive domains. The cognitive domains are as follow: complex attention (includes sustained attention, selective attention and processing speed); executive function (involves planning, decision making, working memory and mental flexibility); learning and memory (include immediate memory, recent memory, cued recall, recognition, long term memory and implicit learning); language (expressive language including naming, word finding, fluency and grammar); perceptual-motor (includes abilities to subsumed under the terms visual perception, perceptual motor, praxis and gnosis); social cognition (includes recognition of emotions and theory of mind) (Cordova, 2013:286-289). According to Jonsson et al. (2010:27) serious symptoms of neurocognitive disorder refers to HIV related to dementia.

The discussion of mild symptoms of neurocognitive disorder in HIV positive patients by Cordova (2013:286-289) is based on the above mentioned cognitive domains. Under mild symptoms of neurocognitive disorder Cordova (2013:286-289) mentioned that: normal tasks take longer than previously and begin to find errors in routine tasks; difficulty resuming a task interrupted by visitor or phone call; difficulty in recalling recent events and has noticeable word-finding difficulty, may need to rely more on maps or others for directions and has subtle changes in behaviour or attitude, such as less ability to recognise social cues or read facial expression.
In this paragraph the serious symptoms of neurocognitive disorder in HIV positive patient will be discussed in accordance with the mentioned cognitive domains. According to Cordova (2013:286-289) the serious symptoms of neurocognitive disorder in HIV positive patients are as follow: increased difficulty in environment with multiple stimuli and easily distracted by competing events in the environment; abandons complex projects and need to focus in one task at a time; repeat self in conversation, often within the same conversation, cannot keep track of short list of items when shopping; has significant difficulties with expressive or receptive language, may not even recall names of closer friends and family; significant difficulty with previous familiar activities (using tools and driving a car); confusion, visual hallucination and delusions may be reported; make decision without regard to safety (example, inappropriate clothing for weather and social setting).

2.2.8 Symptoms of psychosis in HIV positive patients

According to Feldman and Christensen (2008:337) patients living with HIV and suffering from neurocognitive disorder can become psychotic. The psychotic symptoms include hallucinations, typically auditory rather than visual, delusions which tend to be paranoid in content; looseness of association and flight of ideas. Personal care and hygiene may be neglected, and medication adherence becomes poor. Patients at this stage of the disease are most likely to already be unemployed due to cognitive difficulties impairing their functioning at work. These patients are most likely or entirely dependent on others to perform tasks of daily living (Jonsson, Janneen & Zahir, 2012:27). Sadock, Sadock and Ruiz (2015:734) claims that psychotic symptoms are usually found at a later stage in HIV positive patients and they require immediate medical and neurological evaluation and often require management with anti-psychotic medication.

2.2.9 Substance abuse in HIV positive patients

According to the research findings of Nduka, Uthman, Kimani and Stranges (2015:11), it was concluded that substance abuse in people living with HIV is a global public health problem, with one in three HIV- infected persons affected. Sadock, Sadock and Ruiz (2015:734) regarded substance abuse as a vector for the spread of HIV. Substance abuse can lead to impulsive behaviours and unsafe sexual practices (Sadock, et al, 2015:735). On the other hand Cramer, Colbourn, Germbeling, Graham and Stroud (2015:1063-1068) maintained that substance has been used commonly as a coping mechanism by HIV positive patients. HIV
positive status poses a set of psychosocial stressors among people living with HIV. The psychosocial stressors include societal stigma, internalisation of stigma, fear of HIV-positive status disclosure and HIV-related victimisation (Cramer et al, 2015:1063-1068). These psychosocial stressors have a negative impact on the well-being of an individual, this include higher levels of depression, anxiety and hopelessness that can lead to suicidal thoughts or suicidal action. It has been observed on the interpretation of graphs of research study conducted by Cramer, et al, (2015:1063-1068) that HIV positive patients who are abusing substance and have disclosed their HIV positive status are prone to suicidal thoughts and suicidal behaviour. According to Tetrault (2010:1-6) alcohol abuse is associated with inadequate viral suppression and development of antiviral drug resistance, cocaine impairs human microphage and CD4 activity and activate HIV-1 expression.

2.2.10 Causes of symptoms related to mental illness in HIV positive patients

Thom (2009:8) has categorised the causes of symptoms related to mental illness as biological factors and psychological factors. According to Thom (2009:8), biological factors can result from both direct and indirect forms of neurotoxicity due to HIV invasion of the central nervous system and the sequence of immune compromise. The areas predominantly affected are the sub-cortical area of the brain, the seat of emotional mental disorders (Thom, 2009:8). According to Butcher, Mineka and Hooley (2013:498-500) the sub-cortical area include limbic system and hypothalamus. The Limbic system is concerned with the evaluation of pleasant or unpleasant experience; regulate emotions and retention of memory (Butcher et al, 2013:499). The Hypothalamus is concerned with the regulation of metabolism, temperature and emotions (Butcher et al, 2013:499). Catani, Dell’Acqua and de Sehotten (2013:1727-1736) claim that when these two systems are affected, dysfunctioning of these systems is inevitable. The dysfunctioning of these systems may lead to depressive mood, inappropriate crying or laughing; easily provoked rage, unwarranted fear, anxiety, excessive sexual interest, amnesia, dementia, psychosis, temporal lobe epilepsy, disturbances in appetite and sleep and hormonal deficiencies (Catani et al, 2013:1727-1736). Under psychological factors, the major factor is the reaction of HIV-positive patient to the occurrence of the illness. The individual is faced with a diagnosis of having a serious illness and this illness may possibly result to death. In many cases, there are additional stressors related to the stigma associated with HIV/AIDS and lack of social support for HIV-positive patients (Thom, 2009:8). Sorsdahl, Mall, Stein and Joska (2010:1418-1427) mentioned the following causes of mental illness in HIV
positive patients, namely brain disease, hereditary genetics, lack of willpower, expecting too much from oneself, unconscious conflict, lack of parental affection, growing up in a broken home, loss of traditional values in society, decay of natural ways of life and believing in supernatural powers (witchcraft).

Feldman and Christensen (2008: 363) claimed that the drugs used to treat HIV and AIDS can cause adverse effects leading to the development of symptoms of mental illness. Robertson, Hollywood and Gagiano (2011:415) also confirm that Zidovudine causes the patients to experience depression, delirium, insomnia and mania while Efivarenz causes bizarre dreams and insomnia. Adverse effect of anti-retroviral drugs will be further discussed (see 2.2.11 Mental illness as adverse effect of anti-retroviral drugs).

2.2.11 Consequences of misdiagnosing mental illness in HIV-positive patients

According to Steven, Kibourne, Gifford, Burnam, Turner, Shapiro and Bozette (2003:450-460) misdiagnosis of mental illness in HIV positive people is likely when one consider the numerous challenges. Healthcare professionals see as many as 100 HIV positive patients a day; this means that the health care professionals tend to focus on the physical aspect because of overwhelming workload. Sometimes the health professionals are distracted by HIV positive patients with serious physical illness, in this situation the health professionals feel that they are left with no alternative but to attend to physical aspect only. Patients with low education and low mental health literacy may believe that mental illness is not a serious illness to be treated and it doesn’t need to be communicated. Some health professionals regard psychiatric workout (collective approach of excluding organic disorder by doing all vital signs, blood tests and other necessary tests) as complicated as a result they do not conduct the necessary tests. In some institutions healthcare professionals do not concern themselves with patients without medical care insurance/medical aid, because they do not get adequate financial support from the state to sustain the existing services. Healthcare professionals may be not objective listeners which means they only look for symptoms that are familiar to them (Steven et al, 2003:450-460).

The misdiagnosis and consequent lack of treatment of mental illness among HIV-positive patients may result in a number of adverse outcomes including severe psychiatric morbidity, poor treatment adherence, functional decline, cognitive impairment, HIV dementia, and
suicide (Steven et al, 2003:450-460). Poor adherence to treatment (Antiretroviral drugs (ARVs)) due to misdiagnoses of mental illness may lead to increased mental health problems, the occurrence of opportunistic infections including candidiasis of bronchi, candidiasis of oesophagus, invasive cervical cancer, cryptococal meningitis with blindness sometimes, mycobacterium tuberculosis, septicaemia, epilepsy and death may follow (Nurudinova, Chrusciel, Zeringue, Scherrer, Al-Aly, McDonald & Overton 2012:229-234).

According Steven et al. (2003:450-460) when mental illness is misdiagnosed the patient is deprived of treatment leading to serious mental illness. In most cases, these patients self-medicate themselves with alcohol or with alternative drugs. The common serious mental illness is major depression, commonly associated with suicide (Steven et al, 2003:450-460). Sadock, Sadock and Ruiz (2015:733-734) mentioned AIDS mania, psychosis, severe neurocognitive disorder, substance abuse as common serious mental illness resulting from untreated misdiagnosed mental illness. AIDS mania is associated with cognitive slowing or dementia, irritability is more characteristic than euphoria. AIDS mania is usually quite severe in each presentation and malignant in its course (Sadock et al, 2015:733-734). According to Sadock et al. (2015:733-734) psychotic symptoms are usually late stage complications of HIV infection, auditory hallucinations and paranoia are common psychotic symptoms in these patients. Patients with severe neurocognitive disorder presents with prominent psychotic symptoms, severe language dysfunction, severe memory loss, seizures, and mutism (Steven, Kibourne, Gifford, Burnam, Turner, Shapiro & Bozette, 2003:450-460).

2.2.12 The role of the primary health care nurse in identifying symptoms of mental illness in HIV positive patients

According to the Standard Treatment Guidelines for Common Mental Health Conditions outlined on National Department of Health document (2006), the primary health care nurse is obliged to identify symptoms of mental illness to all patients by taking adequate history to make nursing diagnosis for appropriate treatment at primary health care level. Prior 1994, there was little consideration for primary mental health care and policy of mental health service, the focus was on admitting and treating mentally ill patients in psychiatric hospitals (Petersen, Bhana, Campbell-Hall, Lund & Flisher:2012). However primary health care clinics are generally the first point of contact for patients who are seeking treatment (National Department of Health: 2010), a mental health policy based on primary health care principles was adopted in1997 (WHO: 2008b).
A survey was conducted among the primary health care nurse working in several PHC clinics in Kwazulu-Natal (KZN) in order to determine their practices in the management of HIV patients with symptoms of mental illness and it was found out that HIV positive patients were not getting quality treatment according to institutional mental health guidelines and there no local protocols to guide the primary health care nurses (Dube & Uys, 2015:1). Dube and Uys (2015:6) concluded that training and capacity building of PHC nurses must be an ongoing process because new nurses who have not been trained in mental health are continually being allocated to PHC clinics.

2.2.13 The adverse effects of anti-retroviral drugs (ARV’s) on mental illness

Abers, Shandera and Kass (2014:131-145) have discussed the adverse effects of ARV’s that result to mental illness under four subgroups of ARV’s. The subgroups of ARV’S are as follow: the nucleoside transcriptase inhibitors (NRTI), the non-nucleoside transcriptase inhibitors (NNRTI), protease inhibitors (PI) and integrase inhibitors (Abers et al, 2014:131-145). Under NRTI the following drugs are found: Stavudine, Didanosine, Zidovudine, Lamivudine, Emtricibine, Abicavir and Tenofovir (Abers et al, 2014:131-145). Efavirenz and Nevirapine are drugs found under NNRTI, Ritonavir is a drug found under PI and the last subgroup is Integrase inhibitors consisting of drugs such as Raltegravir, Tegravir and Elvitegravir (Abers et al, 2014:131-145).

According to Abers et al. (2014:131-145) anxiety, depression, suicidal ideation, mood changes, mania and hallucinations are common adverse effects of NRTI. Anxiety, insomnia, aggression, vivid dreams, persecutory delusions, visual hallucinations, memory loss, cognitive impairment mania, mood changes and aggression are reported to be the adverse effects of NNRTI (Abers et al, 2014:131-145). Insomnia, abnormal dreams with nightmares, depression and suicidality are elicited amongst patients taking Integrase inhibitors consisting of drugs such as Raltegravir, Tegravir and Elvitegravir (Abers et al, 2014:131-145).

2.3 CONCLUSION

The main purpose of this chapter was to elaborate on the literature review and provide the reader with an array of sources regarding symptoms of mental illnesses in HIV positive patients. The early identification and management of symptoms of mental illness in HIV-positive patient is therefore crucial in reducing the risk of morbidity and mortality. The primary health care nurses are in the best position to identify mental illness early as they
spend the greatest degree of their time with these patients and are most often the first of the professional health care team to have contact with HIV-positive patients. The HIV-positive patient with mental illness is often misdiagnosed and rarely appropriately referred to psychiatric nursing services where they will receive the necessary treatment to manage their additional mental health challenges. For this reason, this study aims to determine the knowledge of primary health care nurses regarding symptoms of mental illness in HIV-positive patients. In the next chapter the research methodology will be discussed.
CHAPTER THREE

RESEARCH DESIGN AND METHOD

3.1 INTRODUCTION

The following section presents the research design of the study. It discusses the research method, which include a description of the population and sampling procedure. It also explains the data collection method, the research instrument, the pilot study and the data analysis. The reliability and validity of the study are also discussed. An overview of the research design as well as the research method will describe in what manner the research question was answered and how the research objectives were approached.

3.2 Research design

According to Nieswiadomy (2012:324) a research design is an overall plan for gathering information in a research study. The research design is the proverbial backbone of the study; it provides the structure of the research methods and design decisions that must be taken (Botma, Greef, Mulaudzi & Wright, 2010:108). Furthermore, Burns and Grove (2011:253) describe a research design as a blueprint for conducting a study. The purpose of a design is to maximise control over factors that can interfere with the validity of the research study findings (Burns & Grove, 2011:253). The research design for this particular study was quantitative, survey, descriptive, exploratory, and contextual in nature. These concepts will now be discussed.

3.2.1 Quantitative design

Burns and Grove (2011:20) describe quantitative research as a formal, objective, rigorous systematic process in which numerical data are used to obtain information about the world. The focus of the quantitative design is on a relatively small number of concepts. A quantitative design may be defined as an enquiry into a social or human problem, based on testing a theory composed of variables, measured with numbers and analysed with statistical procedures in order to determine whether the predictive generalisation of the theory is holding the truth (de Vos et al, 2012:64).

A quantitative approach was the design of choice based on the fact that objective data were
needed to answer the research question. In order to obtain objective data a structured questionnaire was the data collection instrument of choice and statistical methods were used to analyse data. The role of the researcher was that of an objective observer and no personal opinions or interpretation were added on the data. It can thus be inferred that a quantitative design was the most appropriate design for the study.

3.2.2 Survey design

A survey design provides a quantitative or numeric descriptions of trends, attitudes, or opinions of the population by studying the sample of that population (Creswell, 2014: 155-156). According to Botma et al. (2010: 133-134) survey designs gather original data for a population too large to be observed directly. Botma et al. (2010:134) also mentioned the fact that survey designs use questionnaires as data gathering instruments and the researcher can generalise the results to the population from which the sample was drawn. In the study the researcher used a structured questionnaire as a research instrument. The research instrument comprised of three separate sections which will be discussed comprehensively under data collection instrument.

