An exploration of the nurses perception on causes of and management of in-patient aggression in a psychiatric institution in Botswana

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Dedication

I dedicate this thesis to my son Anthony Temo Kealeboga and my husband Emmanuel Kealeboga.

Declaration

I Kealeboga Kebope Mongie declare that 'An exploratory study of nurses' perceptions of inpatient aggression and their management of inpatient aggression in a psychiatric institution in Botswana' is my own work and has not been submitted for any other degree or examination. All the sources have been acknowledged and are indicated in the reference list.

21/04/2010

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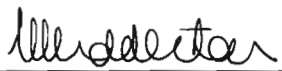

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Abstract

Inpatient aggression in mental health settings is a significant concern because it compromises the quality of care provided by health care workers. Nurses are one of the groups most affected by inpatient aggression because they are usually the client's first contact on admission. A number of studies have found that nurses are the most frequently assaulted professional group both inside and outside of the hospital setting, are more frequently assaulted than doctors and most are likely to experience some form of aggression in their career. The causes of inpatient aggression are frequently conceptualised as multidimensional and involving factors internal to the client e.g. age, factors relating to the environment such as inflexible ward routines and factors relating to the quality of the interaction between nursing staff and clients. Research studies suggest that nurses generally respond reactively and rely heavily on physical control strategies rather than on interpersonal strategies in managing inpatient aggression. Contemporary literature suggests that the perceptions nurses hold about aggression and its causes influences their management of the event and that this process is mediated by a number of client, environment and nurse-related variables including age, education, gender, nursing experience, perceptions of aggression and its causes. Although the causes and management of inpatient aggression in nursing is well documented in the United Kingdom and some other West European countries, this is not the case for Africa and in the case of this study, for Botswana. No studies have attempted to find the nurses' perception, perception on the cause, and management of inpatient aggression in Africa and more so in Botswana.

Aim:

The purpose of the study was to explore how nurses' demographic characteristics, their perceptions of aggression and its causes, influence the management of inpatient aggression by nurses in the main psychiatric institution in Botswana.

Method:

A descriptive, exploratory non-experimental design was used. Perception of inpatient aggression was captured by a Perception of Aggression Scale (POAS) and the perception

on the cause and management of inpatient aggression was collected with Management of Aggression and Violence Attitude Scale (MAVAS).The sample comprised of 71 nurses, 48 of whom were females and 23 males. The mean age of the nurse respondents was 36 years. Of the 71 respondents 50 were registered nurses only while 20 were psychiatric registered nurses. More than two thirds of the respondents had a diploma in nursing, one had a masters degree and the remainder, a degree in nursing. The average nursing and psychiatric nursing experience of the respondents were 12.1 and 6.87 years respectively. ANNOVA test and t-tests were done to find the associations between the nurses' demographic variables, their perception, perception on the cause and management of inpatient aggression.

Findings:

The respondents in this study perceived inpatient aggression as both negative and positive. There was an overall agreement with the perception of aggression as always negative and as an action of physical violence against a nurse (81.73%). Nurses saw the cause of inpatient aggression as emanating from the internal, external and situational/interactional factors. The use of traditional methods of aggression dominated as shown by a high mean score of 80.5 as compared to interpersonal management with a mean score of 60.5. A statistical difference was found between gender, perception of aggression and perception of aggression and the traditional management of aggression while age, nursing and psychiatric nursing experience were statistically associated with the use of interpersonal management of aggression.

Conclusion:

The study provided insight into the nurses' perceptions, perceptions on the cause and management of inpatient aggression in a mental institution in Botswana. Nurses in this study hold predominantly negative perceptions of aggression and generally favour traditional management strategies. However, older, more experienced nurses tended to favour interpersonal techniques. Recommendations for nursing practice, education and research to address this issue centre around further and targeted education and training in mental health and specifically, in the comprehensive management of aggression which

includes communication skills, use of de-escalation, use of medication and cautious physical restraint.

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Chapter One
Introduction to the Study

1.1 Introduction and background to the study

Inpatient aggression in mental health settings is a significant concern because it compromises the quality of care provided by health care workers (Chrzescijanski, Moyle, & Creedy, 2007). Nurses are one of the groups most affected by inpatient aggression because they are usually the client's first contact on admission (Paterson, McCornish & Bradley, 1999). A number of studies have found that nurses are more frequently assaulted than doctors (Lawoko, Soares, & Nolan, 2004); nurses are three times more likely to be assaulted than other health care professionals in hospital settings (Budd, 1999); almost all nurses are likely to experience some form of aggression in their career (Farrell, & Cubit, 2005); and nurses are the most frequently assaulted professional group outside of hospital settings (Lawoko et al., 2004).

The concepts of aggression and violence in psychiatric settings have been variously differentiated, defined and synonymously understood. The literature consistently points to the lack of agreement on the definition of what constitutes aggression and violence within health care professions (Duxbury, Hahn, Needham, & Pulsford, 2008; Ilkiw-Lavalle, 2006; Rippon, 2000). Rippon (2000) highlights the extent of the impact of this conceptual confusion for academic research and operational management in suggesting the terms have become virtually useless for purposes of scientific analysis.

Most conceptual definitions underlying research in this area regard violence as an aspect of physical aggression but differ in their understanding of the point at which aggression manifest as violence. For example, Uys and Middleton (2004) define aggression as behaviour aimed at causing harm which may be verbal (e.g. insult) or physical (e.g. causing an injury to self or others). McMahon and Fisher (2003) assert that aggression can be expressed in many forms from raised voices during an argument to physical harm with or without weapon use while Ilkiw-Lavalle (2006) defines violence as any physical act involving the use of physical force against others, objects, property or the self, irrespective of the outcome. Strasburg (as cited in Rippon, 2000) uses the construct "illegal" to differentiate violence from aggression. Rippon (2000) believes the word violence has come to replace the word aggression in contemporary literature because of the apathy effect associated with the word aggression.

Within the context of this conceptual disagreement and for the purpose of this study the terms violence and aggression will be used interchangeably to refer to any incidence in which a person is verbally abused, threatened or assaulted (Uys & Middleton, 2004). Aggression or violence in the work place is any incidence in which a person is verbally abused, threatened or assaulted in circumstances related to their work British Health and Safety Executive Report (as cited in McMahon & Fisher, 2003).

The risk of inpatient aggression and exposure to it is recognised as a significant factor in why mental health hospitals are perceived as unhealthy and unattractive places to work (Whittington, 2002). Love and Morrison (2003) found that nurses who are constantly exposed to verbal and physical assault and/or the threat of it are vulnerable to burn-out, emotional stress such as on-going feelings of fear, tension and unhappiness and post traumatic stress disorder. Farrell, Bobrowski and Bobrowski (2006) suggest that verbal and physical abuse is not only a source of distress for the nurses but also contributes to errors in decisions of nursing care which may lead to aggression management techniques being over or under-used for the situation. Furthermore, Whittington (2002) argues that this on-going exposure to inpatient aggression contributes to nurses withdrawing from interpersonal relationships with clients and to becoming intolerant of and hardened towards aggression in a spirit-of-fighting-back, even though they understand its relationship to mental illness.

The causes of inpatient aggression are frequently conceptualised as multidimensional and involving factors internal to the client (e.g. age, gender, psychiatric diagnosis); factors relating to the environment (e.g. inflexible ward routines, overcrowding); and factors relating to the quality of the interaction between nursing staff and clients. Duxbury and Whittington (2005) have found that nurses and patients see the origins of inpatient aggression differently. Whereas inpatients believe environmental and interactional factors such as overcrowding; strict and inflexible ward routines e.g. inflexible medication times and meal times; lack of privacy, poor living conditions; denial of services; and poor nursing staff-patient interaction all contribute to their aggression, nurses see factors internal to the patient such as patient illness (delusions, hallucinations and agitation), gender and age as contributing to the development of inpatient aggression.