3.2.3 Exploratory design

Blanche, Durrheim & Painter (2006:44) states that an explorative design is used to undertake a preliminary investigation into a relative unknown area of research. Exploratory design should detail how the research study plans to collect information. An exploratory research will help the researcher to identify important relationships (Blanche, Durrheim & Painter, 2006:44).

The reason for performing an exploratory design is due to the fact that a study of this nature has never been done at the solicited institutions. An exploratory design was utilised in this study with the aim of exploring the knowledge of primary health care nurses regarding symptoms of mental illness in HIV-positive patients attending primary health care services. Data was collected from practising primary health care nurses in public primary health care services of Nelson Mandela Bay.
3.2.4 Descriptive design

According to Blanche, Durrheim and Painter (2010:44) a descriptive design aims to describe phenomena accurately either through normative description or measuring relationships. According to Burns and Grove (2011:34-35) a descriptive design is the explanation and description of phenomena in real life situation. A descriptive design is a non-experimental design used to describe the variable of interest as it naturally occurs; there is no manipulation of the research variables and no attempt to determine the relationship between the variables (Botma et al., 2010:110). It provides an accurate account of the characteristics of particular individual situations or groups. Through descriptive studies, the researcher discovers new meaning to describe what exists, determine frequency with which something occurs and categorizes information (Burns & Grove, 2011:35).

Within the proposed study, the researcher was able to use a numerical description such as frequencies and percentages to provide detailed descriptions of the knowledge of primary health care nurses with regards to symptoms of mental illness in HIV-positive patients. For example, the researcher would aim to determine the relationship between participants existing knowledge (as determined by responses) and the knowledge required for the identification of symptoms of mental illness in HIV-positive patients. Once their knowledge needs regarding symptoms of mental illness were identified the researchers were able to develop recommendations for primary health care nurses assisting them to more effectively identify symptoms of mental illness in HIV-positive patients.

3.2.5 Contextual design

Blanche, Durrheim and Painter (2006:275) claim that a contextual design is used to give the reader an understanding of the context in which the study was done. Human behaviour does not occur in a vacuum but is understood contextually. Botma, Greeff, Mulaudzi and Wright (2010:88) states that research can be conducted in a variety of contexts or settings. These contexts could be natural or field context, it can be partially controlled or it can be highly controlled context. This research study was conducted at primary health care services of Nelson Mandela Bay where primary health care nurses among other health care professionals provide care for HIV-positive patients. The researcher will be sure to consider the complexities of the context of this particular setting when making interpretations of the
research findings.

If would be important at this point to provide a clear understanding of the larger context within which primary health care nurses work as well as the conditions under which the majority of their patients live. According to Stats SA (2011:14) a highly skewed distribution of income and wealth in Nelson Mandela Bay (N=1 152 112). This is substantiated by the following information tabulated on Stats SA (2011:14): 35% unemployment rate, 21.6% without an income and 38% of the population of NMB receives less than R 1 600 per month. Altogether there are 289 000 households and a total of 107 239 are classified as impoverished; 44% of households access at least one social grant; 30% of the people attending antenatal care services are HIV positive and 20% of residents have no or limited schooling (Stats SA, 2011:64). The above information from Stats SA indicates that people living in the Nelson Mandela Bay are living under harsh and impoverished circumstances, too often compromising the health and safety of its people. Primary health care nurses working in the NMB are thus faced with significant challenges in their efforts to meet the health needs of such a population, especially mental health related needs as cases continue to rise as the pressures of life are considerable in these poorly resourced and disadvantaged communities.

3.3 Methodology

Every research requires careful planning and the research methods are a critical element of such planning. Brink, van der Walt and van Ransburg (2012:199) states that research methodology informs the reader of how the investigation was carried out, in other words, what steps were taken to solve the research problem or to answer the research question. Burns and Grove (2011:58) describe the research methodology as a means of how to conduct the study and usually include the research population, sampling, data collection instrument, data collection, method, pilot study and analysis. This section will provide a discussion of the steps, procedures and strategies for gathering and analysing the data that was used during research process.

3.3.1 Research population

The research population is a complete set of individuals or objects that possess common characteristics of interest to the researcher (Nieswiadomy, 2012:37-38). The research
population is that group of people that forms the focus of the study (Brink et al., 2012:131). There are two types of population namely, target and accessible population. A target population is the group of people or objects which the researcher wishes to study and accessible population is the portion of the target population to which the researcher has reasonable access (Burns & Groves, 2011:290-29). The target population for this study include primary health care nurses currently working with HIV-positive patients in primary health care services in the Nelson Mandela Bay (n=250).

3.3.2 Recruitment of Participants

No sampling of participants was necessary as the researcher had access to the entire study population. Rather a census survey was used to collect data on all primary health care nurses (n=241; 9 participates were used for the pilot study) working in primary health care clinics throughout the Nelson Mandela Bay. This type of survey can be conducted when data can be collected for all members of the study population, largely because the population is small enough to do so (Stat Pac, 2014).

Inclusion criteria are the characteristics that the subject or element must possess to be part of the target population (Nieswiadomy, 2012:38). The inclusion criteria are as follows:

- Primary health care nurses working in primary health care service in the Nelson Mandela Bay.
- Primary health care nurses who have worked with HIV-positive patients for at least 6 months.
- Exclusion criteria are those characteristics that can cause a person or element to be excluded from the target population (Nieswiadomy, 2012:38). Exclusion criteria are as follows:
  - Community service nurses.

According to Nursing Act, 2005 (Act No. 33 of 2005) community service nurses refer to nurses who are intending to register as professional nurses for the first time but in order to do that they must perform remunerated service for a period of one year. This category of nurses was not included in the study because they are new in the profession and less experienced in dealing with HIV related cases regarding symptoms of mental illness.
The researcher conducted the study in all three sub-districts (A, B and C) of the Nelson Mandela Bay. Sub-district A, B and C has a total of 52 clinics, with a total of 250 primary health care nurses. Sub-district A has 12 clinics and 57 primary health care nurses (3 primary health care nurses were used for the pilot study thus only had access to 54 primary health care nurses); sub-district B has 17 clinics and 78 primary health care nurses (3 primary health care nurses were used for the pilot study thus only had access to 75 primary health care nurses), while sub-district C has 23 clinics with 115 primary health care nurses (3 primary health care nurses were used for the pilot study thus only had access to 112 primary health care nurses). The researcher managed to collect 160 usable questionnaires from primary health care nurses. From a target population of 241 primary health care nurses, 81 of them did not take part in the research study for different reasons as follows: 19 primary health care nurses were unwilling, 14 primary health care nurses were busy attending a course, 18 primary health care nurses were on annual leave and 17 primary health care nurses were on sick leave. Thirteen questionnaires had a significant amount of missing answers, and according to the statistician this type of questionnaires should not be used.

3.3.3 Data collection instrument

The research instrument (self-administered questionnaire) comprised of three separate sections namely: Section A, B and C:

- **Section A: Biographical information**
  Biographical information including “Gender”, “Age”, “Professional qualification(s)”, “Short courses related to HIV, TB and mental illness that was attended”, training specifically related to mental illness in the last five years”, “Years working as a primary health care nurse” and “Years working with HIV-positive patients” will be obtained.

- **Section B: Knowledge of Mental Health Care**
  A single subsection of the Mental Health Problem Perception Questionnaire (Lauder, Reynolds, Reilly & Angus, 2000:221-226) was used to determine primary health care nurses’ knowledge concerning their care of HIV positive patients presenting with mental health problems. The questionnaire was recently used in a similar research study done in Malawi (Chorwe-Sungani, 2013:650) to assess the knowledge of primary health care nurses concerning their care of patients with mental illness. The Mental Health Problem Perception Questionnaire has three subsections namely, therapeutic commitment, role competency and
role support. According to Lauder, Reynolds, Reilly and Angus (2000:222) role competency is defined as having necessary knowledge, skills and understanding of handling problems of patients in a clinical setting. The researcher utilized the subsection of ‘role competency’ as this subsection best determines the knowledge of primary health care nurses concerning their care of HIV positive patients presenting with mental health problems. This subsection consists of 11 statements using a seven-point Likert scale. Permission to utilize this questionnaire was granted by Prof Lauder.

- Section C: Clinical experience

Having completed a comprehensive review of literature and consulted with nursing experts in the field of psychiatric nursing and HIV/AIDS the researcher developed this section of the questionnaire for the purposes of exploring the knowledge of primary health care nurses regarding symptoms of mental illness in HIV-positive patients. The questionnaire consists of two types of questions, namely 16 multiple choice questions and vignette questions. The participants were requested to tick only one appropriate answer from each question.

3.3.4 Data collection method

Burns and Grove (2011:52) describe data collection as the precise systematic gathering of information relevant to the specific objectives of the study. The type of data collection method used in the study is a structured questionnaire.

After obtaining permission from the Faculty Postgraduate Studies Committee (FPGSC) of Nelson Mandela Metropolitan University (NMMU) and relevant regional health authorities, namely Eastern Cape Department of Health and District Health Office of Nelson Mandela Bay (see annexure H); permission was requested and obtained from the facility managers of sub-district A, B and C primary health care services (see annexure G). The researcher enquired from the facility managers of sub-district A, B and C about the number of available participants and suitable time to deliver the questionnaire to them.

The researcher first met with the facility manager (gatekeeper) at each clinic and provided the necessary documentation namely the approval letters for conducting research study and request letter that gives a comprehensive explanation for of the purposes, and nature of the research study. Thereafter, with the support of the facility manager, the researcher met with
each primary health care nurse in the clinic, providing each with information about the research study. Appointments were made with the facility managers to meet the participants. Thereafter, the researcher met with each participant in person, providing them with all the necessary information and expectations about the research study (see annexure F), the consent forms (see annexure C) and questionnaires to be completed (see annexure A). Only after signing the consent form, did the researcher encourage the participants to answer the questionnaires honestly. The participants were given the opportunity to ask the researcher questions and thereafter the participants were left on their own to complete the questionnaires. Participants were reassured that all information written on the questionnaires would be treated with absolute confidentiality. The questionnaires had no names on them and they are kept under lock and key at NMMU after analysis. According to Burns and Grove (2011:52) confidentiality is a crucial strategy to adhere when conducting a research study. The participants were instructed to place the completed questionnaires and consent forms in a sealed box that was then collected by the researcher 48 hours after delivery. The facility managers were assigned the responsibility of monitoring the process of ensuring completed questionnaires were placed in the sealed box to ensure confidentiality.

The researcher managed to collect 160 correctly completed questionnaires. The process of collecting data was challenging at times because of administrative discrepancies (facility managers were not always available as promised and the deputy facility managers were unable to give permission to conduct research at their respective facility). The researcher visited some of these clinics more than three times in order to collect the completed questionnaires. Other delays experienced by the researcher included the following: some primary health care nurses were attending short courses, memorial services and others on leave.

3.3.5 Pilot study

According to Botma et al. (2010:275) a pilot study only tests some aspects of studies such as the usability of the measuring tool and recording forms. A pilot study is normally done on a few participants that meet the inclusion criteria and for the purposes of determining the clarity, ambiguity in the instrument; and if there are potential embarrassing or/and culturally sensitive issues present in the instrument (Botma et al., 2010:275). The pilot study was conducted amongst 9 primary health care nurses. One clinic within each of the three sub-
districts was randomly selected and three participants within each of these clinics were randomly selected.

The names of all the clinics from the three subdistricts (A, B and C) were written on a piece of paper. Each piece of paper was folded in half to hide the name. Those clinics from subdistrict A were first placed in the hat. The pieces of paper were shuffled in the hat and then one clinic was selected from the hat. The process was continued for the remaining two sub-districts B and C until three clinics were selected from each subdistrict. The same process was followed for the selection of 3 primary health care nurses from each of the three clinics.

The researcher thereafter contacted the relevant participants and after receiving informed consent provided each participant with the questionnaire. After each participant completed the questionnaire the researcher then interviewed each in a private room to determine their views regarding the nature (clarity, ambiguity, potential embarrassment and cultural sensitive issues) of each question. The questionnaire was deemed satisfactory exempting for one question. Question 10 of section B was deemed problematic as it contained two questions, that being the identification of mental health problems and the assessment of mental health problems. This concern was discussed with the supervisors and adjustments were made by removing the word assessment to ensure the focus was on the identification of mental illness. The findings from the pilot study were not included in the main study but rather used to ensure quality control of the research instrument.

### 3.3.6 Data analysis

Brink, van der Walt and van Rensburg (2012:177-178) mentioned that data analysis entail categorizing, ordering, manipulation and summarizing the data and describing it in meaningful terms. The most powerful tool available to the researcher in analyzing quantitative data is statistics. Statistical methods enable the researchers to reduce, summarize, organize, manipulate, evaluate, interpret and communicate quantitative data. The researcher together with the statistician has used descriptive and inferential statistics to analyze and interpreted the data using Statistica version 13, a statistical software program.

Descriptive statistics were used to describe and summarize the data and thus tell us what the data set looks like (Brink et al., 2012:179). Descriptive statistics included the following
measures:

- one way frequency distribution
- cross tabulations (how do variables correlate).

The inferential statistics permitted the researcher to infer that particular characteristics in a sample exist in the larger population (Brink et al., 2012:179). Inferential statistics included the following tests:

- Chi-square test which tests for the statistical significance of differences between observed and expected frequencies in a two way cross tabulation of categorical variables.
- Cramer’s V (cross tabulations) statistics used to measure practical significance.

Cramer’s V table consists of conventions for describing the magnitude of association in contingency tables (Rea & Parker, 1992). This table will be only be used when statistical significance is indicated by the Chi-square results. See table 3.1 below.

<table>
<thead>
<tr>
<th>Value of Cramer’s V</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.00 and under 0.10</td>
<td>Negligible association</td>
</tr>
<tr>
<td>0.10 and under 0.20</td>
<td>Weak association</td>
</tr>
<tr>
<td>0.20 and under 0.40</td>
<td>Moderate association</td>
</tr>
<tr>
<td>0.40 and under 0.60</td>
<td>Relatively strong association</td>
</tr>
<tr>
<td>0.60 and under 0.80</td>
<td>Strong association</td>
</tr>
<tr>
<td>0.80 and under 1.00</td>
<td>Very strong association</td>
</tr>
</tbody>
</table>

*Table 3.1: Cramer’s V table*

This quantitative data analysis was done with the assistance of the statistician. Findings were explained by using tables, graphs and pie charts. Interpretation of the research findings considered the context of the research setting as well as how the new evidence could be used in clinical practice and further research in the field (Pilot & Beck, 2012:60).

Table 3.2 below was constructed in consultation with the statistician to explain how the three different knowledge categories, “Poor”, “Average” and “Good” were derived. The different knowledge categories were derived from the data organized and summarized by the
The statistician to interpret the knowledge of mental illness amongst primary health care nurses. The interval ranges for these three knowledge categories were as follows: 0-6 for “Poor” knowledge, 7-9 for “Average” knowledge and 10-16 for “Good” knowledge.

<table>
<thead>
<tr>
<th>Mental illness</th>
<th>No. of Items</th>
<th>Minimum Score</th>
<th>Maximum Score</th>
<th>Poor</th>
<th>Average</th>
<th>Good</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depression</td>
<td>4</td>
<td>0</td>
<td>4</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Anxiety</td>
<td>4</td>
<td>0</td>
<td>4</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Psychosis</td>
<td>3</td>
<td>0</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Mood Disorder</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td>Cognitive Impairment</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td>Referral</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Overall</td>
<td>16</td>
<td>0</td>
<td>16</td>
<td>6</td>
<td>9</td>
<td>16</td>
</tr>
</tbody>
</table>

*Table 3.2: Knowledge categories*

**3.3.7 Criteria for Measurement Quality**

A reliable and valid measuring instrument is important for the quality of the research study. Reliability and validity are fundamental measurements of an instrument to ensure that the findings are credible and trustworthy (Brink et al, 2012:169).

**3.3.8 Reliability**

Reliability refers to the degree to which the instrument can be dependent upon to yield consistent results if used repeatedly over time on the same person, or if used by two researchers (Brink et al, 2012:169). Botma et al. (2010:177) confirmed the above statement by saying that reliability represents the consistency of the measure achieved. This means that if a valid (accurate) measuring instrument is applied to different groups under various circumstances it should produce the same results.

In this study this was achieved by comparing and checking the results of the pilot study with those of the questionnaire used in the main study. The results were similar, leading the
researcher to accept the questionnaire as reliable.

3.3.9 Validity

Validity seeks to ascertain whether an instrument accurately measures what is supposed to measure, given the context in which it is applied. Validity has different types of instruments such as content validity, face validity, concurrent validity, criterion validity, construct validity and predicting validity (Brink et al, 2012:166-168). In the study face and content validity were used.

In the study, the researcher gave the questionnaire to the supervisors, a statistician, a psychiatric nurse and a psychologist to check validity, checking if the instrument (questionnaire) is constructed using concepts from the literature that best reflect the range of dimensions of the variables being measured in the problem.

3.3.9.1 Face validity

Face validity is the most obvious and the weakest kind of instrument validity. It merely means that the instrument appears to measure what is supposed to measure (Brink et al, 2012:166). In this study, the researcher looked thoroughly at the questions that are going to be asked from the participants. The questionnaires were given to the supervisors, community psychiatric nurses and a psychologist in the primary health care services to critique and verify if the questions made sense. In addition, the researcher interviewed the participants and asked them what they thought about the format of the questionnaire and nature of questions and if they had any suggestions to improve the questionnaire. The questionnaires were clearly understood by the participants except question 10 of section B was not clear to one of the participants. Question 10 of section B was modified with the consent of supervisors by removing the word assessment to ensure a better understanding for participants.

3.3.9.2 Content validity

Burns and Grove (2011:335) state that content validity examines the extent to which measurements include all the major elements that are relevant to the construct being measured. This means that if some of the major elements of the variable being measured are
not included in the questionnaire then the content validity will be poor. An in depth literature study was done to ensure content validity of the questionnaire. The researcher presented the questionnaire to statistician and supervisors to check if the data collection instrument is valid and reliable. Section B of the questionnaire is a derivative from a tested instrument used in previous research studies and the permission to utilize it was granted (see section B under data collection).

3.4 Ethical Consideration

The researcher is responsible for conducting research in an ethical manner across all the different phases including: conceptualization phase, planning phase, implementation phase and dissemination phase. The researcher was guided by fundamental ethical principles during the research process namely, that of justice, autonomy, beneficence and non-maleficence (Brink et al, 2012:32-38).

3.4.1 The principle of Justice

Justice is to treat every individual equally and fairly regardless of race, age, sex, cultural background and sexual orientation. It is the duty of the researcher to always ensure equal distribution of benefits to the participants. This is done to prevent one group benefiting to the detriment of another, or allowing the exploitation of that group. The principle of justice mandate allocation and equal distribution of an available resource (Muller, 2009:63). In this study the researcher ensured justice by ensuring that all participants regardless of race, age, sex, level of education and rank by treating them equally and fairly, when they were engaged to take part in the research study.

3.4.2 The principles of autonomy

Autonomy is a term derived from Greek word-autos meaning ‘self’ and nomos denoting ‘rule’, governance, or law (Muller, 2009:62). Autonomy refers to the human being rights to self-determination. This means that a person has a right to choice and decision making. The participants in this research study were invited to become involved in the research process. Furthermore, the researcher furnished the participants with enough information so that each participant was able to make an informed decision (see annexure B).
The researcher assumed the responsibility of ensuring autonomy for each participant by informing the research participants that they have a right to participate and to refuse to participate or chose not to participate from the research participation without consequences (Muller, 2009:62). Participants will also be informed about the research findings by arranging a workshop for them.

### 3.4.3 The principles of non-maleficence and beneficence

Watson, McKenna, Cowman and Keady (2008:131) claim that non-maleficence is concerned with the concept that one should not inflict evil or harm. This principle is first addressed at the beginning of the project when setting background and justification for the approach. Beneficence requires the promotion of good, the difference between non-maleficence and beneficence is obscured. Non-maleficence is passive in nature and beneficence is active in nature. Maintaining confidentiality, the researcher will ensure that the participant is not harmed in any way (Watson, McKenna, Cowman & Keady, 2008:132). The participants will not benefit personally from the study but if primary health care nurses can be better informed regarding the relationship between HIV and mental illness, they may be able to identify mental health related problems earlier. To ensure that participants didn’t feel threatened or offended the researcher made a point of re-assuring the participants and explaining that the focus of the questionnaire was on determining the knowledge of primary health care nurses collectively and furthermore that the research findings were to be used to develop recommendations that can be utilized by primary health care nurses.

### 3.4.4 Strategies used to ensure a high ethical standard

- **Confidentiality and privacy**

Confidentiality pertains to how personnel information is managed to ensure that only the researcher is directly involved in the study and have access to the information, the information is not willingly or unintentionally shared with other people unless the participant has given consent to share the information (Botma et al, 2010:17). Confidentiality was ensured by the researcher by not using names in the research studies and the questionnaires were kept in a locked cupboard after collection and use. The participants were told that a safe protected place for storing data is available at NMMU. The researcher explained to the
participants that the people who are directly involved in the study and have access to the data for academic purpose are the researcher, supervisors and statistician. Martin (2008:664) defines privacy as a state of being away from others, alone and undisturbed. Martin (2008:664) also refers to privacy as secrecy, meaning that the knowledge, view, belief and attitude of one person are not known by other person. The researchers must respect the participants’ rights to privacy. The participants were told that no hidden apparatus such as cameras, one way mirrors and microphones would be used. Participants completed the questionnaire in the privacy of their offices. The participants maintained the right to decide where, when, to whom and to what extent the information may be revealed.

- Permission from relevant authorities

To execute the study approval of the research plan and ethical permission was obtained from the Faculty of Health Postgraduate Studies Committee (FPGSC) at the NMMU. The ethical reference number is H15-HEA-NUR-025. Approval was also obtained from the Department of Health and the reference number is EC_2015RP23_675 was allocated. The researcher also obtained permission from the District Health Office, the District Health Office used the same reference number as the Department of Health. The facility managers from different primary health care services of Sub-district A, B, and C permitted the researcher to conduct the research study.

3.5 CONCLUSION

In this study quantitative, exploratory, descriptive and contextual design was utilized to determine primary health care nurses’ knowledge regarding symptoms of mental illness in HIV positive patients. The research method employed by the researcher has been explained in detail in order to justify the chosen research design. The reliability and validity were also tested through an extensive literature review, pilot study, and evaluation of research instrument by experts including research supervisors from NMMU who have experience in nursing education and research methodology. In the next chapter the result of the data collected will be discussed and analysed.
CHAPTER FOUR
RESULTS AND DISCUSSION

4.1. INTRODUCTION

A full description of research design and method was given in chapter 3. This chapter will present the research results supplemented in parts by a discussion. The findings will be presented in the form of bar graphs, pie charts and tables. Each section of the questionnaire will be discussed separately. Section A (Biographical data), B (Knowledge of mental health care) and C (Clinical experience), as per the questionnaire, of this chapter use descriptive statistics to present the findings while the last and fourth section of this chapter uses inferential statistics to determine the relationship between sections A, B and C all of which aim to determine the knowledge of primary health care nurses regarding symptoms of mental illness.

4.2 BIOGRAPHICAL DATA (SECTION A OF QUESTIONNAIRE)

The biographical data of the participants will be discussed in this section. This section included questions concerning gender, age, professional qualifications, short courses, training related to mental illness, working period as a primary health care nurse and period of time working with HIV positive patients in primary health care services.

4.2.1 Gender

In question 1 the participants were asked to indicate their gender. The information obtained indicated that out of 160 participants the female participants constituted the large majority of 93% (n=148) while the male participants were only 7% (n=12). The male to female ratio to primary health care nurses in this study is 1:12. Nursing is a profession that is dominated by females as reflected in the statistics of the South African Nursing Council (SANC) for 2006 that revealed that in the Eastern Cape there was a male to female ratio of registered nurses of 1:17 (SANC, 2006). The data are summarized in figure 4.1.
4.2.2 Age

In question 2 the participants were asked to indicate their age. There were 8% (n=12) who were between 21-29 years, 38% (n=60) between the ages of 30-39 years, 27% (n=43) between the ages of 40-49, 24% (n=38) between 50-59 years and lastly 6% (n=9) were 60 years and above. The low percentage of the age group 21-29 years is a concern when considering the social prejudice (society views nursing as not a dignified and respectful profession) that influences the youth in choosing the nursing profession (Poreddi, Kuunduru & Math, 2012:6-8). Thus, the shortage of nurses in the primary health care services creates and contributes to inadequate provision of mental health care (WHO, 2011:3); the situation is no different in the Eastern Cape (Strumpher, van Rooyen, Topper, Andersson & Schierenback, 2014). The shortage of nurses is a concern and it has attracted much discussion in recent years, this shortage encompasses recruitment and retention of young nurses (Drury, Francis & Chapman, 2009:2). The declining number of young nurses will have a significant effect over the next two decades as the current, older nurses start to retire and the solution for this problem is to implement succession programme for recruiting young nurses (Drury, Francis & Chapman, 2009:2). The data are summarized in figure 4.2.
4.2.3 Professional qualification

In question 3(a) the participants were asked to indicate their qualification. Results show that 11% (n =17) of the participants had obtained a diploma in general nursing, and 3% (n=4) of the participants had obtained a diploma in community nursing. Only 2% (n=3) of the participants had obtained a diploma in psychiatric nursing. However, a large group of 47% (n=75) of the participants had obtained a four year comprehensive diploma. Results also reveal that 21% (n=33) of the participants had a BCur degree and 4% (n=6) of the participants had obtained a BCur Honours degree. A further 14% (n=22) indicated that they received other qualifications related to the nursing profession. The participants who had obtained one year post basic course in psychiatry, four year comprehensive diploma and those who had obtained BCur degree are all trained as psychiatric professional nurses. These results indicate that the majority of the nurses 69. 4% (n=111) at primary health care services have received training in psychiatry and can be expected to identify symptoms of mental illness as well as manage such patients. Basavanthappa (2011:1-3) felt that essentials of mental health nursing should involve the simplification of previous curriculum, because many students have voiced that mental illness is complex and express that in order to complete their studies they were compelled to know mental illness; they didn’t internalize it for practice. Thus this attitude makes the identification of symptoms of mental illness a difficult task to master, above all, this simplification of mental illness curriculum should be introduced in all curriculums (Basavanthappa, 2011:780). Thus the opportunity to maintain
and improve their existing knowledge will be determined later in this section. The data are summarized in figure 4.3.

Figure 4.3: Professional qualifications of participants (N=160)

4.2.4 Short courses related to HIV

In question 4(a) the participants were asked to indicate the types of short courses they have attended; the courses are related to the management of HIV/AIDS patients. The results show that 40% (n=64) of the participants attended and completed the management of HIV/Tuberculosis (TB)/Chronic Obstructive Pulmonary Diseases (COPD) and Sexually Transmitted Infection (STI) course, while 70% (n=112) of participants completed Voluntary Counselling Test (VCT) and Prevention of Mother to Child Transmission (PMTCT) course. A total of 30% (n=51) of the participant completed the HIV skills development course, 76% (n=122) of the participants completed the Nurse Initiation and Management of patients on ARV’s course (NIMART), 43% (n=69) of participants attended Chronic Care for HIV course, and 50% (n=80) attended TB/HIV infection control course. The majority of the participants having completed the VCT/PMCT and NIMART courses, (70%) most likely to capacitate themselves to better cope with the high demand of HIV positive patients. The Eastern Cape Department of Health has made a tremendous effort in prioritizing
VCT/PMTCT and NIMART course for the management of HIV positive patients in an effort to improve service delivery to patience. Suthar, Rutherford, Horvath, Doherty, Eyerusalem and Negussie (2014:177-183) agreed that an effort of decentralization (from hospitals) of ARV’s initiation is crucial at primary health care services for improved service delivery. The data are summarized in table 4.1.