A number of other studies have shown that while all three dimensions interact to produce aggression, the more negative the quality of the situational/interactional factors, the greater

the risk for inpatient aggression against nurses Turnbull & Patterson (as cited in Duxbury, 2002; Wijk, 2006). This latter dimension is the focus of many nursing studies since there is some evidence to suggest that this dimension is more frequently related to episodes of inpatient aggression than internal or environmental factors (Duxbury, 2002; Wijk, 2006). Furthermore, the central position of this dimension to the heart of psychiatric nursing theory and practice underlines its importance (Duxbury, 2002; Duxbury & Whittington, 2005; Duxbury et al., 2008; Ilkiw-Lavalle & Grenyer, 2003; Middleton & Uys, 2009; Wijk, 2006).

Many argue that the perceptions nurses hold about aggression contribute to the cause and management of aggressive behaviour (Duxbury 2002; Jonker, Goossen, Steenhuis, & Oud, 2008; Palmstierna & Barredal, 2006). Finnema, Dassen and Halfens (2004) found that nurses hold both positive and negative perceptions about inpatient aggression and that these perceptions are differentiated with respect to their perceptions about the function and desirability of the behaviour. Most studies suggest that nurses who perceive aggression as a functional and understandable patient response (e.g. as a healthy reaction to feelings of anger; as a form of communication) are more likely to use less controlling measures e.g. interpersonal de-escalation, and to demonstrate restraint in the way they implement physical measures (Nakahira, Moyle, Creedy, & Hitomi, 2008; Jansen, Middel, Dassen, & Reijneveld, 2006). On the other hand, nurses who regard inpatient aggression as dysfunctional and undesirable (as unnecessary and unacceptable; repulsive; as an intrusion) are more likely to use traditional controlling methods in the treatment of inpatient aggression e.g. rapid medication tranquilisation and physical restraint (Nakahira, et al., 2008; Palmstierna & Barredal, 2006).

The range of traditional inpatient aggression management strategies has been well-described, particularly in studies emanating from the United Kingdom, Australia, Sweden and Norway (Beech & Leather 2003; Duxbury 2002; Duxbury et al., 2008; Hahns, Needham, Abderhalden, Duxbury, & Halferns, 2006). These include physical and interpersonal strategies. Physical strategies refer to physical restraint (client movement is restrained or immobilised through mechanical means or through being held by staff); calming medication (major antipsychotic tranquillizers such as Chlorpromazine and the major sedatives such as Benzodiazepine); seclusion (restricting the client involuntarily to a room which is impossible to leave). Interpersonal strategies of de-escalation, limit setting and anger management are based on the idea that aggressive behaviour is a functional communication of severe anxiety

and distress and that it is these underlying experiences that the nurse needs to focus on in managing angry clients (Duxbury, 2002; Duxbury & Whittington, 2005; Foster, Bowers & Nijman 2007; Gudjonsson, Rabe-Hesketh, & Szumukler, 2004; Nakahira et al., 2008; Uys & Middleton, 2004).

While both physical and interpersonal strategies have a potentially therapeutic value, many research studies suggests that nurses generally respond reactively and rely heavily on physical control strategies rather than interpersonal strategies in managing inpatient aggression (Duxbury, 2002; Duxbury & Whittington, 2005; Gudjonsen et al., 2004; Mason & Chandley, 1999; Nakahira et al., 2008). For example, Duxbury (2002) analysed 221 inpatient aggressive incidents and found that although 70% involved verbal abuse and 30% physical abuse, nurses used controlling methods such as physical de-escalation, medication and seclusion 69% of the time and non-controlling methods such as verbal de-escalation 31% of the time. Duxbury and Whittington (2005 p. 475) found that interpersonal skills are poorly executed by nurses when dealing with aggression and one nurse commented that 'nurses just don't use their skills'.

A perception of aggression as a dysfunctional and undesirable behaviour and a spirit of fighting back thus frequently underlie how nurses in hospital settings chose and implement these aggression management strategies (Duxbury & Whittington, 2005; Palmstierna & Barredal, 2006). There are a number of studies which have suggested that these more coercive approaches may be the cause of some inpatient aggression in mental hospitals (Duxbury, 2002; Duxbury & Whittington, 2005; Duxbury et. al., 2008; Whittington & Higgins, 2002; Wijk, 2006). Inpatients frequently 'fight back' when treatment approaches such as physical restraint are not performed properly because they are perceived as an assault and provoke a self protection and preservation response in the inpatient (Whittington & Higgins, 2002). Wijk (2006) found that inpatients attribute the cause of inpatient aggression to the constant threats from nurses about the use of medication and other controlling measures if they express dissatisfaction with ward rules.

Certain other characteristics of nurses such as age, gender, nursing qualifications and level of experience in nursing and previous experience with inpatient aggression have been shown in some studies, to influence how nurses perceive inpatient aggression, its causes and the treatment approaches they adopt in managing inpatient aggression (Duxbury et al., 2008;

Jansen, Dassen, Burgerhoof, & Middel, 2006; Jonker et al., 2008; Nakahira et al., 2008; Nijman & Rector, 1999). The findings from these studies are often contradictory (Lowe, Wellman & Taylor, 2003). For example, Jonker et al. (2008) found that older nurses with more experience were found to use less coercive methods in managing inpatients with aggression while male nurses with long experience are more likely to perceive inpatient aggression as dysfunctional than female nurses (Palmstierna & Barredal, 2006). Beech (1999), Grube (2001) and Jonker et al. (2008) argue that level of education is a significant factor in how nurses perceive and subsequently manage inpatient aggression and suggest that more educated nurses tend to use less coercive methods. On the other hand, Hahns et al. (2006) found no relationship between choice of strategy and aggression management training. These authors further argue that nurses' previous experiences with inpatient aggression make them more likely to opt for less coercive treatment options than those who have not experienced inpatient aggression.

Although inpatients and nurses might differ in their beliefs about what cause inpatient aggression, there are a significant number of studies in the West European, Asian and North American contexts that draw associations between nurses' characteristics, perceptions of aggression and the interactional management of aggression (Jansen et al., 2006; Nakahira et al., 2008; Palmstierna & Barredal, 2006). Automatic negative perceptions of inpatient aggression and the spirit of fighting back is inconsistent with psychiatric nursing's perspective of the therapeutic nurse-patient relationship underpinned by attitudes of unconditional positive regard, gentleness, respect and concern for the social, psychological and physical well-being of clients (Middleton & Uys, 2009).

1.2. Statement of the problem

Inpatient aggression occurs in all health care facilities and is of significant concern for psychiatric settings and hospitals (Lawoko et al., 2004). Although the causes and management of inpatient aggression in nursing is well documented in the United Kingdom and some other West European countries, this is not the case for Africa and in the case of this study, for Botswana. The Lobatse psychiatric hospital is the only psychiatric hospital in the country and therefore serves as the national referral hospital for other recently established mental health and units (Seloilwe & Thupayagale-Tshweneagae, 2007). Very little is known

about how psychiatric nurses working in Lobatse Mental Hospital in Botswana perceive, respond to and manage psychiatric inpatient aggression. Anecdotal reports suggest that aggressive incidents do occur but these incidences and their management have not been formally described.

Although there may be other studies, the literature review found one nursing study in the area of aggression situated in South Africa and none in the broader African context. The study focused on the perception of the inpatients on the external and situational/interactional factors that contribute to their inpatient aggression. The results showed that inpatients attributed the cause of inpatient aggression to primarily poor inpatient staff interaction (interactional causes) with some emphasis on environmental factors (Wijk, 2006). Nurses, rather than patients are the focus of this study, a hitherto under-explored aspect of this sensitive but important phenomenon.