<table>
<thead>
<tr>
<th>Short course attended</th>
<th>Participants (n)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical guidelines for the Primary Care: The management of adult with HIV/AIDS/TB/Asthma/COPS/STI’s</td>
<td>(n=64)</td>
<td>40%</td>
</tr>
<tr>
<td>VCT and PMTCT</td>
<td>(n=112)</td>
<td>70%</td>
</tr>
<tr>
<td>HIV/AIDS skills development</td>
<td>(n=51)</td>
<td>31%</td>
</tr>
<tr>
<td>Nurse initiation and management of patient on ARV’s (NIMART)</td>
<td>(n=122)</td>
<td>76%</td>
</tr>
<tr>
<td>Chronic care for HIV patients</td>
<td>(n=69)</td>
<td>43%</td>
</tr>
<tr>
<td>Management of TB and HIV infection control</td>
<td>(n=80)</td>
<td>50%</td>
</tr>
</tbody>
</table>

*Table 4.1: Short courses related to HIV (N=160)*

4.2.5 Training related to mental illness

In question 4(b) the participants were asked to indicate whether or not they have undergone any training related to mental illness in the last 5 years. Only 13% (n=20) of the participants indicated that they attended training for mental illness in the last 5 years and thus the large majority 87% (n=140) had not received training for mental illness in this time. Mental health care remains the most neglected form of care in the South African health care system (WHO, 2008:4). Due to insufficient political support and mental health leadership in South Africa, the country has inadequate mental health systems and consequently mental health care is grossly deficient (Strumpher et al, 2014). Little is being done to resource mental health care, especially concerning the lack of capacitation (education and training) and recruitment of the health care team (van Rooyen, Topper, Morton, Strumpher, Schierenbeck & Anderson, 2014:373). The data are summarized in figure 4.4.
4.2.6 Working period of primary health care nurses

In question 5 the participants were asked to indicate the duration of time they have worked as primary health care services in a primary health care service. As little as 9% (n=15) of the participants indicated that they have provided services as primary health care nurse for a duration of more than a year, while 22% (n=35) for a period of 1-3 years, eighteen percent (n=29) for a duration of 4-6 years, 14% (n=22) for a period of 7-9 years and thirty seven percent (n=59) of the participants disclosed that they have worked with as primary health care nurses for 10 years and more. It can be concluded that most of the primary health care nurses (69%; n=110) have four years working experience and more, suggesting that the majority of the nursing work force in primary health care are experienced as health professionals. The data are summarized in figure 4.5.
4.2.7 Duration of primary health care nurses working with HIV positive patients

In question 6 the participants were asked to indicate the duration of time they have worked with HIV positive patients. A total of 13% (n=21) of the participants indicated that they have provided services to HIV positive patients in primary health care services for a duration of more than a year, while 31% (n=50) for a period of 1-3 years, 18% (n=29) for a duration of 4-6 years, while 11% (n=18) of the primary health care nurses indicated that they have worked with HIV positive patients for a period of 7-9 years. About 27% (n=42) of the participants disclosed that they have worked with HIV positive patients for 10 years and more. This thus gives the indication that most of the primary health care nurses (87%; n=139) had a reasonable amount of time (1 year or more) working with HIV positive patients when considering the time and experience required to develop the necessary skills and knowledge in managing such patients. The data are summarized in figure 4.6.
4.2.8 Discussion of biographical data

The low percentage of young nursing professionals joining primary health care services is a concern when considering the social prejudice (society views nursing as not a dignified and respectful profession) that influences the youth in choosing the nursing profession (Poreddi et al, 2012:6-8). Thus, the shortage of nurses in the primary health care services creates and contributes to inadequate provision of mental health care (WHO, 2011:3); the situation is no different in the Eastern Cape (Strumpher et al, 2014). The shortage of nurses is a concern and it has attracted much discussion in recent years, this shortage encompasses recruitment and retention of young nurses (Drury et al, 2009:2). The declining number of young nurses will have a significant effect over the next two decades as the current, older nurses start to retire and the solution for this problem is to implement succession programme for recruiting young nurses (Drury et al, 2009:2). The efforts of the Department of Health are commendable because they have managed to send 70% (n=112) to 76% (n=122) of the participants to short courses of VCT, PMTCT and NIMART in order to cope with the care of HIV positive patients. These courses involve initiation of ARV’s. ARV’s may cause symptoms of mental illness as adverse effects; and poor adherence to ARV’s may also result in mental illness associated with increased viral load. However, a central concern relates to the finding that only 13% (n=2) of participants attended training related to mental illness in the last 5 years.
This indicates that mental health care remains the most neglected form of care in the South African health care system. Recent research findings confirm the lack of in-service and ongoing mental health and the lack of prioritization of mental health (van Rooyen et al, 2014:373).

4.3 SELF-RATED KNOWLEDGE: CARING FOR THOSE WITH MENTAL HEALTH PROBLEMS (SECTION B OF QUESTIONNAIRE)

Section B relates to the primary health care nurses’ self-rated knowledge related to caring for those with mental health problems. Participants responded to 11 questions using a Likert Scale ranging from one (to what extent they disagreed) to seven (to what extent they agreed). Through consultation it was suggested by the statistician that in order to analyse the 11 statements it would be better to reduce the seven responses to three specific responses namely disagree, neutral and agree. This means that the first three responses were reduced to disagree, the fourth response remained neutral and the last three responses were reduced to agree. The results of each statement are presented below along with a final discussion of the combined results. The results were illustrated on 11 different tables, followed by the summary of the results.

4.3.1 Statement 1: I feel I know enough about the factors that place people at risk of mental health problems to carry out my role when working with this client group

It is evident that 46.9% (n=75) of the participants felt that they had adequate knowledge about the factors that place people at risk of mental health problems. As much as 37.5% (n=60) of the participants disagreed about their feeling of knowing enough about the factors that place people at risk of mental health problems. The data are summarized in table 4.2:

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disagree</td>
<td>60</td>
<td>37.5%</td>
</tr>
<tr>
<td>Neutral</td>
<td>25</td>
<td>15.6%</td>
</tr>
<tr>
<td>Agree</td>
<td>75</td>
<td>46.9%</td>
</tr>
<tr>
<td>Total</td>
<td>160</td>
<td>100%</td>
</tr>
</tbody>
</table>

*Table 4.2: Response to statement 1 (N=160)*
4.3.2 Statement 2: I feel I know how to treat people with long term mental health problems

As much as 46.2% (n=74) of the participants felt that they did not know how to treat people with long term mental health problems; whilst only 35.0% (n=56) of the participants felt that they did know how to treat people with long term mental health problems. The data are summarized in table 4.3.

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disagree</td>
<td>74</td>
<td>46.2%</td>
</tr>
<tr>
<td>Neutral</td>
<td>30</td>
<td>18.8%</td>
</tr>
<tr>
<td>Agree</td>
<td>56</td>
<td>35%</td>
</tr>
<tr>
<td>Total</td>
<td>160</td>
<td>100%</td>
</tr>
</tbody>
</table>

*Table 4.3: Response to statement 2 (N=160)*

4.3.3 Statement 3: I feel that I can appropriately advise my patients about mental health problems

It is evident that 24.4% (n=39) of the participants felt that they could not advise their patients about mental health problems. Contrary with the above statement, 56.3% (n=90) of the participants felt that they could advise their patients about mental health problems. The data are summarized in table 4.4.

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disagree</td>
<td>39</td>
<td>24.4%</td>
</tr>
<tr>
<td>Neutral</td>
<td>31</td>
<td>19.4%</td>
</tr>
<tr>
<td>Agree</td>
<td>90</td>
<td>56.2%</td>
</tr>
<tr>
<td>Total</td>
<td>160</td>
<td>100%</td>
</tr>
</tbody>
</table>

*Table 4.4: Response to statement 3 (N=160)*

4.3.4 Statement 4: I feel that I have a clear idea of my responsibilities in helping patients with mental health problems

The below tabulated results give the indication that 25.6% (n=41) of the participants felt that they did not have a clear idea of their responsibilities in helping patients with mental health problems, whilst 48.8% (n=78) of the participants felt that they have a clear idea of
responsibility requirements for helping patients with mental health problems. The data are summarized in table 4.5.

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disagree</td>
<td>41</td>
<td>25.6%</td>
</tr>
<tr>
<td>Neutral</td>
<td>41</td>
<td>25.6%</td>
</tr>
<tr>
<td>Agree</td>
<td>78</td>
<td>48.8%</td>
</tr>
<tr>
<td>Total</td>
<td>160</td>
<td>100%</td>
</tr>
</tbody>
</table>

*Table 4.5: Response to statement 4 (N=160)*

4.3.5 Statement 5: I feel that I have the right to ask patients about their mental health status when necessary

The below results show that 8.1% (n=13) of the participants felt that they did not have the right to ask patients about their mental health problems when necessary, whilst 79.4% (n=127) of the participants felt that they do have the right to enquire about the patients’ mental health problems. The data are summarized in table 4.6.

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disagree</td>
<td>13</td>
<td>8.1%</td>
</tr>
<tr>
<td>Neutral</td>
<td>20</td>
<td>12.5%</td>
</tr>
<tr>
<td>Agree</td>
<td>127</td>
<td>79.4%</td>
</tr>
<tr>
<td>Total</td>
<td>160</td>
<td>100%</td>
</tr>
</tbody>
</table>

*Table 4.6: Response to statement 5 (N=160)*

4.3.6 Statement 6: I feel that my patients believe I have the right to ask them questions about mental health problems when necessary

It is evident that 11.9% (n=19) of the participants felt that it is not the patients’ expectation to be asked about the status of their mental health problems. In contrast with the above statement, 73.8% (n=118) of the participants felt that they were expected by the patients to enquire the status of their mental health problems.
The data are summarized in table 4.7.

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disagree</td>
<td>19</td>
<td>11.9%</td>
</tr>
<tr>
<td>Neutral</td>
<td>23</td>
<td>14.4%</td>
</tr>
<tr>
<td>Agree</td>
<td>118</td>
<td>73.8%</td>
</tr>
<tr>
<td>Total</td>
<td>160</td>
<td>100%</td>
</tr>
</tbody>
</table>

*Table 4.7: Response to statement 6 (N=160)*

4.3.7 Statement 7: I feel that I have the right to ask a patient for any information that is relevant to their mental health problem

The below mentioned 7.5% (n=12) of the participants felt that they did not have the right to enquire relevant information from the patient concerning their mental health problems; whilst 84.4% (n=135) of the participants felt that they had the right to enquire relevant information from the patient concerning their mental health illness. The data are summarized in table 4.8.

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disagree</td>
<td>12</td>
<td>7.5%</td>
</tr>
<tr>
<td>Neutral</td>
<td>13</td>
<td>8.1%</td>
</tr>
<tr>
<td>Agree</td>
<td>135</td>
<td>84.4%</td>
</tr>
<tr>
<td>Total</td>
<td>160</td>
<td>100%</td>
</tr>
</tbody>
</table>

*Table 4.8: Response to statement 7 (N=160)*

4.3.8 Statement 8: I feel that I am able to work with patients with mental health problems as effectively as with other patients who do not have mental health problems

It is therefore evident that 31.3% (n=50) of the participants felt that they do not have the ability to work effectively with patients presenting with mental health problems. In contrast with the above statement 54.4% (n=87) of the participants felt that they were able to work with patients presenting with mental health problems effectively. The data are summarized in table 4.9.
4.3.9 Statement 9: I have the skills to work with patients with mental health problems

The below tabulated results indicate that 41.9% (n=67) of the participants felt that they did not have the expected skills to work with patients presenting with mental health problems; whilst 44.4% (n=71) of the participants felt that they had adequate skills to work with patients presenting with mental health problems. The data are summarized in table 4.10.

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disagree</td>
<td>67</td>
<td>41.9%</td>
</tr>
<tr>
<td>Neutral</td>
<td>22</td>
<td>13.8%</td>
</tr>
<tr>
<td>Agree</td>
<td>71</td>
<td>44.4%</td>
</tr>
<tr>
<td>Total</td>
<td>160</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table 4.10: Response to statement 9 (N=160)

4.3.10 Statement 10: I feel that I can identify the psychiatric or psychological problems of patients

It is evident that 13.8% (n=22) of the participants felt that they cannot identify the psychiatric or the psychological problems of patients. In contrast with the above statement, 70.6% (n=113) of the participants felt that they had adequate knowledge to identify psychiatric or psychological problems of patients. The data are summarized in table 4.11.

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disagree</td>
<td>22</td>
<td>13.8%</td>
</tr>
<tr>
<td>Neutral</td>
<td>25</td>
<td>15.6%</td>
</tr>
<tr>
<td>Agree</td>
<td>113</td>
<td>70.6%</td>
</tr>
<tr>
<td>Total</td>
<td>160</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table 4.11: Response to statement 10 (N=160)
4.3.11 Statement 11: In general, I feel that I can understand patients with mental health problems

The below mentioned results show that 15.6% (n=25) of the participants felt that they did not have the required understanding of mental health problems; whilst 70.6% (n=113) of the participants felt that they have understanding of mental health problems. The data are summarized in table 4.12.

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disagree</td>
<td>25</td>
<td>15.6%</td>
</tr>
<tr>
<td>Neutral</td>
<td>22</td>
<td>13.8%</td>
</tr>
<tr>
<td>Agree</td>
<td>113</td>
<td>70.6%</td>
</tr>
<tr>
<td>Total</td>
<td>160</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table 4.12: Response to statement 11 (N=160)

4.3.12. Discussion: Overall self-rated knowledge related to caring for those with mental health problems

The overall knowledge was calculated by adding the frequencies of each category (disagree, neutral and agree) for all 11 statements, and then divided this number by 11. It is evident that the majority of participants 60.37% (n=97) felt that they have adequate knowledge related to caring for people with mental health problems. On the other hand 39.6% (n=63) of the participants felt either uncertain or inadequate of their knowledge (disagree/neutral responses) regarding the care of patients with mental health problems. Although these results indicated the majority as having adequate knowledge related to caring for people with mental illness, it must be highlighted that these were self-rated scores. As a result these scores will be verified when compared with their actual knowledge of symptoms of mental illness as determined in Section C. Regardless, 15.6% still admit to feeling uncertain and inadequate concerning their knowledge of mental health care suggesting the need for training and support in this area of the health care system. Delobelle, Rawlinson and Ntuli (2009:1061-1073) claimed that inadequate knowledge among primary health care nurses is a concern because they have a much higher frequency of contact with patients as compared to other health professionals. In-service training is a necessary action to remedy the problem of inadequate knowledge in mental illness. Walker, Moxham, Dwyer, Broadbent and Sander
support the above statement by saying that training of nurses in mental illness promote confidence in the care of patients. The data are summarized in table 4.13.

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disagree</td>
<td>38</td>
<td>24%</td>
</tr>
<tr>
<td>Neutral</td>
<td>25</td>
<td>15.6%</td>
</tr>
<tr>
<td>Agree</td>
<td>97</td>
<td>60.4%</td>
</tr>
<tr>
<td>Total</td>
<td>160</td>
<td>100%</td>
</tr>
</tbody>
</table>

*Table 4.13: Response to statement 1-11 (N=160)*

### 4.4 KNOWLEDGE OF SYMPTOMS OF MENTAL ILLNESS RELATED TO CLINICAL EXPERIENCE (SECTION C OF QUESTIONNAIRE)

The results relating to the knowledge of symptoms of mental illness in a clinical setting are illustrated in the tables below. In the tables the results differentiate between poor, average and good knowledge relating to primary health care nurses’ knowledge of symptoms of mental illness (see the explanation of these categories under data analysis- chapter 3). Each table summarized frequency distribution scores of symptoms of mental illness from selected conditions of mental illness namely: depression, anxiety, psychosis, mood disorder and cognitive impairment. The findings also illustrate knowledge concerning appropriate referral of HIV positive patients presenting with mental illness symptoms.

#### 4.4.1 Knowledge of symptoms of depression

In this section the knowledge of symptoms of depression were determined. As much as 70.7% (n=113) of participants had poor knowledge of symptoms of depression, whilst 24.4% (n=39) had average knowledge and only 5.0% (n=8) of the participants had good knowledge. The data are summarized in table 4.14.

<table>
<thead>
<tr>
<th>Knowledge of Depression</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor</td>
<td>113</td>
<td>70.7%</td>
</tr>
<tr>
<td>Average</td>
<td>39</td>
<td>24.4%</td>
</tr>
<tr>
<td>Good</td>
<td>8</td>
<td>5.0%</td>
</tr>
<tr>
<td>Total</td>
<td>160</td>
<td>100%</td>
</tr>
</tbody>
</table>

*Table 4.14: Frequency distribution scores: knowledge of symptoms of depression (N=160)*
4.4.2 Knowledge of symptoms of anxiety

In this section the knowledge of symptoms of anxiety were determined. The large majority of participants 86.9% (n=139) had poor knowledge of symptoms of anxiety, whilst 8.8% (n=14) had average knowledge and only 4.4% (n=7) of the participants had good knowledge. The data are summarized in table 4.15.

<table>
<thead>
<tr>
<th>Knowledge: Anxiety</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor</td>
<td>139</td>
<td>86.9%</td>
</tr>
<tr>
<td>Average</td>
<td>14</td>
<td>8.8%</td>
</tr>
<tr>
<td>Good</td>
<td>7</td>
<td>4.4%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>160</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

*Table 4.15: Frequency distribution scores: knowledge of symptoms of anxiety (N=160)*

4.4.3 Knowledge of symptoms of psychosis

In this section the knowledge of symptoms of psychosis were determined. The results display that only 18.8% (n=30) of the participants proved to have good knowledge regarding symptoms of psychosis while the majority of the participants 48.8% (n=78) had average knowledge regarding psychosis symptoms. A total of 32.5% (n=52) of participants had poor knowledge. The data are summarized in table 4.16.

<table>
<thead>
<tr>
<th>Knowledge: Psychosis</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor</td>
<td>52</td>
<td>32.5%</td>
</tr>
<tr>
<td>Average</td>
<td>78</td>
<td>48.8%</td>
</tr>
<tr>
<td>Good</td>
<td>30</td>
<td>18.8%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>160</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

*Table 4.16: Frequency distribution scores: knowledge of symptoms of psychosis (N=160)*

4.4.4 Knowledge of symptoms of mood disorder

In this section the knowledge of symptoms of mood disorder were determined. The significant majority (76.9%) of the participants had poor knowledge of symptoms of mood disorder with the remaining 23.1% (n=37) of participants having average knowledge. None of the 160 participants had good knowledge of symptoms of mood disorder. The data are summarized in table 4.17.
### Knowledge of symptoms of mood disorder

The frequency distribution scores for knowledge of symptoms of mood disorder are shown in Table 4.17. The majority of participants (76.9%) had poor knowledge, 23.1% had average knowledge, and 0% had good knowledge. A total of 160 participants were included in the study.

<table>
<thead>
<tr>
<th>Knowledge: Mood Disorder</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor</td>
<td>123</td>
<td>76.9%</td>
</tr>
<tr>
<td>Average</td>
<td>37</td>
<td>23.1%</td>
</tr>
<tr>
<td>Good</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Total</td>
<td>160</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table 4.17: Frequency distribution scores: knowledge of symptoms of mood disorder (N=160)

### 4.4.5 Knowledge of symptoms of cognitive impairment

In this section, the knowledge of symptoms of cognitive impairment was determined. Similar to the trends observed above, the majority of participants (62.5%) had poor knowledge, while 37.5% had average knowledge, and none had good knowledge. A total of 60 participants had average knowledge.

<table>
<thead>
<tr>
<th>Knowledge: Cognitive impairment</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor</td>
<td>100</td>
<td>62.5%</td>
</tr>
<tr>
<td>Average</td>
<td>60</td>
<td>37.5%</td>
</tr>
<tr>
<td>Good</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Total</td>
<td>160</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table 4.18: Frequency distribution scores of symptoms of cognitive impairment (N=160)

### 4.4.6 Knowledge related to appropriate referral for patient with symptoms of mental illness

The knowledge of appropriate referral for patients with symptoms of mental illness was assessed. A small number of participants (31.9%) had poor knowledge, while 68.1% had average knowledge, and none had good knowledge. The data are summarized in Table 4.19.

In this section, the knowledge relating to appropriate referral of a patient with symptoms of mental illness was determined. A small number of participants (31.9%) had poor knowledge, while 68.1% had average knowledge, and none had good knowledge. The data are summarized in Table 4.19.
4.4.7 Discussion: Overall knowledge of symptoms of mental illness related to clinical experience

When considering the overall knowledge scores related to symptoms of mental illness an alarming 5% (n=8) of the participants had good knowledge. This is a cause for concern when considering the prevalence of mental illness and the consequent undetected mental illness among HIV positive patients due to such a finding. This same cause for concern was specifically magnified in numerous tables above (table 4.14, 4.15, 4.16, 4.17 and 4.18), that being the poor knowledge of primary health care nurses relating to symptoms of mental illness. Delobelle et al. (2009:1061-1073) also felt that the lack of knowledge regarding symptoms of mental illness among primary health care nurses is a concern because they have a higher frequency of contact than any other health care provider, thus a significant role to play in the early detection and referral of patients with symptoms of mental illness. Dube and Uys (2015:9) research findings confirm those of this study as they also identified a lack of knowledge and skills among primary health care nurses as contributing factors to the poor management of mental illness in patients. The data are summarized in table 4.20.

<table>
<thead>
<tr>
<th>Knowledge: Mental illness</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor</td>
<td>97</td>
<td>61%</td>
</tr>
<tr>
<td>Average</td>
<td>55</td>
<td>34%</td>
</tr>
<tr>
<td>Good</td>
<td>8</td>
<td>5%</td>
</tr>
<tr>
<td>Total</td>
<td>160</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table 4.20: Frequency distribution scores: Overall knowledge of symptoms of mental illness (N=160)
4.5 KNOWLEDGE OF SYMPTOMS OF MENTAL ILLNESS AMONG PRIMARY HEALTH CARE NURSES: AN INTEGRATION OF SECTION A, B & C OF QUESTIONNAIRE

Each condition for comparison of section A and B data with section C for knowledge of symptoms were discussed under a table to infer a clear picture of compared results. Chi-squared test and the Cramer’s V test for statistical and practical significance between the observed and the expected frequencies are determined for the various associations listed below and later unpacked.

4.5.1 Comparison of participants’ knowledge of symptoms of mental illness with their age

When comparing participants’ knowledge of symptoms of mental illness with age, participants ranging from 21-39 years and 40+ years displayed more or less equal results of ‘poor knowledge’ ranging from 24.6% (n=17) to 31.9% (n=29), ‘average knowledge’ ranging from 39.1% (n=27) to 49.5% (n=45) and ‘good knowledge’ ranging from 18.7% (n=17) to 36.2% (n=25). There was statistically significant evidence (Chi-square=6.247; df=2; p=0.044) when comparing knowledge of symptoms of mental illness and age of primary health care nurses (younger primary health care nurses ranging from 21-39 years were more likely to have good knowledge as compared to middle aged primary health care nurses 40 years and older). However, Cramer’s V (V=0.198) indicated a weak practical significance. Austin and Boyd (2010:79) confirmed that young nurses may display better knowledge than older nurses because they are acquainted with the use of technology in order to access relevant and contemporary information. Bastable and Dart (2007:29) stated that young adult are in position to learn better and acquire knowledge than other age group, because they are energetic, motivated and enjoying critical analysis, problem solving and decision making about personal, occupational and social role as they strive for independency. However, slightly different trends concerning knowledge emerge when assessing average knowledge scores in that middle aged nurses scored slightly higher than their younger colleagues. These results may be due to their many years of experience and accumulation of knowledge over this extended time period. The data are summarized in table 4.21.
<table>
<thead>
<tr>
<th>Age</th>
<th>Knowledge</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Poor</td>
<td>Average</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>21-39 yrs</td>
<td>17</td>
<td>24.6</td>
</tr>
<tr>
<td>40+ yrs</td>
<td>29</td>
<td>31.9</td>
</tr>
<tr>
<td>Total</td>
<td>46</td>
<td>28.8</td>
</tr>
</tbody>
</table>

Table 4.21: Comparison of knowledge of symptoms of mental illness and age (N=160)

4.5.2 Comparison of participants’ knowledge of symptoms of mental illness with their qualifications

When comparing participants’ knowledge of symptoms of mental illness with their respective qualification categories, namely basic nursing and psychiatric nursing, either displayed more or less equal results of ‘poor knowledge’ ranging from 37% (n=10) to 27% (n=30), ‘average knowledge’ ranging from 44.4% (n=12) to 43.2 (n=48) and ‘good knowledge’ ranging from 18.5% (n=5) to 29.7% (n=33). There was no statistical significance (Chi-square=1.79; df=2; p=0.417) when comparing knowledge of symptoms of mental illness and qualification. However, trends in the results table show that those with psychiatric qualifications clearly had better “good knowledge” scores as compared to those with simply basic nursing qualifications. It would be safe to assume that this is the result of having received training in mental health and that in-service training in mental health would benefit all primary health care nurses. The data are summarized in table 4.22.
### Knowledge of symptoms for mental illness and qualifications

<table>
<thead>
<tr>
<th>Qualification</th>
<th>Knowledge</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Poor</td>
<td>Average</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>Basic Nursing</td>
<td>10</td>
<td>37.0</td>
</tr>
<tr>
<td>Psychiatric Nursing</td>
<td>30</td>
<td>27.0</td>
</tr>
<tr>
<td>Total</td>
<td>40</td>
<td>64</td>
</tr>
</tbody>
</table>

*Table 4.21: Comparison of knowledge of symptoms of mental illness with qualification (N=160)*

#### 4.5.3 Comparison of participants’ knowledge of symptoms of mental illness with the short courses

When comparing participants’ knowledge of symptoms of mental illness with short courses attended the participants displayed more or less equal results of ‘poor knowledge’ ranging from 27.5% (n=19) to 29.7% (n=27), ‘average knowledge’ ranging from 42.9% (n=39) to 47.8 (n=33) and ‘good knowledge’ ranging from 24.6% (n=17) to 27.5% (n=25). There was no statistical significance (Chi-square=0.398; df=2; p=0.820) when comparing knowledge of symptoms of mental illness and short courses attended. The data are summarized in table 4.23.

### Knowledge of symptoms for mental illness and short courses

<table>
<thead>
<tr>
<th>Short courses</th>
<th>Knowledge</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Poor</td>
<td>Average</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>0-3</td>
<td>27</td>
<td>29.7</td>
</tr>
<tr>
<td>4-6</td>
<td>19</td>
<td>27.5</td>
</tr>
<tr>
<td>Total</td>
<td>46</td>
<td>57.2</td>
</tr>
</tbody>
</table>

*Table 4.23. Comparison of knowledge of symptoms of mental illness with short courses (N=160)*
4.5.4 Comparison of participants’ knowledge of symptoms of mental illness with training related to mental illness in the last 5 years

When comparing participants’ knowledge of symptoms of mental illness with the training related to mental illness, participants displayed more or less equal results of ‘poor knowledge’ of 28.9% (n=46) and ‘good knowledge’ of 25.8% (n=41). There was no statistical significance (Chi-square=2.643; df=2; p=0.268) when comparing knowledge of symptoms of mental illness and training attended. Statistical significance was not possible due to the small number of participants that responded to this question. Of more importance and worthy of noting is the concerning result that only 20 out of 160 participants attended training for mental illness in the last five years. Munro, Watson and McFadyen (2007: 1430-1438) attributed poor knowledge of mental illness with lack of access to support and ongoing in-service mental health training and education and consequently proposed the need for effective and appropriate training of nurses in order to improve their knowledge, skills and attitudes regarding mental health care. The data are summarized in table 4.24 (one participants did not complete this question thus N=159).

<table>
<thead>
<tr>
<th>Training</th>
<th>Knowledge</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Poor</td>
<td>Average</td>
</tr>
<tr>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>Yes</td>
<td>3  15.0</td>
<td>12 7.5</td>
</tr>
<tr>
<td>No</td>
<td>43 30.9</td>
<td>60 37.5</td>
</tr>
<tr>
<td>Total</td>
<td>46 45.9</td>
<td>72 45</td>
</tr>
</tbody>
</table>

Table 4.24: Comparison of knowledge of symptoms of mental illness with training related to mental illness (N=159)

4.5.5 Comparison of participants’ knowledge of symptoms of mental illness with their experience working as primary health care nurse

When comparing participants’ knowledge of symptoms of mental illness with the experience of the participants working as primary health care nurses, participants displayed ‘good
knowledge’ results of 43.8% (n=70) and ‘poor knowledge’ results of 7.5% (n=12). There was no statistical significance (Chi-square=6.547; df=4; p=0.162) when comparing knowledge of symptoms of mental illness and experience of working as a primary health care nurse. However, there are clear trends in the data that indicate that knowledge increases with increased years of experience. Thus it would be critical for the more experienced nurses to share their experiences (knowledge and skills) with younger and more inexperienced nurses. Opportunities to share knowledge and skills could be facilitated by unit managers as part of in-service training. The data are summarized in table 4.25.

<table>
<thead>
<tr>
<th>Primary health care experience</th>
<th>Poor</th>
<th>Average</th>
<th>Good</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;1 year</td>
<td>3</td>
<td>8</td>
<td>4</td>
<td>15</td>
</tr>
<tr>
<td>1-6 years</td>
<td>4</td>
<td>33</td>
<td>27</td>
<td>64</td>
</tr>
<tr>
<td>7+ years</td>
<td>5</td>
<td>37</td>
<td>39</td>
<td>81</td>
</tr>
<tr>
<td>Total</td>
<td>12</td>
<td>78</td>
<td>70</td>
<td>160</td>
</tr>
</tbody>
</table>

Table 4.25: Comparison of knowledge of mental illness and experience working as a primary health care nurse (N=160)

4.5.6 Comparison of participants’ knowledge of symptoms of mental illness with their experience working with HIV positive patients

When comparing participants’ knowledge of symptoms of mental illness with the experience of the participants working with HIV positive patients, participants displayed more or less equal results of ‘poor knowledge’ of 28.8% (n=46) and ‘good knowledge’ of 26% (n=42). There was no statistical significance (Chi-square=8.142; df=4; p=0.086) when comparing knowledge of symptoms of mental illness and experience of working with HIV positive patients. The results indicate that less than half of the participants with experience in working with HIV positive patients display average knowledge, few displaying ‘good knowledge’ required for effective clinical practice. However, of as much importance and although not statistically significant, it appears that experience does make a difference in knowledge.
scores, as those with more than one years’ experience in working with HIV positive patients were more knowledgeable than those with only one year of experience. Again the need for younger more inexperienced nurses to consult with older more experienced nurses is highlighted. The data are summarized in table 4.26.

<table>
<thead>
<tr>
<th>Experience working with HIV + patients</th>
<th>Knowledge</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Poor</td>
<td>Average</td>
</tr>
<tr>
<td>&lt;1 year</td>
<td>3 1.5</td>
<td>7 35</td>
</tr>
<tr>
<td>1-6 years</td>
<td>27 34.2</td>
<td>34 43</td>
</tr>
<tr>
<td>7+ years</td>
<td>16 26.2</td>
<td>31 50.8</td>
</tr>
<tr>
<td>Total</td>
<td>46 28.8</td>
<td>72 45</td>
</tr>
</tbody>
</table>

Table 4.26: Comparison of knowledge of mental illness with experience working with HIV positive patients (N=160)

4.5.7 Comparison of knowledge of symptoms of depression and self-rated knowledge of mental health care

There was no statistical significance (Chi-square=0.124; df=2; p=0.940) when comparing knowledge of symptoms of depression and self-rated knowledge of mental health care. The total results indicate that 70.6% (n=113) of participants displayed poor knowledge and a very low percentage of 29.4% (n=47) displayed good knowledge. The data are summarized in table 4.2.
When comparing participants’ knowledge of symptoms of anxiety with mental health care, the total results indicate that 86.9% (n=139) and 13.1% (n=21) of participants displayed a very high percentage of poor knowledge and a very low percentage of good knowledge respectively. In contrast with the above statement the participants’ personal rating regarding mental health care ranged from high to medium. There was no statistical significance (Chi-square=2.167; df=2; p=0.338) when comparing knowledge of symptoms of anxiety and knowledge of mental health care. The data are summarized in table 4.28.