If, as Duxbury and others have suggested, the way in which nurses respond to and manage psychiatric inpatient aggression is directly influenced by their perceptions of aggression, its causes and nurses demographic factors, then exploring these perceptions will provide some insight into how and why they subsequently manage episodes of psychiatric inpatient aggression (Hans et al., 2006; Ilkiw-Lavalle & Grenyer, 2003; Jonker et al., 2008).

1.3. Purpose

The purpose of the study was to explore how nurses' demographic characteristics, their perceptions of aggression and its causes, influence the management of inpatient aggression by nurses in the main psychiatric institution in Botswana.

1.4. Objectives of study

1.4.1 To describe how nurses perceive inpatient aggression.

1.4.2 To describe nurses perceptions of the causes (internal, external and situational/interaction) of inpatient aggression.

1.4.3 To describe the management strategies nurses use to manage inpatient aggression.

1.4.4 To explore the association between nurses' demographic characteristics, their perceptions of inpatient aggression and its causes and subsequent management strategies.

1.5 Significance of the study

The findings and recommendations of this study will provide nurses and managers at the Lobatse psychiatric hospital with more in-depth and contextual information about the phenomenon of inpatient aggression, how their nurses perceive inpatient aggression, its causes, and the management strategies nurses' use. This kind of information is important to developing appropriate in-service education training programmes based on local content rather than or as well as, adapted international content. Furthermore, the data on the frequency with which nurses encounter aggression in the inpatient environment will assist in highlighting the extent of the problem and thus, draw clinicians and management's attention to the matter for intervention. Recommendations and suggestions emanating from the study might therefore help hospital policy makers to formulate an aggression management policy and intervention plans that are grounded in the phenomenon of inpatient aggression as it is described by nurses, in the Lobatse hospital environment. The findings may also serve as foundation for further research on the phenomenon of inpatient aggression.

1.6 Conceptual framework

The variables for the conceptual framework was based on Duxbury's (2002) three dimensional understanding of the causes of inpatient aggression and management strategies and Abderhalden et al., (2002) descriptions of how nurses perceive inpatient aggression. Nurses generally perceive inpatient aggression in one of two ways: as functional and therefore understandable e.g. a form of communication, an anxiety management strategy; the

start of the nurse-patient relationship; an attempt to protect oneself; or as dysfunctional and therefore unnecessary e.g. unacceptable; a negative response; an act of physical aggression against a nurse).

Duxbury's (2002) three dimensional model says aggression in inpatient settings occurs as a result of three broad interacting components namely the internal component, the external component and the situational/interactional component (Diagram 1). These three components have been well-researched and most authors agree upon the definition and factors associated with each component (Duxbury & Whittington, 2005; Hans et al., 2006; Wijk, 2006).

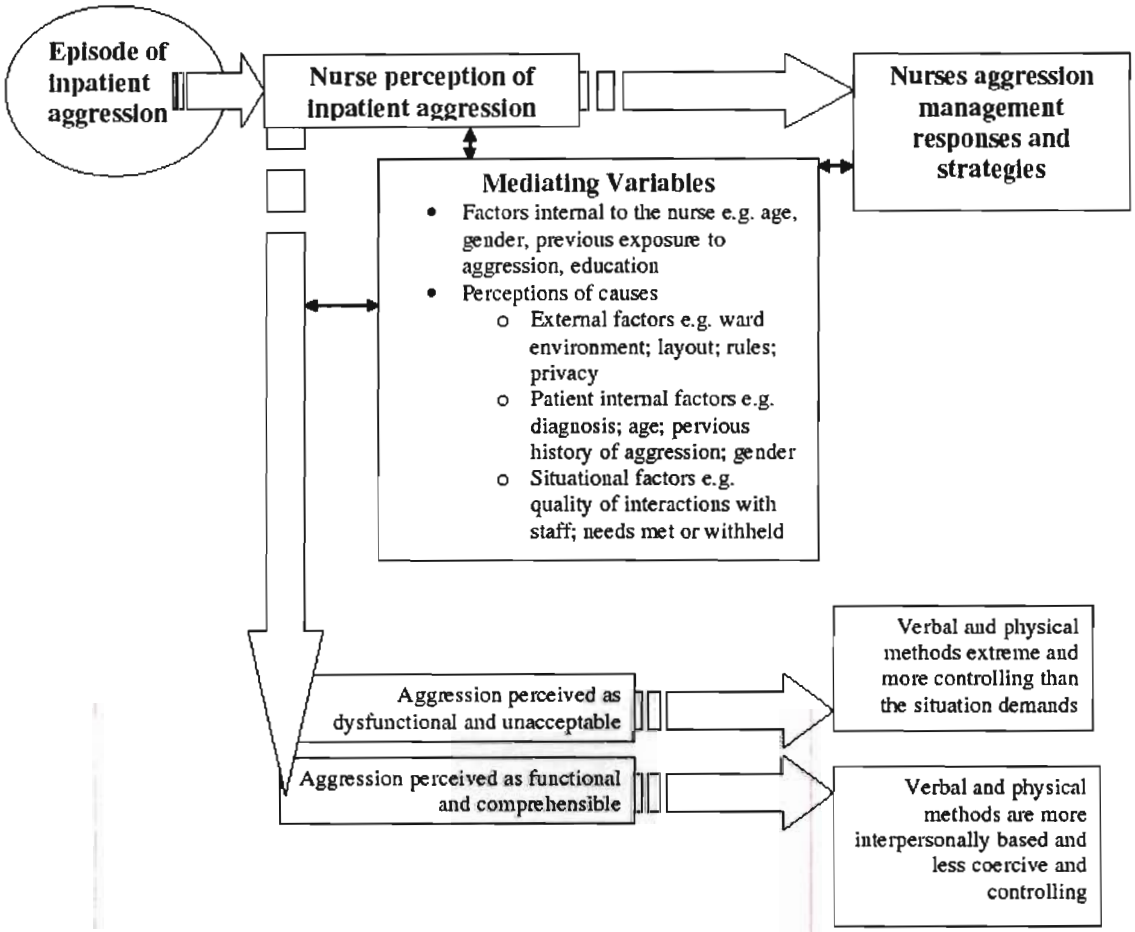


Diagram 1: Conceptual framework

(Adapted from the studies on aggression by Abderhalden et al., (2002); Duxbury, (2002); Foster et al. (2007); Jonker et al., (2008); Palmstierna & Barredal, (2006) and Ajzen (1988) theory of planned behaviour)

Internal model have been defined as those factors residing within the aggressive person, such as mental illness e.g. Schizophrenia, or personality (Duxbury et al., 2008). Age and gender have been associated with increased risk for aggression; men between the ages of 15-35 tend to be more at risk for aggression than younger or older men and women. The external model sees aggression being mainly caused by factors in the person's physical or social environment, such as the physical layout of the ward, or the way in which the ward is governed by the staff. The situational/interactional model includes factors in the immediate situation, such as the interaction between the patient and others (particularly staff members). Nurses are likely to perceive these models differently, and their beliefs about causation may influence their approach to managing an aggressive incident (Foster et al., 2007).