Table 4.27: Comparison of knowledge of symptoms of depression with self-rated knowledge of mental health care (N=160)

4.5.8 Comparison of knowledge of symptoms of anxiety and knowledge of mental health care

When comparing participants’ knowledge of symptoms of anxiety with mental health care, the total results indicate that 86.9% (n=139) and 13.1% (n=21) of participants displayed a very high percentage of poor knowledge and a very low percentage of good knowledge respectively. In contrast with the above statement the participants’ personal rating regarding mental health care ranged from high to medium. There was no statistical significance (Chi-square=2.167; df=2; p=0.338) when comparing knowledge of symptoms of anxiety and knowledge of mental health care. The data are summarized in table 4.28.

Table 4.27: Comparison of knowledge of symptoms of depression with self-rated knowledge of mental health care (N=160)
Table 4.28: Comparison of knowledge of symptoms of anxiety with self-rated knowledge of mental health care (N=160)

4.5.9 Comparison of knowledge of symptoms of psychosis and knowledge of mental health care

When comparing participants’ knowledge of symptoms of psychosis with mental health care, the total results indicate that 32.5% (n=52) and 67.5% (n=108) of participants displayed a low percentage of poor knowledge and a high percentage of good knowledge respectively. In contrast with the above statement the participants’ personal rating regarding mental health care ranged from high to medium. There is better results when looking knowledge of symptoms of psychosis, this is supported by The British Psychological Society (2000:14-16) who reported that severe mental illness is recognizable. Psychosis is a form of severe obvious mental illness (The British Psychological Society, 2000:14-16). There was no statistical significance (Chi-square=0.068; df=2; p=0.968) when comparing knowledge of symptoms of psychosis and knowledge of mental health care. The data are summarized in table 4.29.

<table>
<thead>
<tr>
<th>Mental health care rating</th>
<th>Poor</th>
<th>Good</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>Low</td>
<td>12</td>
<td>100</td>
<td>0</td>
</tr>
<tr>
<td>Medium</td>
<td>66</td>
<td>84.6</td>
<td>12</td>
</tr>
<tr>
<td>High</td>
<td>61</td>
<td>87.1</td>
<td>9</td>
</tr>
<tr>
<td>Total</td>
<td>139</td>
<td>86.9</td>
<td>21</td>
</tr>
</tbody>
</table>
Table 4.29: Comparison of knowledge of symptoms of psychosis with self-rated knowledge of mental health care (N=160)

<table>
<thead>
<tr>
<th>Mental health care rating</th>
<th>Poor</th>
<th>Good</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>Low</td>
<td>4</td>
<td>33.3</td>
<td>8</td>
</tr>
<tr>
<td>Medium</td>
<td>26</td>
<td>33.3</td>
<td>52</td>
</tr>
<tr>
<td>High</td>
<td>22</td>
<td>31.4</td>
<td>48</td>
</tr>
<tr>
<td>Total</td>
<td>52</td>
<td>32.5</td>
<td>108</td>
</tr>
</tbody>
</table>

4.5.10 Comparison of knowledge of symptoms of mood disorder and knowledge of mental health care

When comparing participants’ knowledge of symptoms of mood disorder with mental health care, the total results indicate that 76.9% (n=123) and 23.1% (n=37) of participants displayed a very high percentage of poor knowledge and a very low percentage of good knowledge respectively. In contrast with the above statement the participants’ personal rating regarding mental health care ranged from high to medium. There was no statistical significance (Chi-square=0.027; df=2; p=0.987) when comparing knowledge of symptoms of mood disorder and knowledge of mental health care. The participants have been realistic again by displaying congruency when comparing their perceived knowledge and their actual knowledge about mood disorder symptoms. The data are summarized in table 4.30.
Table 4.30: Comparison of knowledge of symptoms of mood disorder with self-rated knowledge of mental health care (N=160)

4.5.11 Comparison of knowledge of symptoms of cognitive impairment and knowledge of mental health care

When comparing participants’ knowledge of symptoms of cognitive impairment with mental health care, the total results indicate that 62.5% (n=100) and 37.5% (n=60) of participants displayed a high percentage of poor knowledge and a low percentage of good knowledge respectively. In contrast with the above statement the participants’ personal rating regarding mental health care ranged from high to medium. There was no statistical significance (Chi-square=2.440; df=2; p=0.295) when comparing knowledge of symptoms of cognitive impairment and knowledge of mental health care. Inspite of absence of statistical significance it is significant that a large number of primary health care nurses cannot identify symptoms of cognitive impairment readily. The data are summarized in table 4.3.

<table>
<thead>
<tr>
<th>Mental health care rating</th>
<th>Poor</th>
<th></th>
<th>Good</th>
<th></th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>Low</td>
<td>9</td>
<td>75.0</td>
<td>3</td>
<td>25.0</td>
<td>12</td>
</tr>
<tr>
<td>Medium</td>
<td>60</td>
<td>76.9</td>
<td>18</td>
<td>23.1</td>
<td>78</td>
</tr>
<tr>
<td>High</td>
<td>54</td>
<td>77.1</td>
<td>16</td>
<td>22.9</td>
<td>70</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>76.9</td>
<td>37</td>
<td>23.1</td>
<td>160</td>
</tr>
</tbody>
</table>
Table 4.31: Comparison of knowledge of symptoms of cognitive impairment with self-rated knowledge of mental health care (N=160)

<table>
<thead>
<tr>
<th>Mental health care rating</th>
<th>Poor</th>
<th>Good</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>Low</td>
<td>10</td>
<td>83.3</td>
<td>2</td>
</tr>
<tr>
<td>Medium</td>
<td>48</td>
<td>61.5</td>
<td>30</td>
</tr>
<tr>
<td>High</td>
<td>42</td>
<td>60.0</td>
<td>28</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>62.5</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td>160</td>
<td>100</td>
<td>160</td>
</tr>
</tbody>
</table>

4.5.12 Summary of comparison of knowledge for mental illness symptoms and knowledge of mental health care

When comparing participants’ knowledge of symptoms of mental illness with mental health care, the total results indicated that 28.8% (n=46) and 26.3% (n=42) of participants displayed a high percentage of poor knowledge and a low percentage of good knowledge respectively. Despite participants’ high rating of mental health care for HIV positive patients, majority of participants did not display very high knowledge of mental illness symptoms instead less than half of the participants displayed average knowledge of mental illness symptoms which is not adequate for effective and efficient clinical practice. There was statistical significance (Chi-square=11.772; df=4; p=0.019) when comparing knowledge of symptoms of mental illness and knowledge of mental health care. However, Cramer’s V (V=0.192) indicated a weak practical significance. This means the few participants who rated themselves with low scores really indicated knowledge deficit that needs optimizing their knowledge for effective, efficient health care services. The data are summarized in table 4.32.
Overall knowledge of mental illness symptoms and knowledge of mental health care

<table>
<thead>
<tr>
<th>Mental health care rating</th>
<th>Poor</th>
<th>Average</th>
<th>Good</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>Low</td>
<td>8</td>
<td>66.7</td>
<td>2</td>
<td>16.7</td>
</tr>
<tr>
<td>Medium</td>
<td>24</td>
<td>30.8</td>
<td>36</td>
<td>48.2</td>
</tr>
<tr>
<td>High</td>
<td>14</td>
<td>20.0</td>
<td>34</td>
<td>48.6</td>
</tr>
<tr>
<td>Total</td>
<td>46</td>
<td>28.8</td>
<td>72</td>
<td>45.0</td>
</tr>
</tbody>
</table>

Table 4.32: Comparison of knowledge of symptoms of mental illness with self-rated knowledge of mental health care (N=160)

4.6 SUMMARY OF RESULTS

Only 8% (n=12) of young nurses ranging from 21-29 years participated in the research study, this indicates that there are few youngster joining the nursing profession. Poredi et al. (2012:6-8) confirmed that young people are not interested to join the profession because of social prejudice (nursing is not regarded as dignified and respectful profession). Drury et al. (2009:2) claimed that this is one of the cause shortages and a succession programme is vital for recruiting young people, because shortage will affect the service delivery. The results indicated the majority of the participants 69.4% (n=111) at primary health care services have received training in psychiatry, and can be expected to identify symptoms of mental illness. The majority of 76% (n=122) participants have completed the VCT/PMTCT and NIMART courses in order to cope with high demand of care for the HIV positive patients. Only 13% (n=20) of the participants attended training for mental illness in the last 5 years. According to van Rooyen et al. (2014:373) little is being done to resource mental health care, especially concerning capacititation (education and training) and recruitment the health care team. The majority of participants (69%; n=110) have worked more than 4 years, suggesting adequate experience to work as health professional. Most of the participants (87%; n=139) had a reasonable amount of time (1year and more) working with HIV positive patients.

According to section B of the questionnaire (self-rated knowledge of mental health care) the primary health care nurses felt that they had a fairly adequate knowledge (‘average’ and ‘good’ knowledge) related to caring for HIV positive patients presenting with mental illness.
According to Section C of the questionnaire (knowledge of symptoms of mental illness) results indicated that they did not have adequate knowledge of symptoms of mental illness relating to HIV positive patience with mental health challenges. In this above section, comparison of these different section revealed clear incongruence’s in primary health care nurses knowledge, most especially for symptoms related to depression, anxiety and mood disorder while less incongruence’s remained for cognitive impairment and psychosis.

In comparing knowledge (Section C) with variables from Section A there revealed a few statistical significant associations namely; younger adults (ages 21-39) had an improved knowledge of mental illness as compared to their older colleagues (ages 40+); however this knowledge is still inadequate for effective clinical practices. Bastable et al. (2007:29) stated that young adult are in a position to learn better and acquire knowledge than other group, because they are energetic, motivated and enjoying critical analysis, problem solving and decision making about personal, occupational and social role as they strive for independency. Dube and Uys (2015: 9) suggested that their study identified a lack of knowledge and skills among primary health care nurses as contributing factors to the poor management of mental illness which verify the findings of this study.

4.7 CONCLUSION

Chapter 4 presented a detailed description and discussion of the results of the study. Based on these results it can be concluded that primary health care nurses lack the adequate knowledge of symptoms of mental illness in HIV positive patients. This lack of knowledge was evident across the entire questionnaire as was highlighted in this chapter. The importance of taking action in resolving this dilemma will be detailed in the following chapter.
5.1. INTRODUCTION

In the previous chapter, the results concerning professional nurses’ knowledge of symptoms of mental illness in HIV positive patients’ were presented and discussed. Descriptive and inferential analysis assisted in identifying a number of areas of concern which formed an important part of this discussion. These identified areas of concern justified the development of a set of recommendations which will shortly follow in this chapter.

5.2 SUMMARY OF RESEARCH FINDINGS

- The majority of primary health care nurses (61%) lack the adequate knowledge of symptoms of mental illnesses in HIV positive patients.
- Although 60.4% of primary health care nurses felt that they had adequate self-rated knowledge related to the caring for people with mental health problems, there still remain as many as 39.6% that they felt either uncertain or inadequate in their knowledge (self-rated) related to the caring for people with mental health problem.
- There is an incongruent in primary health care nurses’ actual knowledge of symptoms of mental illness as compared to their self-rated knowledge of mental health care, suggesting that they have higher estimates of their mental health knowledge than is actually the case.
- A small percentage (8%) of young adults are joining the nursing the profession.
- Although younger adults had slightly better knowledge (‘good knowledge’ category) than middle age colleagues, those with more experience proved to have a significant amount of more knowledge than those with less experience.
- This study suggests that it is imperative that primary health care nurses are equipped with adequate knowledge so that they may be knowledgeable and have increased willingness to deal with mental illness amongst HIV in positive patients.
- At this stage recommendations are crucial to ensure that the knowledge of primary health care nurses is optimized for effective services for HIV positive patients.
5.3 RECOMMENDATIONS

The researcher based the following recommendations on the findings of the research study. Due to the lack of knowledge among primary health care nurses related to identifying symptoms of mental illness in HIV positive patients, recommendations focused on ways in which knowledge could be optimized. The recommendations identified by the researcher can be classified into the following categories: Research, administrative control, policy and legislature, nursing education and clinical practices.

5.3.1 Recommendations related to research

Further research needs to be conducted concerning primary health care nurse’s mental health care needs regarding knowledge and skills development. A qualitative research study enquiring into the knowledge and skills needs of primary health care nurses would complement this current study in better understanding the challenges and possible solutions. The results from both studies could be used to contribute to further research, more specifically intervention and action research whereby primary health care nurses receive education and training in mental health care and over a period of time knowledge, attitude and practice can be evaluated for change in behavioral outputs. Further research needs to be conducted in an in-depth spectrum to understand why a small number of primary health care nurses undergo mental illness training, and those that have gone still display a knowledge deficit in early detection of mental illnesses amongst HIV positive patients. On account of referrals, the primary health care nurses were very good to know where to refer patients presenting with mental illness symptoms however, in practice they are hesitant to refer or they do not refer at all, causation for this hesitation or lack of referrals when necessary needs further exploration. Most of the primary health care nurses have indicated that they felt that they can identify mental illnesses amongst HIV positive patients when in essence they detect the symptoms when they are severe, a qualitative research to investigate their perception is vital for improved clinical practices. A quantitative approach in aiming to explain the administrative control of the primary health care nurses’ employers’ support structure in ensuring improved knowledge for identifying mental illnesses in HIV positive patients and improved service delivery in primary health care serves is necessary.
5.3.2 Recommendations related to administrative control

Administration control plays a crucial role in management, supervision, quality control and work ethics of a primary health care center, and change management to keep the primary health care nurses abreast with the new trends of development in health care services. It is recommended that management create an environment for initiative, creativity and become active participants in decision making processes with their subordinates with the intention of implementing a bottom up approach instead of a bureaucracy. This requires management to work hand-in-hand with primary health care nurses in identifying the developmental needs for example knowledge on mental illness and related care practices in order to optimize service delivery. It is recommended that the management support primary health care nurses by offering learning and training opportunities as they aim to develop themselves both clinically and academically. The primary health care nurses should be allowed to access and retrieve relevant the knowledge electronically using internet facilities. It is recommended that the management involves the primary health care nurses for quality control by formulating a vision, mission and a standardized procedural function for services rendered at the primary health care centers. The inclusion of the primary health care nurses in formulating standardized procedures, vision and mission will ensure non-alienation, non-marginalization and there will be a collaborative function between management and their subordinates. It is also recommended under quality control that primary health care nurses indicate their knowledge deficit and be involved in the planning of necessary remedial action in the form of in service training, workshops, seminars and symposiums. It is recommended that the administration should persuade the primary health care nurses to adhere to the ethical code of conduct, as it is very unethical to claim that they possess knowledge when they do not. This has been postulated in some statements in chapter four where their knowledge of symptoms of mental illness were incongruent with their self-rated abilities to identify symptoms. It is recommended that administration encourages change, introduce and initiate change as a developmental mechanism for primary health nurses and the primary health care service centers. It is the change management that will trigger an interest and desire for the primary health care nurses to remain driven to keep abreast with new trends of development in the care of HIV positive patients presenting with mental illness.
5.3.3 Recommendations related to policy and legislature

The policies and legislation are crucial for a sound practice base and government support. It is very important for the primary health care nurses to adhere and refer to the policies when in practice, but the situation without policies tend to frustrate both the primary health care nurses and that may affect the patients’ care. It is recommended that primary health care nurses lobby to members of the parliament to create and amend necessary policies and legislature. This is possible only and only if the primary health care nurses are represented directly or indirectly in the parliament. The policies for the practice must be always available and accessible to the primary health care nurses for direction and to ensure that the rights of both the primary health care nurse and patients are upheld.

5.3.4 Recommendations related to nursing education

Primary health care nurses receive their formal nursing education and training at colleges and universities. According to the study most of the primary health care nurses which are namely; 4 year courses and BCur nurses have undergone training in mental illness in their initial formal training. The study shows that inspite of their training they displayed a lack of knowledge of mental illness in HIV positive patients. It is recommended that primary health care nurses who have completed their qualifications remain in contact with their respective colleges and universities through the alumini societies. It is recommended that the academic institutions organize that interaction with their products remain fluid and open by inviting them to workshops, seminars and symposiums and visiting them periodically to attend. This will ensure that primary health care nurses are kept abreast with current medical trends and developments and this will create a constant eagerness to remain in the loop with new medical practices. It is recommended that the pharmacology department to update the nurses in practice with current changes necessary for the care of HIV positive patients with mental illness. It is recommended that institutions should offer additional qualifications or add in their curriculum mental illness in HIV positive patients (management of neurocognitive disorder in HIV positive patients).

5.3.5 Recommendations related to clinical practices

Continuous education and training mental illness in HIV positive patients is of paramount importance in order to enhance practice and increased positive outcome. It is recommended that all primary health care nurses be orientated periodically at the community psychiatric
services. It is recommended that the specialized doctors, psychologists, psychiatrists and specialized nurses at the services offer some form of inservice training to the primary health care nurses periodically (elaboration on recommendations regarding inservice training shall be further discussed below). It is recommended that the primary health care nurses should always strive to identify mental illness amongst HIV positive patients and make use of the available protocols or algorithms for assessing and managing HIV positive patients presenting with mental illness. A publication of the Southern African HIV clinicians society journal called HIV Nursing Matters have illustrated the important symptoms of depression by observing an algorithm that can assist primary health care nurses to identify mental illness in HIV positive patients. According to Thom (2009:25) the examples are as follows:

The symptoms of depression to observe

- Feeling of sadness
- Decreased interest or pleasure in activities
- Weight loss or gain
- Sleeping more or less
- Feeling tired most of the time
- Feeling of worthlessness or inappropriate guilt
- Inability to concentrate or make decisions
- Thought of death
Algorithm approach for different conditions of mental illness in HIV positive patients

HIV + patient’s interview

Have you felt Lonely/sad/down/depressed?

Have you thought about killing yourself?

Administer SADPERSON scale (see Figure 5.2)

Exclude psychosis and perform physical examination to exclude delirium

Have you been forgetful lately?

Do you feel people are against you or want to harm you?

Have you been drinking alcohol more than usual?

Figure 5.1: Algorithm approach for mental illness
<table>
<thead>
<tr>
<th>S</th>
<th>Sex: Male is higher risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Age: Extremes of age are at higher risk</td>
</tr>
<tr>
<td>D</td>
<td>Depression or other comorbidity are at higher risk</td>
</tr>
<tr>
<td>P</td>
<td>Previous attempts: those with a past history of attempts are at higher risk</td>
</tr>
<tr>
<td>E</td>
<td>Ethanol/alcohol or other substance use/abuse</td>
</tr>
<tr>
<td>R</td>
<td>Rational thinking loss e.g. psychosis with command hallucinations</td>
</tr>
<tr>
<td>S</td>
<td>Social support: no social support confers a higher risk</td>
</tr>
<tr>
<td>O</td>
<td>Organized plan</td>
</tr>
<tr>
<td>N</td>
<td>No spouse</td>
</tr>
<tr>
<td>S</td>
<td>Sickness: Medical or psychiatric illness may confer a higher risk</td>
</tr>
</tbody>
</table>

| 0-2 points | The patient may be sent home but one needs to ensure follow up in the future |
| 3-4 points | Close follow up needs to be ensured and hospitalization considered |
| 5-6 points | Hospitalization is strongly considered |
| 7-10 points | Ensure hospitalization and consider involuntary admission if necessary |

**Figure 5.2: The SADPERSONS Scale**

The primary health care nurses at this point in time are only required to identify mental illness in HIV positive patients and refer appropriately to the community psychiatric nurse or services for further management.

According to Poggenpoel, Labuschagne, Muller, Nolte, Potgieter and Powell, (1985:51-52) various recommendations have been made about inservice training namely that:

- Inservice trainers can plan more effective inservice training programmes with the assistance of inservice training committees consisting of nursing managers,
professional nurses and teachers in nursing.

- Inservice trainers can also utilise a broader spectrum of methods to assess the needs for inservice training programmes.

- Financing of workshops and seminars promoting inservice education is also pivotal (Ibrahim, 2015).

- According to Poggenpoel, Labuschagne, Muller, Nolte, Potgieter and Powell (1985) promotion of active participation of nurses in inservice training programmes is essential, this can be carried out through rewarding nurses’ contribution towards inservice training enabling not only the testimonials and enrichment obtained from inservice training becoming the only tool utilised to attract potential participants in inservice training.

- Poggenpoel, Labuschagne, Muller, Nolte, Potgieter and Powell (1985) stipulated that attention should be focused at correlating effective inservice training programmes and providing quality patient care and cost effectiveness in a specific health care system.

- Attention could be focused to the fact that nurses’ high workload could hinder their attendance of inservice training programmes. Inservice training should be planned in a manner that enables nurses to attend inservice training programmes.

- Inservice trainers mostly utilise formal lecture method of teaching. This form of teaching is not considered the most effective form of educational method of educating adults because it does not bring about the optimal participation in learning process. Educational methods namely Problem based Learning, Self- experience exercises, stimulation and or practice instructions are considered more advantageous.

- Attention should be focused at ensuring that inservice training programmes relate to the needs and interest of the participants.

- Acknowledgement of differences existing among the participants in terms of age, area of specialization, social status and or educational background is crucial to ensure effective inservice training.

- Attention should be focused at determining the duration of the inservice training programme depending on the accomplishments of the objectives of the training. In the
following section limitations will be discussed.

5.4 Limitations

The process of data collection was not a smooth process, the researcher encountered some difficult administrative problems where he could not conduct research immediately because the first in charge of the facility was not available. Initially the researcher collected the data during the festive season where he had to return to the variant institutions to collect the questionnaires as most of the questionnaires had no responses. Some of the participants did not participate because they were not interested.

5.5 Conclusion

Primary health care nurses have an important role to play in caring for HIV positive patients, especially those displaying symptoms of mental illness. Thus it is essential that they have the adequate knowledge and skills needed for caring for such patients. Based on the results of this study, it was determined that primary health care nurses lack the adequate knowledge required for identifying symptoms of mental illness. A comprehensive set of recommendations have been clearly outlined and highlight the role various stakeholders need to play in better supporting primary health care nurses in developing their knowledge and skills needs for the purposes of optimizing their care and support of HIV positive patients. The result would be significant for HIV positive patients with symptoms of mental illness as primary health care nurses become better equipped to meet their mental health needs.
14. REFERENCE LIST


Hess, K.K. 2006. Exploring Cognitive Demand in Instructions and Assessment Applying Webb DOK Level to Bloom’s Taxonomy to produce is given when authorship is fully cited khess@nciea.org.


Suthar, A., Rutherford, G., Havarth, T., Doherty, M. & Negussie, E. 2014. Improving Anti-retroviral drugs Therapy scale up and effectiveness through service integration and


RESEARCH QUESTIONNAIRE

Primary health care nurses’ knowledge regarding symptoms of mental illness in HIV-positive patients

Please tick the appropriate block in each question. In some of the items (those marked with *) there may be more than one response.

Section A: Biographical information

1) Indicate your gender:

<table>
<thead>
<tr>
<th>Female</th>
<th>Male</th>
</tr>
</thead>
</table>

2) Indicate your age range:

<table>
<thead>
<tr>
<th>21-29 years</th>
<th>30-39 years</th>
<th>40-49 years</th>
<th>50-59 years</th>
<th>60+ years</th>
</tr>
</thead>
</table>

3a) * Indicate your professional qualification(s):

<table>
<thead>
<tr>
<th>Diploma in general nursing</th>
<th>Diploma in community nursing</th>
<th>Diploma in psychiatric nursing</th>
<th>4 years comprehensive diploma</th>
<th>BCur Degree</th>
<th>BCur Honores</th>
<th>Other</th>
</tr>
</thead>
</table>
3b) If “Other” please state: …………………………………………………………………

4a) * Which of the following short courses related to HIV, TB and mental illness have you attended?

<table>
<thead>
<tr>
<th>Clinical guidelines for the Primary Care: The management of adult with HIV/AIDS/TB/Asthma/COPD/STI’s</th>
</tr>
</thead>
<tbody>
<tr>
<td>VCT and PMTCT</td>
</tr>
<tr>
<td>HIV/AIDS skills development</td>
</tr>
<tr>
<td>Nurse initiation and management of patient on ARV’s (NIMART)</td>
</tr>
<tr>
<td>Chronic care for HIV patients</td>
</tr>
<tr>
<td>Management of TB and HIV infection control</td>
</tr>
</tbody>
</table>

4b) Have you undergone any training related to mental illness in the last 5 years?

| Yes | No |

4c) If “yes” to question 4b, when last did you receive the above mentioned training?

| <6 months | 6 months-1 year | >1-2 years | 3-4 years | >4 years |

5) How long have you been working as a primary health care nurse?

| <1 year | 1-3 years | 4-6 years | 7-9 years | 10+ years |
6) Indicate how long you have worked with HIV-positive patients in the primary health care service:

<table>
<thead>
<tr>
<th>Time Frame</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;1 year</td>
<td></td>
</tr>
<tr>
<td>1-3 years</td>
<td></td>
</tr>
<tr>
<td>4-6 years</td>
<td></td>
</tr>
<tr>
<td>7-9 years</td>
<td></td>
</tr>
<tr>
<td>10+ years</td>
<td></td>
</tr>
</tbody>
</table>
### Section B: Knowledge of mental health care

*Please indicate how much you agree or disagree with each of the following statements:*

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>strongly disagree</th>
<th>disagree</th>
<th>slightly disagree</th>
<th>neutral</th>
<th>slightly agree</th>
<th>agree</th>
<th>strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I feel that I know enough about the factors that put people at risk of mental health problems to carry out my role when working with this client group.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>2</td>
<td>I feel I know how to treat people with long term mental health problems.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>3</td>
<td>I feel that I can appropriately advise my patients about mental health problems.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>4</td>
<td>I feel that I have a clear idea of my responsibilities in helping patients with mental health problems.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>5</td>
<td>I feel that I have the right to ask patients about their mental health status when necessary.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>6</td>
<td>I feel that my patients believe I have the right to ask them questions about mental health problems when necessary.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>7</td>
<td>I feel that I have the right to ask a patient for any information that is relevant to their mental health problem.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>8</td>
<td>I feel that I am able to work with patients with mental health problems as effectively as with other patients who do not have mental health problems.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>9</td>
<td>I have the skills to work with patients with mental health problems.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>10</td>
<td>I feel that I can identify the psychiatric or psychological problems of patients.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>11</td>
<td>In general, I feel that I can understand patients with mental health problems.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>
Section C: Clinical experience

*Tick only one appropriate answer for each of the questions below.*

1) People living with HIV may experience significant sadness. Which symptom/s may be observed or reported?

<table>
<thead>
<tr>
<th>Difficulties with sleep</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Significant changes in appetite/weight</td>
<td></td>
</tr>
<tr>
<td>Loss of energy</td>
<td></td>
</tr>
<tr>
<td>All of the above</td>
<td></td>
</tr>
<tr>
<td>None of the above</td>
<td></td>
</tr>
</tbody>
</table>

2) People living with HIV may experience significant sadness. Which symptom/s may be observed or reported?

<table>
<thead>
<tr>
<th>Fatigue or loss of energy</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Restlessness</td>
<td></td>
</tr>
<tr>
<td>Muscle tension/pain</td>
<td></td>
</tr>
<tr>
<td>All of the above</td>
<td></td>
</tr>
<tr>
<td>None of the above</td>
<td></td>
</tr>
</tbody>
</table>

3) People living with HIV may have suicidal thoughts. Which symptom is a clear warning sign that the patient may be suicidal?

<table>
<thead>
<tr>
<th>Excessive or inappropriate guilt</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Loss of energy</td>
<td></td>
</tr>
<tr>
<td>Hopelessness</td>
<td></td>
</tr>
<tr>
<td>All of the above</td>
<td></td>
</tr>
<tr>
<td>None of the above</td>
<td></td>
</tr>
</tbody>
</table>
4) Mr X, who has been diagnosed as HIV-positive, is reported by his wife to be significantly sad. Which symptom/s may be observed or reported?

<table>
<thead>
<tr>
<th>Symptom/S</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Loss of pleasure in all, or almost all activities</td>
<td></td>
</tr>
<tr>
<td>Feelings of worthlessness</td>
<td></td>
</tr>
<tr>
<td>Reduced sexual drive/desire</td>
<td></td>
</tr>
<tr>
<td>All of the above</td>
<td></td>
</tr>
<tr>
<td>None of the above</td>
<td></td>
</tr>
</tbody>
</table>

5) A patient living with HIV may experience significant anxiety. Which symptom/s may be observed or reported?

<table>
<thead>
<tr>
<th>Symptom/S</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Restlessness</td>
<td></td>
</tr>
<tr>
<td>Muscle tension</td>
<td></td>
</tr>
<tr>
<td>Trouble breathing</td>
<td></td>
</tr>
<tr>
<td>All of the above</td>
<td></td>
</tr>
<tr>
<td>None of the above</td>
<td></td>
</tr>
</tbody>
</table>

6) A patient living with HIV may experience significant anxiety. Which symptom/s may be observed or reported?

<table>
<thead>
<tr>
<th>Symptom/S</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Loss of pleasure in all, or almost all activities</td>
<td></td>
</tr>
<tr>
<td>Irritability</td>
<td></td>
</tr>
<tr>
<td>Recurring thoughts of death or suicidal</td>
<td></td>
</tr>
<tr>
<td>All of the above</td>
<td></td>
</tr>
<tr>
<td>None of the above</td>
<td></td>
</tr>
</tbody>
</table>
7) A patient living with HIV may experience significant anxiety. Which symptom/s may be observed or reported?

- Excessive fatigue
- Feeling of worthlessness
- Poor concentration
- All of the above
- None of the above

8) Mrs J, who has been diagnosed as HIV-positive, is in your consultation room and reports to be significantly distressed and anxious. Which symptom/s may be observed or reported?