This conceptual framework is underpinned by the theory of planned behaviour which suggests that an individual's perceptions of events (negative or positive) influence the nature of the actions he/she will take in response to those events (Ajzen, 1988). However, these perceptions and responses are mediated through a range of environmental factors (e.g. support from others in the environment for the intended action) personal characteristics (e.g. amount of experience with the phenomenon, problem-solving ability, degree of perceived personal control and mastery (Jonker et al., 2008; Nakahira et al., 2008; Wijk, 2006). The study therefore assumes that if the nurse perceives aggression as a dysfunctional and unnecessary behaviour, he/she is more likely to use coercive strategies in managing this behaviour (Duxbury, 2002; Jonker et al., 2008; Palmstierna & Barredal, 2006). However, the nurses perceptions and hence management will be mediated by her views on the cause of the aggression (internal to the client, located in the environment or within the interaction) and a range of personal characteristics such as level of education, nursing experience, age and gender and experience with violent behaviour (Nakahira et al., 2008).

1.7 Definition of commonly used terms

Aggression

Middleton and Uys (2004) define aggression as behaviour aimed at causing harm which may be verbal (e.g. insult) or physical (e.g. causing an injury to self or others). This term is used synonymously with violence in the psychiatric nursing literature.

Violence

Violence according to Ilkiw-Lavalle (2006) is any act involving the use of physical force against others, objects, property, or the self irrespective of the outcome. This term is used synonymously with aggression in the psychiatric nursing literature.

Nurse

A person who has graduated with a diploma or degree in General Nursing and who is registered with the statutory body as a General Nurse.

Psychiatric inpatient hospital

Public psychiatric facility where patients with serious mental illnesses requiring sustained.

1.8 Conclusion

This chapter provided and introduction to the study, the background of the study, problem statement, research purpose, objectives, significant of the study, operational definitions of used in the study, and the discussions of the basic assumptions and the theoretical frame work. Chapter two describes the literature review and the list of data bases used to search for the literature.

Chapter 2
Literature review

2.1 Introduction

Literature review is important as it compares what has been previously done on the same or similar topics and also illustratively shows gaps, limitations and the recommendations in the body of knowledge. This study's results shall be linked to the existing body of knowledge on the topic. The literature review explores the problem of aggression and its consequences in in-patient psychiatry, its management and the factors that influence its management. Computer assisted data based -PubMed, LWW Journals@OVID, Cochrane Library, Medline-PubMed and Medline-EBSO HOST were used to search for the study's key search terms such as aggression, violence, management of inpatient violence, age, level of education, gender and experience of nurses and views and management of inpatient aggression and nurses' attitudes and management of aggression.

2.2 Contemporary descriptions of inpatient aggression

The concept of aggression in mental health has been variously defined (chapter 1 page 1). The variations in the definitions of aggression is often cited as the reason for why comparisons of research related to the area of aggression are not easy in the area of aggression in mental hospitals (Rippon, 2000). Researchers have operationalized the definition of aggression as verbal threats, abusive language, shouting at others, the use of weapons, rape, sexual harassment with the intent of causing discomfort to the next person and hitting, biting, striking and/or punching another (Farrell et al., 2006; Foster et al., 2007; O'Connell, Young, Brooks, Hutchings, & Lofthouse, 2000). It is generally assumed that the definition of aggression is influenced by the perception of the severity of the common type of injuries of reported cases of aggression in a particular area (Lawoko et al., 2004; O'Connell et al., 2000). Bowers et al. (2007) assert that even the most recent instruments for observing and measuring aggression define aggression with respect to its outcome. Thus, the more severe or obvious the outcome e.g. bruising, bleeding or damage to self, others and/or property, the more dangerously the behaviour is rated. This may account for the under-reporting and over-reporting of aggression as what is defined as aggression in one setting

may not necessarily be seen as such in another setting (Rippon, 2000). For example, the outcome of verbal threats may not be as tangible as the outcome of a physical assault yet the impact of each might be equally traumatic for the individuals concerned (Farrell et al., 2006). The problems associated with the lack of standardised definition of aggression in inpatient mental health settings is acknowledged and an operationalized definition of inpatient aggression is recommended with the aim of capturing the global perspective and extent of inpatient aggression (Lam, 2002; McKenna, Poole, Smith, Coverdale, & Gale, 2003; Rippon, 2000).

Workplace violence is seen as epidemic since it is reported in almost all countries, as well as with different professions (Farrell et al., 2007; Rippon, 2000). Aggression is also very common in the psychiatric inpatient setting (O'Connell et al., 2000). Lentedre (1997) argues that this is not surprising since aggression is commonly associated with the acute phase of different forms of serious mental illness and therefore, with the need for hospitalisation. Hospitalisation itself is often involuntary and experienced as a traumatic event which has the potential for defensive aggression (Bradley, Kumar, Ranclaud, & Robinson, 2001).

Research also associates the occurrences of inpatient aggression with stressors emanating from the environment (Wijk, 2006). An association has been made between inpatient aggression and overcrowding of patients in a mental hospital (Nijman & Rector, 1999). Many studies for example have found that insufficient psychological and physical space e.g. lack of privacy, rest and confined spaces may trigger inpatient aggression (Bradley et al., 2001; Nijman & Rector, 1999; Wijk, 2006).

Aggression also is said to result from frustration following unmet needs. Generally when people start to think that they deserve more than what is at hand they get frustrated and become aggressive (Alison, 2003). According to Ilkiw-Lavalle and Grenyer (2003) patients cited limiting setting as one of the cause of their aggression. They mentioned factors such as not being allowed to leave for home and not wanting to stay in the hospital as some of the contributing factors to their aggression. Patients in a study by Wijk (2006) also emphasised the frustration following denial of basic needs, inaccessible staff and the general lack of information about their illnesses as also contributing to their aggression.

2.3 The depth and breadth of the problem of aggression in inpatient settings

Literature has found that though aggression occurs in all health facilities it generally occurs more in the mental health settings. For example in the United Kingdom, 95 000 incidences of violence were reported in the National Health Service facilities of which two and half times of the overall incidences occurred in mental health British National Audit Office (as cited in Foster et al., 2003). Lawoko et al. (2004) argue that it is important to note that the prevalence rate and incidences of inpatient aggression varies due to the differences in operational definitions of aggression.

According to Lam (2002) aggression and violence is part of many professionals but nurses are more frequently affected. A study done in Australia by Farrell et al. (2006) on scoping the workplace aggression in nursing found that 64% of the nurses who participated in their study reported at least one type of aggression during period of the study. Abderhalden et al. (2002) in Switzerland found that 72% of the nurses in psychiatric facilities indicated that they felt threatened of working in mental hospitals and 70% reported being violated at least once in their nursing careers.

Although there is a large body of literature that shows that nurses are confronted with some form of aggression on a daily basis, the nurse respondents in a study by Jonker et al. (2008) in the Netherlands presented a different point of view. Most nurses reported that they rarely or only sometimes experience inpatient aggression. This revelation contradicted the finding of the same study that showed that aggression occurred at least 181 times a year. Jonker et al. (2008) argue that these findings may be due to the assumption that the nurses have become so familiar with aggression both in their work places and in society that they do not consider it an untoward occurrence and therefore, did not report upon all episodes when completing the questionnaire.

Evidence suggests that nurses experience both physical and verbal forms of aggression but verbal aggression has been found to be the most common form of aggression experienced (Farrell et al., 2006; McKenna et al., 2003). Foster et al. (2007) found that for 145 cases of aggression reported by nurses, 84.1% were verbal abuse and only 16.6% involved a nurse

being pushed or being struck by a hand. Only one incident of violence was reported involving a patient pouring hot water on a nurse.

Studies have shown that aggression can predispose staff to both physical and psychological stress. In his study on the extent of aggression exposure and the effects of such exposure on the psychological health of nurses in Sydney Australia, Lam (2002) found that 40% of their sample (314 nurses) had psychological distress and 10% showed signs of mild to severe depression. In their study on the psychological impact of verbal abuse and violence by patients on nurses working in psychiatric wards in Japan, Inoue, Tsukano, Muraoka, Kaneko and Okamura's (2006) showed that following exposure to verbal abuse, nurses suffered psychological distress. Richter and Berger (2006) assessed the course of post traumatic stress disorder among members of the mental health hospital following patient assault over a period of six months in Germany. Of the 46 assaulted staff members who agreed to participate in their study 70% were nurses and others included others members of the health team i.e. physicians, social workers and house keeping staff. About 10% of the participants suffered from post traumatic stress disorder.