- Heart palpitations
- Difficulty in concentrating
- Sweaty palms
- All of the above
- None of the above

9) Which symptom/s is an indication that the patient may be hallucinating?

- Inability to express oneself
- Patient hearing voices that are not heard by other people
- Poor hygiene (untidy/ dirty)
- All of the above
- None of the above
10) Which symptom/s is an indication that the patient may be delusional?

<table>
<thead>
<tr>
<th>Symptom</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Talking and laughing to himself/herself</td>
<td></td>
</tr>
<tr>
<td>Maintaining a rigid position for an extended period of time</td>
<td></td>
</tr>
<tr>
<td>Beliefs that are not true. For example, patient believes he/she does not have HIV or believes that their family wants to harm him/her</td>
<td></td>
</tr>
<tr>
<td>All of the above</td>
<td></td>
</tr>
<tr>
<td>None of the above</td>
<td></td>
</tr>
</tbody>
</table>

11) Mr T, who has been diagnosed as HIV-positive, is reported by his son to be significantly disorganised and displaying unusual behavioural. Which of the following symptom/s may be observed or reported?

<table>
<thead>
<tr>
<th>Symptom</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>No psychomotor activity (rigid)</td>
<td></td>
</tr>
<tr>
<td>Non-goal directed movements</td>
<td></td>
</tr>
<tr>
<td>Opposition, or no response, to instructions</td>
<td></td>
</tr>
<tr>
<td>All of the above</td>
<td></td>
</tr>
<tr>
<td>None of the above</td>
<td></td>
</tr>
</tbody>
</table>

12) Which of the following symptom/s may indicate significant elevated mood?

<table>
<thead>
<tr>
<th>Symptom</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Abnormally talkative and loud</td>
<td></td>
</tr>
<tr>
<td>Patient is suddenly spending a lot of money he/she does not have</td>
<td></td>
</tr>
<tr>
<td>Displays verbal and physical aggression</td>
<td></td>
</tr>
<tr>
<td>All of the above</td>
<td></td>
</tr>
<tr>
<td>None of the above</td>
<td></td>
</tr>
</tbody>
</table>
13) Mrs X believes that she is a very rich woman and owns businesses while in reality she is unemployed and spends the majority of her time at home. Which of the following symptom/s indicate significant elevated mood?

- Forgetfulness
- Poor concentration
- Inflated self esteem
- All of the above
- None of the above

14) A patient living with HIV may experience significant problems with thinking (cognitive dysfunction). Which of the following symptom/say be reported or observed?

- Family report that the person is more forgetful than he/she has been in the past
- Confusion/disorientation
- Poor concentration
- All of the above
- None of the above

15) Mr D, who has been diagnosed as HIV-positive, is reported to be experiencing significant difficulty with thinking (cognitive dysfunction). Which of the following symptom/s may be reported or observed?

- Abnormally talkative and loud
- Difficulties with sleeping
- Unable to plan and make good decisions
- All of the above
- None of the above
16) If you come across a patient who is displaying significant symptoms of mental illness, what according to protocol is the appropriate next step to follow regarding the future management of this patient?

<table>
<thead>
<tr>
<th>Option</th>
</tr>
</thead>
<tbody>
<tr>
<td>Refer to specialised primary health care nurse</td>
</tr>
<tr>
<td>Set an appointment to meet them the following week</td>
</tr>
<tr>
<td>Refer patient to community psychiatric nurse for further assessment</td>
</tr>
<tr>
<td>Refer patient to HIV counsellor</td>
</tr>
<tr>
<td>Refer patient to General Practitioner</td>
</tr>
<tr>
<td>Refer patient to psychologist</td>
</tr>
<tr>
<td>Discuss patient with psychiatrist</td>
</tr>
</tbody>
</table>

Thank you very much for your participation.
Dear participant

RE: REQUEST FOR PERMISSION TO COMPLETE QUESTIONNAIRE

I am the student at the Nelson Mandela Metropolitan University, pursuing a Master’s Degree in Research. As part of the requirements for the programme, a student is required to conduct a research study. The title of the study is: PRIMARY HEALTH CARE NURSES’ KNOWLEDGE REGARDING SYMPTOMS OF MENTAL ILLNESS IN HIV POSITIVE PATIENTS ATTENDING PRIMARY HEALTH CARE SERVICES.

This letter serves to ask for your consent to take part in this study. The problem being investigated by the researchers is that primary health care nurses are only screening HIV positive patients for symptoms of physical illness to ensure appropriate treatment for the patients. Symptoms for mental illness are identified when the patients are seriously mentally ill. However it is not clear what screening measures are done to determine symptoms associated with mental illness amongst these patients. This means that symptoms of mental illness are not noticed at an early stage by primary health care nurses during the regular visits of HIV positive patients. This has led to the following questions:

- What is the primary health care nurses’ level of knowledge regarding the screening for symptoms of mental illness in HIV positive patients attending primary health care services?
- What are the items that should be included in the development of guidelines that can be utilized by primary health care nurses for screening symptoms of mental illness in HIV positive patients attending primary health care services?
Annexure B

The researcher is aiming to explore and describe the primary health care nurses’ level of knowledge regarding the screening of symptoms for mental illness in HIV positive patients attending primary health care services. The researcher is also aiming to determine the items that should be included in the development of guidelines that can be utilized by primary health care nurses for screening symptoms of mental illness in HIV positive patients attending primary health care services.

You are requested to take part in this study. The study is solely for academic purposes. You are requested to give a written consent. You will be asked to complete a questionnaire which should not take longer than 15 minutes. Questions answered must please be done so as honestly and truthfully as possible. After completion of study you will be given feedback at a workshop to be held at the hospital. Confidentiality will be maintained. If at any time prior to or during completion of the questionnaire you feel uncomfortable in any way, you can withdraw from the research project without fear of negative consequences or repercussions.

If you require any further information do not hesitate to contact our supervisor.
Contact details: NNMMU Nursing Department: 041-506 2122
Supervisor Prof J. Strumpher 041-506 2617

Thanking you.
Yours faithfully
A.P. Jantjies

..................
Signature

0718543846

Supervisor: Professor J. Strumpher
Signature:
CONSENT FORM

If you accept to take part in the study, please sign below:

I…………………………………………………… (full name and surname) hereby agree to participate in the research study that was comprehensively explained to me on
……………………………… (date)

Signed by: ………………………………………………. Date:…………………

Witnessed by: ………………………………………………. Date…………………

Your participation is much appreciated.
Dear Ethical Research Committee

Re-Request for permission from Ethical Research Committee.

I am a student at the Nelson Mandela Metropolitan University, pursuing a Master’s Degree in Research. As part of the requirements for the programme, a student is required to conduct a research study. The title of the study is: PRIMARY HEALTH CARE NURSES’ KNOWLEDGE REGARDING SYMPTOMS OF MENTAL ILLNESS IN HIV-POSITIVE PATIENTS.

This letter serves to ask for your permission to conduct the research study in the primary care services of the Nelson Mandela Metropolitan District. Psychiatric nurse working in the primary health care services have observed that HIV-positive patients, although seen regularly by primary health care nurses, are often too late, if at all, in identifying symptoms of mental illness. HIV-positive patients referred are often those that have significantly deteriorated and become seriously ill. However it is not clear what measures are done to determine symptoms associated with mental illness amongst these patients. This means that symptoms of mental illness are not noticed at an early stage by primary health care nurses during the regular visits of HIV-positive patients. This has led to the following questions:

- What is the primary health care nurses’ knowledge concerning symptoms of mental illness in HIV-positive patients attending primary health care services?

- What can be done to optimise the knowledge of primary health care nurses concerning their identification of symptoms of mental illness in HIV-positive patients attending primary health care services?

The researcher is aiming to determine the primary health care nurses’ knowledge regarding symptoms of mental illness in HIV-positive patients. The information obtained will be used
to develop recommendations for the purpose of improving primary health care nurses’ knowledge and identification of symptoms of mental illness in HIV-positive patients.

I shall request the participants to complete a questionnaire. It should not be longer than 15 minutes. Participants will not be coerced to participate. They will be allowed to withdraw from participating in the research study if they are not comfortable. Confidentiality will be adhered to. The actual names will be replaced with a number. I have included a copy of proposal, consent form and a questionnaire.

Upon the completion of the research study, I undertake to provide the institution with a bound copy of a full research report.

If you require any further information do not hesitate to contact my supervisors.

Contact details: NNMMU Nursing Department: 041-506 2122

Supervisor Prof J. Strumpher: 041-504 2617
Co-supervisor Mr K. Topper: 041-504 1731

Thanking you.
Yours faithfully
A.P. Jantjies

………………
Signature

0718543846

Supervisor: Professor J. Strumpher
Signature:
Mr Merile  
Acting Director specialised services  
BISHO  
Fax: (040)608 3304  

14 July 2015  

Dear Merile  

RE: REQUEST FOR PERMISSION FROM DEPARTMENT OF HEALTH  

I am a student at the Nelson Mandela Metropolitan University, pursuing a Master’s Degree in Research. As part of the requirements for the programme, a student is required to conduct a research study. The title of the study is: PRIMARY HEALTH CARE NURSES’ KNOWLEDGE REGARDING SYMPTOMS OF MENTAL ILLNESS IN HIV POSITIVE PATIENTS.

This letter serves to ask for your permission to conduct the research study in the primary care services of the Nelson Mandela Metropolitan District. Psychiatric nurse working in the primary health care services have observed that HIV positive patients, although seen regularly by primary health care nurses, are often too late, if at all, in identifying symptoms of mental illness. HIV positive patients referred are often those that have significantly deteriorated and become seriously ill. However it is not clear what measures are done to determine symptoms associated with mental illness amongst these patients. This means that symptoms of mental illness are not noticed at an early stage by primary health care nurses during the regular visits of HIV positive patients. This has led to the following questions:

- What is the primary health care nurses’ knowledge concerning symptoms of mental illness in HIV positive patients attending primary health care services?
- What can be done to optimise the knowledge of primary health care nurses...
concerning their identification of symptoms of mental illness in HIV positive patients attending primary health care services?

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If you require any further information do not hesitate to contact my supervisors.

Contact details: NNMMU Nursing Department: 041-504 2122
Supervisor Prof J. Strumper 041-504 2617
Co-supervisor Mr K. Topper 041-504 1731

Thanking you.
Yours faithfully
A.P. Jantjies

Supervisor: Professor J. Strumper
Signature:

0718543846
To: The District Manager

RE: REQUEST FOR PERMISSION TO CONDUCT RESEARCH IN PRIMARY HEALTH CARE SERVICES

I am a student at the Nelson Mandela Metropolitan University, pursuing a Master’s Degree in Research. As part of the requirements for the programme, students are required to conduct a research study. The title of the study is: PRIMARY HEALTH CARE NURSES’ KNOWLEDGE REGARDING SYMPTOMS OF MENTAL ILLNESS IN HIV POSITIVE PATIENTS.

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• What can be done to optimise the knowledge of primary health care nurses concerning their identification of symptoms of mental illness in HIV positive patients attending primary health care services?
The researcher is aiming to determine the primary health care nurses’ knowledge regarding symptoms of mental illness in HIV positive patients. The information obtained will be used to develop recommendations for the purpose of optimising primary health care nurses’ knowledge and identification of symptoms of mental illness in HIV positive patients.

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Upon the completion of the research study, I undertake to provide the institution with a bound copy of a full research report.

If you require any further information do not hesitate to contact my supervisors.
Contact details: NNMMU Nursing Department: 041-504 2122
Supervisor Prof J. Strumpher: 041-504 2617
Co-supervisor Mr K. Topper: 041-504 1731

Thanking you.
Yours faithfully
A.P. Jantjies

0718543846

Supervisor: Professor J. Strumpher
Signature:
Dear Facility Manager

RE: REQUEST FOR PERMISSION TO CONDUCT RESEARCH IN PRIMARY HEALTH CARE SERVICES

I am a student at the Nelson Mandela Metropolitan University, pursuing a Master’s Degree in Research. As part of the requirements for the programme, a student is required to conduct a research study. The title of the study is: PRIMARY HEALTH CARE NURSES’ KNOWLEDGE REGARDING SYMPTOMS OF MENTAL ILLNESS IN HIV POSITIVE PATIENTS.

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Supervisor Prof J. Strumpher: 041-504 2617
Co-supervisor Mr K. Topper: 041-504 1731

Thanking you.
Yours faithfully
A.P. Jantjies

………………
Signature

0718543846

Supervisor: Professor J. Strumpher
Signature:
MR AP JANTJIES
97 VERWOERD DRIVE
VANES ESTATE
UITENHAGE
6229

RE: OUTCOME OF PROPOSAL SUBMISSION

QUALIFICATION: MCUr (Research)

FINAL RESEARCH/PROJECT PROPOSAL:
PRIMARY HEALTH CARE NURSES’ KNOWLEDGE REGARDING SYMPTOMS OF MENTAL ILLNESS IN HIV-POSITIVE PATIENTS
Please be advised that your final research project was approved by the Faculty Postgraduate Studies Committee (FPGSC) subject to the following amendments/recommendations being made to the satisfaction of your Supervisors:

**COMMENTS/RECOMMENDATIONS**

1. The proposal was well prepared.

2. Editorial corrections:
   - Page 1, line one – insert “an” before increased
   - Page 2, five lines from bottom – change mentioned into mention

When writing what authors say, it should be in the present tense – e.g. smith states

- Page 3, line 5 – claimed becomes claims
- Proposal page 4 “alexia” definition to “difficulty in understanding written language”

3. Time schedule
   - The year needs to be corrected for the last two items in the work and time schedule. The time schedule was very ambitious.

4. Annexure A:
   - Change “strongest agree” option to “strongly agree”.
   - Section C: some questions are identical but give different answers. Check if this is correct.

5. Annexure E: Change “Dear Merile” to “Dear Mr Merile”

6. The contact numbers for the researcher were not the same between the various letters.

The ethics clearance reference number is **H15-HEA-NUR-025** and is valid for three years.

Please be informed that this is a summary of deliberations that you must discuss with your Supervisors.

2. Please forward a final electronic copy of your appendices, proposal and REC-H form to the FPGSC secretariat.

We wish you well with the project.

Kind regards,

Marilyn Afrikaner
FPGSC Secretariat
Faculty of Health Sciences
Annexure I

William Lauder <william.lauder@stir.ac.uk>
Mon 2/9/2015 1:12 PM
Inbox
To: Jantjies, Anderson (Mr) (s211111104);
Cc: Topper, Kegan (Mr) (Summerstrand Campus South) <kegan.topper@nmmu.ac.za>;
Strumpher, Nita (Prof) (Summerstrand Campus North);

Inbox

Dear Anderson

I would be delighted for you to use the MHPPQ. Good luck with your research.

William

Professor William Lauder
Professor of Nursing
School of Health Sciences
Highland Campus
University of Stirling
Inverness
01463 255619
william.lauder@stir.ac.uk

Visiting Professor University of South Florida

Editor-in-Chief Nurse Education Today
Annexure J
Annexure K