The mental stress suffered by nurses following aggression by patients is said to be likely associated with the quality of care they provide to the patients (Inoue et al., 2006; Whittington, 2002). According to Chen, Hwo and Williams (2005) severe aggressive incidences affect the nurses' judgement when confronted by an aggressive patient. This is supported by Dawson, Kingsley and Pereira (2005) who argue that nurses working with aggressive patients are challenged emotionally and therapeutically when treating these patients. It is argued that the nurses some how dissociate themselves from the apathetic and compassionate qualities they are known for and put themselves and their safety before patients which mostly manifest through their harsh management strategies (Jansen et al., 2006). Whittington (2002) asserts that this hash and traditional methods to management of aggression might contribute to the aggressiveness of patients if they are well not practiced.

2.4. The three dimensional model of aggression causation and its management

Inpatient aggression has been found to result from the active interaction of three factors (internal, external, and situational/interactional) in mental hospitals (Duxbury, 1999; Duxbury, 2002; Nijman, aCampo, Raveli & Merckelbach, 1999). Finnema et al. (1994) did a qualitative study on the characterization of patients aggression by nurses in different Dutch psychiatric wards in which a total of 24 (14 female and 10 male) nurses were interviewed on what they described as aggression, what they thought caused it and the interventions they thought could be employed to prevent and stop patients from being aggressive. The results found that the nurses reported a combination of patient related factors, interactional factors and situational/interactional factors as the precursors of patient aggression. Duxbury et al. (2008) suggests that these models of causation of aggression greatly influence the current management practices of aggression.

2.4.1. Internal model

There is a link between the occurrence of inpatient aggression and the patient's personal characteristics (age, gender) including mental illness or personality and intoxication with alcohol (Duxbury & Whittington, 2005). Mental illness has been found to be highly associated with aggression and severe psychopathology is seen as a major cause of aggression in the mental health hospitals (Nijman, 2002). Psychosis, especially schizophrenia and mania, has been cited as a common cause of aggression (Soliman & Reiza, 2001). Cornwell (2006) asserts that manic patients tend to display maladaptive behaviours of aggression during periods of heightened energy which are generally not well tolerated in the wards and as a result, causes conflict in their environment. Patients diagnosed with schizophrenia have a higher likelihood of engaging in violent and aggressive behaviour than other patient diagnosed with mental disorders (Tailor & Schanda, 2000). A study carried out in the United States of America by Swanson, Swartz and Vandom (2006) found that positive signs of schizophrenia i.e. suspiciousness, persecutory delusions, auditory hallucinations and excitement increases the chances of violence or aggression from the individual patients. Aggression has also been found in other patients diagnosed with mental illness. For example Anderson and Bushmen (2002) found an association between personality disorder and the

occurrence of aggression. Gournay (2000) argues that even though schizophrenia and mania have been most frequently associated with the cause of aggression, other disorders can not be ruled out since their association with aggression has not been fully explored.

The age and gender of patients has been associated, although not conclusively, with the cause of inpatient aggression. Nurses were equally likely to be abused by both males and females in mental hospitals regardless of age and gender (Ostrom & Mierlo, 2008). A study by Farrell et al. (2006) indicated that 67% of the assaults (either verbal or physical) were from the male patients. On the other hand, Lam, McNeil and Blinder (2000) found that female patients were the most aggressive, accounting for 55% of all incidences of aggression episodes while males accounted for only 45% of the episodes. Female patients are more likely to use verbal forms of aggression and men physical forms of aggression which frequently result in injury to staff (Krawkoski & Czober, 2004).

2.4.2. External model

The external model includes factors external to the patient (environment) as the cause of inpatient aggression (Duxbury et al., 2008). These factors includes ward design, overcrowding, inadequate food, bedding, ward activities (Duxbury & Whittington, 2005; Ilkiw- Lavalle & Grenyer, 2003; Wijk, 2006). McKenna, et al. (2003) argue that aggression in psychiatry may occur as a result of the stress emanating from both the physical (locked doors, seclusion facilities) and social (overcrowding, lack of privacy and visiting families) and the set up in which care is provided.

Interviews with patients in Wijk's (2006) study revealed that living in a dirty environment was frustrating while rigid limit setting and lack of privacy contributed significantly to the cause of inpatient aggression. Other patients attributed their outburst of aggression to poor living conditions such as boredom, inadequate bedding, inadequate food and the lack of appreciation by nursing staff for their cultural differences. Some patients also reported that the ward atmosphere was generally a contributor to their outburst of aggression. Patients presenting with different mental health problems were incarcerated together which in turn caused tension and frustration among patients, leading to aggressive outbursts.

An assessment of both the staff and patients views on the causes and management of inpatients aggression and violence was carried out in England (Duxbury & Whittington, 2005). A total of 82 patients and 80 nurses participated in the study. Both the nurses and the patients perceptions were captured using Management of Aggression and Violence Attitude Scale (MAVAS) questionnaire. Five nurses and five patients were further interviewed in order to explore in-depth the meaning of the issues raised in the questionnaire. The results revealed that both nurses and patients agreed with factors within the environment as the precursor to some of the inpatient aggression. Patients highlighted issues such as being locked up and treated like prisoners as problematic whereas nurses attributed aggressive outbursts to the ward design. In their study on the perceptions of staff and patients on aggression in mental health care units in Australia, Ilkiw-Lavalle and Grenyer (2003) found similar trends and results. Limit setting such as being refused leave to go home by the staff, was seen by patients as the reason for their aggression while nurses saw medication or treatment the clients receives as the cause of aggression.

2.4.3. Interactional/situational model

The interaction between staff and patients has also been found to contribute cause to inpatient aggression. In her evaluation of staff and patients views on the strategies employed to manage inpatient aggression, Duxbury (2002) found that patients attributed the reason for their aggression to the negative interactive and poor communication styles of nurses. In the South African study, Wijk (2006) found that most patients felt that they were being neglected. These patients attributed their aggressive behaviour to the rude and unsympathetic remarks they got from the nursing staff which caused them great frustration, anger and unhappiness. Other patients complained that they were left for long periods of time alone with the security staff and who are not trained to care for them.

A follow up study by Duxbury and Whittington (2005) on the perspectives of staff and patients on the cause of patient aggression and violent using the MAVAS questionnaire survey and semi-structured interviews found the same results. Poor interpersonal communication skills (verbal and listening) and non-caring attitudes of nurses were cited by patients as the antecedents of their aggression. The results of the study by Ilkiw-Lavalle and Grenyer (2003) on different perceptions of staff and patients of aggression in acute units

support these findings. Patients mentioned poor communication between staff and patients, their demand not being met and not wanting to be told what to do as some of the causes of their aggressions. Additionally, staff recommended improvements in the pharmacological management of aggression while patients advocated for improved communication and listening skills. The results of these studies seem to suggest that nurses are deviating from the interpersonal, therapeutic relationship with patients that is regarded as the heart of mental health nursing (Middleton & Uys, 2009) and this may have an impact on nursing care Lancee, Gallop, MaCay and Toner, (as cited in Wijk, 2006).

2.5 Nurses and clients perceptions of inpatient aggression

Studies have found that both nurses and patients have different perceptions of aggression, its cause and its management (Duxbury & Whittington, 2005; Ilkiw-Lavalle & Grenyer, 2003). Ilkiw-Lavalle and Grenyer (2003) did a study of the difference between nurses and patients' perceptions of aggression in Sydney Australia. 29 patients and 29 nurses who were involved in incidences of aggression were interviewed on what they believed caused aggression and on how they thought similar situations could be avoided in the future. In addition to this nurses were asked to rate their fears on a five-point Likert scale with 0 representing no fear and 5 representing extreme fear during the incident of aggression. The results revealed that staff regarded medication as both the cause and the best strategy of how aggression could be managed. The patients saw interpersonal conflicts, limit setting and their diagnosis of mental illness as causes of their aggression and asked for better communication from the staff when dealing with their aggression.

A similar trend of results were found in a study in which Duxbury and Whittington (2005) used a MAVAS questionnaire and interviews to uncover the perception of both staff and patients on the cause and management of violence in the United Kingdom (UK). Two opposing views on the cause of aggression came from the nurses and patients. Patients mainly saw the environmental stressors i.e. being locked up, and the poor staff patient relationships i.e. failure of the staff to listen to them as the cause of inpatient aggression while nurses saw the patients' illness as the cause of aggression.

The perception nurses holds towards inpatient aggression is either negative or positive and it is differentiated according to the terminology used and the type of instrument used to collect the data (Abderhalen et al., 2002; Jansen et al., 2006; Nakahira et al., 2008). Most instruments commonly classifies negative aggression as destructive, undesirable, intrusive, unacceptable while positive aggression is classified as protective, communicative and functional phenomenon (Jansen et al., 2006; Nedham et al., 2005; Palmstierna & Barredal, 2006). According to the theory of planned behaviour the individual's appraisal of the behaviour as bearable or unbearable will influence how they respond to that behaviour (Ajzen, 1988). Nurses in a study by Jonker et al. (2008) viewed aggression as both negative and positive even though the destructive non-communicative view was dominant. Nakahira et al. (2008) explored the attitudes among the nurses working in Japan. 675 nurses took part in the study and the results indicated that nurses had both negative and positive attitudes. Nursing patients using chemical and physical restraints, seclusion and medication were viewed as having negative attitudes and those using less restrictive measures had positive attitudes. These findings revealed that not all nurses' attitudes towards inpatient aggression are negative and with proper training on management of aggression as recommended by literature the status quo might improve. Jansen et al. (2006) explored the attitudes of nurses towards aggression in the Netherlands. 618 care givers participated in their study. The staff attitudes were found to be either positive or negative. The staff who were found to agree more with the negative view of aggression were more likely to use more coercive methods in managing inpatient aggression than those who viewed aggression as positive.

Although many studies agree with the above argument, the findings of a study by Nakahira et al. (2008) indicated a different point of view. This study found that nurses with negative attitudes towards inpatient aggression (perceived patient aggression as destructive and offensive) were more inclined to talk to these patients. The explanation for this was that it could be that they believed patients had control over their behaviour and therefore when talked to they would cease their behaviours. On the other hand, the same authors reported that nurses with positive attitudes towards inpatient aggression (perceived inpatient aggression as functional and communicative) saw medication as the most appropriate approach to the management of inpatient aggression. The authors speculated that the nurses did not see the use of medication as a restraining mechanism. This view is confirmed in the study by Duxbury and Whittington (2005 p. 474) in which nurses reported that the use of medication and others traditional methods are routine in the management of aggression since

"traditionally it's the way it has always been done." This is explored further in the next section.

2.6 Nursing aggression management strategies in the inpatient environment

Management of inpatient aggression includes preventative measures such as risk assessment, close observation patient teaching, interpersonal management of communication, listening skills, and the use of traditional methods objectively with both the client and nurse's well being and safety a priority (Duxbury et al., 2008; Needham et al. 2004; Uys & Middleton, 2004). Some researchers are of the view that nurses show a preference for the use of traditional methods over other methods and that choice of management is also dependent on who is affected and the severity of the problem (Duxbury, 2002; Foster et al., 2007).

Many of the research studies argue that nurses prefer the traditional methods, possibly for their familiarity with them as well as for the extent to which they are entrenched in institutional policy (Duxbury & Whittington, 2005). Duxbury and Whittington (2005) found that nurses preferred the use of medication, seclusion and physical restraint in the management of aggression. This over reliance on the traditional methods in the management of inpatient aggression is evident in the study by Ilkiw-Lavalle and Grenyer (2003). The authors studied the management of 44 incidences of aggression and found that oral medication was used in 14 incidents (32%), patients were secluded in 12 incidences (27%), patients were isolated in 6 incidences (14%), intramuscular injection was used in 5 incidences (11%), restraints were used in 4 incidences (9%) and patients were talked to in only three instances (7%). The preference for medication as a strategy was also found by Duxbury et al. (2008). These authors compared the management of aggression and violence among nurses in the UK and Switzerland using the MAVAS. The use of medication was found to be the most preferred management strategy of aggression with the Swiss nurses emphasising the need for it to be used more often than the UK nurses. The analysis continues to show that both groups felt that seclusion was not necessary and should be discontinued. Even though this was the case the Swiss again found seclusion as one of the best approaches in the management of inpatient aggression. Both groups felt that the use of physical restraint was more important with the UK nurses stating that it is best for the safety of the patients. Both groups agreed that

non-physical means could be employed and de-escalation or "talking-down" techniques and negotiation could be effective. The general consensus was that the Swiss nurses used traditional methods in the management of aggression more than their UK counterparts (Duxbury et al., 2008)

On the other hand, Foster et al. (2007) found nurses did use interpersonal techniques to de-escalate aggressive episodes although 25% of all aggressive incidents were managed with seclusion and about 22.83% of these were managed with physical restraint. The results of this study could not be compared with other studies since it was not clear how many times patients were talked to when showing aggression. The results though elaborate the over reliance on the traditional methods which is already discussed above.

A number of studies, including some of those already reported upon in other sections of this report, consistently draw attention to the differences in the views of patients and nurses with respect to aggression management. Duxbury (2002) showed that the staff advocated for the use of medication and traditional methods while the patients did not. The patients were not aware of de-escalation methods which suggest they had not experienced them. Both groups agreed that different alternatives to the management of aggression were necessary because the current and traditional methods were inadequate.

Inpatient-aggression is also managed by looking at who has been affected (Foster et al., 2007). For example in situations where a patient was a victim of aggression, in most cases the victims were calmed down and no other hash measures like medication or seclusion were used. However, when the victim was a nurse, seclusion was implemented as a management strategy in almost 35.9% of these instances and in only 25% of patient-to-patient violent instances. This 10% difference was noted and found to be clinically significant. Although only 7.6% patient-to-nurse episodes produced pain or injury for the nurse, patients were more likely to be secluded if their aggression involved a nurse, than if it involved another patient. This suggests that seclusion in these instances have a punitive intent and was used more to assuage the victim than to manage the behaviour (Duxbury, 2002). It is apparent that the use of traditional methods in the management of inpatient aggression predominates although there are other alternatives. Some researchers argue that the use of traditional methods is influenced by the general perceptions of the nurses, perception about the cause and the nurses' demographic characteristics of age, gender, nursing and psychiatric nursing

experience and previous encounters with inpatient aggression (Jonker et al., 2008; Nedham et al., 2005; Whittington, Bowers, Nolan, Simpson, & Neil, 2009).

2.7 Association of nurses' demographics characteristics, perception and management of aggression

Several personal characteristics of nurses have been linked to the way in which nurses manage inpatient aggression such as perceptions or attitudes towards inpatient aggression, level of education, gender and age (Jansen et al., 2006; Jonker et al., 2008; Nakahira et al., 2008).

The level of experience and age of nurses have been found to be highly associated with the way inpatient aggression is managed in the mental health hospitals. A study done by Holzworth and Wills (1999) found that nurses differed significantly in the judgements they made regarding the use of seclusion and restraints. Less experienced nurses in most cases used the most restrictive measures in the management of aggression. A study was done in the UK by Low et al. (2003) to examine both perceptions about situations of conflicts and types of interventions employed in dealing with inpatient aggression. They found that nurses with higher grades or more experience used less restrictive measures in the management of inpatient aggression.

The approval of the use of coercive methods by staff in management of inpatient aggression was assessed in England (Whittington et al., 2009). The staff's responses seemed to vary depending on age, experience with the method and gender. For example, the older staff seemed to strongly disapprove of the use of more coercive approaches while younger staff was less approving of mechanical restraints. Generally the staff that have had previous exposure to a particular method of management of aggression showed preference of that method. The male staff on the other hand showed approval of the use of more coercive methods than female staff. The authors further question the role of gender issues in the nursing profession since it seemed that male nurses dissociate themselves from the caring and therapeutic profession they are known for. The authors also suggest that it is possible that hospitals dominated more by women than male staff will result in the use of less coercive methods.

Although studies are limited they have however attempted to find the influence of nursing qualification or training in aggression management and management of aggression (Hans et al., 2006). Jonker et al. (2008) suggested that an additional training in aggression should be seen as way forward in the management of inpatient aggression in mental hospitals. The researcher was of the opinion that an additional qualification in psychiatry will result in less use of restrictive measures and concentrate more on the interpersonal approaches but the evidence surrounding the phenomena is contradictory and inconclusive. In their study on nursing management of aggression in acute psychiatric wards in Australia, Delaney, Cleary, Jordan & Horsfall (2001) found that the nurses recommended the need for additional training in aggression management as they believed it would provide them with information and necessary skills to manage aggressive patients.

According to the findings of Duxbury (1999), mental health nurses used a more medically restrictive approach (seclusion, sedation, medication) in management of inpatient aggression without consultation with doctors while general nurses in most cases referred the patients to the doctors. This suggests that general nurses without psychiatric training might model themselves on the more traditional methods of managing inpatient aggression. A study by Ilkiw-Lavalle, Grenyer, and Graham (cited in Beech & Leather, 2005) report that following training in aggression (the disease process, predictors and its management) health workers in Australia's knowledge had improved on how to predict and manage aggressive behavior. Other health workers who were not exposed to aggression training before also showed improved knowledge. The authors' reported a significant improvement of the post test results as compared with pre test.

A programme of aggression minimization was developed by Grenyer, Ilkiw-Lavalle, Biro, Middly-Clements, Comnions, and Coleman (2004) in Australia. The programme first enrolled 15 expert nurses to the train the trainer nurses who thereafter ran a workshop for 48 health workers on aggression and aggression management. On evaluation, the staffs indicated an increase in skills and were much softer and showed tolerant attitudes towards psychiatric patients in the mental hospital. The staff indicated a greater willingness to work with the patients following this training.

A study in Australia aimed to enhance the confidence and skills of mental health staff in dealing with patient aggression (Ilkiw-Lavalle, 2006). 103 health workers were trained in

aggression minimization skills. The training mainly included identification and predictors of aggression, the use of verbal and non verbal skills in dealing with aggression, confidence in dealing with aggression and lastly how to deal with fear. The post-course evaluation indicated an increase of knowledge and skills in aggression and management as well as an increase in confidence and a decrease in fear of aggression, in participants. Furthermore, 18 months following the course it was found that 94% of those who participated used both the verbal and interpersonal skills they learnt on the course, to manage patients with aggression. The staffs were found to be confident overall when managing aggression but reported being less confident when managing a very aggressive patient.

On the other hand a review of literature by Paterson and Duxbury (2007) shows that following training in seclusion management the likelihood of using restraints increases. The authors found that training in restraint management can lead nurses to practice what they have learnt and in so doing, lead to the over reliance on the method even when it is not called for. The authors gave an example that from 1994-2004, 2299 incidences of aggressive incidences were reported and restraints were used in 111 times in the mental health hospitals in the United States of America.

Hans et al. (2006) studied the effect of a training course on the mental health nurses attitudes on reasons for patient aggression and its management. Sixty three nurses participated in the study. The results showed no change in the nurses' attitudes towards the management of aggression. Nurses maintained trust in the use of traditional methods as the best management of inpatient aggression. The authors continued to say professional socialization may be the reason why nurses have hardened attitudes towards inpatient aggression and these may attitudes may be too stable to be shaken by any additional training in psychiatry or aggression management course.

The theory of planned behaviour suggests that the attitudes follow reasonably from the perception people hold about the object of the attitude just as intention and actions follow reasonably from attitudes (Ajzen, 1988). Therefore Nakahira et al. (2008) recommended that through education and training it should be possible to change nurses' perception on the management of inpatient aggression but emphasised the need for further research in this area.

Age, and level of experience (nursing and psychiatric) on the other hand has been associated with the development of negative attitude towards inpatient aggression which in turn has been seen as a possible determinant in the way inpatient aggression will be managed by nurses (Nakahira et al., 2008). It is assumed that young and inexperienced nurses are more likely to be easily intimidated by encounters of patient aggression and therefore are most likely to opt for controlling harsh and more coercive measures in the management of aggression (Nakahira et al., 2008). It is speculated that the management strategies nurses opt for in managing inpatient aggression is highly indicative of the attitude they hold towards that aggressive behaviour (Duxbury et al., 2008; Jansen et al., 2006; Nakahira et al., 2008).

2.8. Summary and conclusion

It is apparent from the literature that inpatient aggression poses a clinical problem for both patients and the nurses attending them. Although research findings have significantly pointed to the patient's illness as the cause of inpatient aggression, Irwin (2006) argues that aggression does not occur in a vacuum and that the multi-causal internal, external and situational/interactional factors have to be acknowledged. Irwin (2006) further argues that nurses are pivotal in the phenomenon of inpatient aggression and therefore, they should be assisted to explore their behaviour as an aspect of these multi-causal factors.

Today's nursing practice strongly encourages the use of evidence-based practice but the inconsistent and poor definitions of aggression and violence in mental health settings offers little help especially in developing preventative and management strategies guidelines for inpatient aggression (Rippon, 2000). Thus a standard and internationally accepted definition of aggression is recommended for scientific comparisons.

Chapter three will introduce the study's methodology and the design that has been used in the study.

Chapter Three
Research Methodology

3.1 Introduction

According to Burns and Grove (2005) methodology is a systematic and logical way in which data is gathered and synthesized. This chapter describes the research design, the population of study and the procedure for sampling this population. The data collection procedure and instrument used to collect data as well as the ethical considerations and data management issues underlying this study are further described.

3.2 Research approach and study design

The study was based on the positivistic paradigm which assumes that phenomena can be objectively observed and their constituent parts identified and their relationships statistically measured and recorded (Brink, 2006; Polit & Beck, 2008). A quantitative approach was therefore suitable for this study because it showed the relationships between nurses views about inpatient aggression (their perception of aggressive behaviour and its causes), their management strategies, and the nurse characteristics commonly associated with inpatient aggression in clear, numerical terms (Terre Blanche, Durrheim & Painter, 2006).

This quantitative study therefore used a descriptive, exploratory non-experimental design to study (rather than manipulate) these variables in their natural setting in order to describe and to explore the association between them (Polit & Beck, 2008).

3.3 Research setting

The research was carried out at the Lobatse Mental Hospital in Botswana. The hospital is situated in Lobatse, a town with an area of about 4355 kilometre squared in South eastern of Botswana (Ministry of Local Government, Lands and Housing Botswana, 1997). Lobatse has a total population of about 29 689 people (Population and Hosing Census, 2002). The hospital is one of three national specialist hospitals and the only psychiatric hospital in the country. The hospital was established in 1938 as a mental home and relay station for

psychiatric patients in transit to mental institutions in Zimbabwe and South Africa for treatment. The hospital has been extended over the years and now has 180 beds but frequently has an accommodation rate of 282 inpatients. Many of these inpatients are required to sleep on the floor.

The hospital has five wards, three admission wards (one female partly secure/partly open ward, one male secure ward and one male admission open ward) and two open recovery or rehabilitation wards (male and female).The female admission ward is designated open/closed since the movement of inpatients is controlled depending on the severity of their illness. A mental health care attendant guards and monitors the movements of these inpatients. Inpatients in the acute phase of the illness are first admitted to the admission ward and once their symptoms have stabilised, they are transferred to a recovery or rehabilitation ward and thereafter, discharged into the care of the family. The most common cause for admission is psychosis associated with Schizophrenia which accounts for almost 90% of all admissions (World Health Organisation (WHO), 2005).

The hospital is a major teaching/learning resource for the eight institutions, of which seven are offering the diploma and one offering degree in general nursing programme and one institution among the seven offers post basic diploma in psychiatric nursing as well as for other mental health professionals. It is also a clinical base for master students from the University of Botswana. Presently, there are seven doctors, four of which are psychiatrically trained; three occupational therapists; two psychologists; three social workers and one physiotherapist.

3.4 Population

The population for this study was all the nurses (N 121) working at Lobatse mental hospital of which 35 (29%) are male and 87 (71%) are females. All nurses working in the hospital have done either a three year diploma in nursing, a four year degree in nursing, and/or an advanced diploma in psychiatric nursing or a masters degree in nursing. The majority of these nurses are diploma trained. Only 34 (28.1%) of the total number of nurses have additional, specialist training in psychiatric nursing although all diploma nurses are exposed to psychiatry in their general training. All nurses are fluent in English as this is both the language of primary, secondary and nursing instruction and the country's official language.

3.5 Sample population

All participants meeting the inclusion criteria were included in the study i.e. all the nurses with a three year diploma.

3.5.1 Sample size

The total population of the study at the time was (N 121). For this study non probability approach was used to select nurses. Nurses working in the hospital who met the criteria for inclusion were conveniently selected. To ascertain that major characteristics of the population were selected the sample was selected basing on the principle of quota sampling (Freud, Wlliams & Perles, 1993). Quota sampling method is the one in which the researcher identifies strata of the population and determines proportions of the elements within the population in order to ensure representation (Freud, Wlliams & Perles, 1993). The population under study consisted of 121 nurses altogether. 86 (71% of total population) were females, 35 (29% of the total population) were males and only 34 (28.1% of the total population) had an additional qualification in psychiatric nursing. The population was therefore divided into three strata which were females (86), males (35) and those with additional qualification in psychiatric nursing (34). To ensure representation it was anticipated that at least 35% of the sample should be men, 65% females and 33% have an additional qualification in psychiatric nursing. According to Polit and Hungler (1987) characteristics to form a stratum are chosen on the basis of the researcher's judgement and does not require any skill and more effort. The authors continue to say that it important though that the estimations reflect differences in the variables under investigation. In view of the above argument, the researcher deemed the proposed percentages of each stratum of the population to be representative of the population.

So basing on this a sample size of 96 has been calculated, based on the formula described in Katzenellenbogen, Joubert and Abdool Karim (1997).

$$n = \frac{(1.96)^2 \times 0.5 \times (1-0.5)}{(0.1)^2}$$

1.96 is a 95% confidence level

0.5 is 50% proportion of the population expressed as a decimal

0.1 is 10% percentage points degree of error on either side of the normal distribution, expressed as a decimal.

n is 96 with 34 men (35% of the sample) and 62 female (65% of the sample) and 32 (33% of the sample)

Non response to the hand delivered questionnaires led to a sample size of n=71 with a response rate of 58.7%. A sample size of 50% of the entire population is considered acceptable in social science research Carey & Seibert (as cited in Farrell et al., 2006)

Of the 71 respondents 67.6% (48) were women, 32.4% (23) were male and about 29.6% had an additional qualification in psychiatric nursing. Even though the anticipated figures were not realised it should be noted that 65.7% of the entire population of men responded, 55.2% women out of the entire population responded and 60% of those who had an additional qualification responded.

3.5.2 Inclusion criteria

The entire nursing population i.e. participants with a minimum of a diploma or degree in general nursing and working full time in the hospital on day and night duty in both clinical, education and administration contexts were targeted for participation in the study.

3.6. Data collection instruments

Data was collected using a self reporting Questionnaire (appendix 2). The instrument was developed from two existing instruments. The instrument incorporated demographic variables, items relating to nurses perception of aggression and items relating to the nurses beliefs about the causes and management of inpatient aggression. A variable table describing the most common variables used in similar studies, the tools used to collect data for each variable and the statistical tests applied to determine the relationship between these variables is outlined in Table 1 (see Appendix 1).

Section A of the questionnaire outlines the demographic variables of age, gender, nursing qualification, psychiatric nursing experience and nursing experience, work setting and previous experience with aggression. These nominal variables have been included here on the basis of the reviewed studies. For instance Table 1 (appendix 1 page 92) shows that the most commonly used variables in the topic of perception of inpatient aggression and its

management are age, gender, nursing experience, nursing qualification, type of ward, grade, management of aggression and attitude towards inpatient aggression.

Section B of this self-report questionnaire consisted of 39 statements on a five-point Likert scale (strongly disagree – strongly agree) which focuses on three areas: nurses' perceptions of inpatient aggression (first 12 items); nurses' perceptions of the causes of inpatient aggression and their views about management strategies (remaining 27 items).

Nurses' perceptions draws on an adapted version of the Perceptions of Aggression Scale developed originally by Jansen, Dassen and Moorer (1997) and subsequently adapted by Abderhalden et al. (2002) and available in the public domain. Six of these items are related to the view of aggression as a dysfunctional, undesirable phenomenon and six relate to aggression as a functional, comprehensible phenomenon.

Nurses' views of causes of aggression and their management strategies were measured through 27 items. These 27 items are based on an adapted version of the Measurement of Aggression and Violence Scale developed by Duxbury (2002) and Jansen et al. (1997). Thirteen out of the 27 statements relate to the causes of aggression and violence and they are based on the internal, external and factors model (Duxbury, 2002). 14 statements reflect the management strategies nurses use in managing inpatient aggression. Author permission was sought and given for this instrument to be used, although it was found subsequently to appear in the public domain (Appendix 3).

The scoring for this section of the instrument has been adapted from a visual analogue scale (VAS) to a five point Likert scale. The original instrument uses a visual analogue scale (VAS) to record participants' views on each of the items. A VAS uses a horizontal line anchored by word descriptors which in this case, are strongly agree and strongly disagree, at each end. The horizontal line is 10 cm in length and participants are required to make their mark at some point along this line that best represents their opinion of the item. The VAS score for each item is determined by measuring in millimetres from the left hand end of the line to the point that the participant makes. This means that each horizontal line for each item for each respondent needs to be manually measured to calculate scores. There is some debate and confusion about the type of measurement being generated through this scale and hence

the nature of the statistical tests that can be performed. Some argue that the data is essentially ordinal while others regard it as interval (Terre Blanche et al., 2006)

The decision to use a five point Likert scale rather than the VAS was based on the assumptions that both scales are useful in measuring opinion and perceptions; both require participants to make a decision on their level of agreement; there is no ambiguity about the type of measurement (ordinal) offered through this scale Nyren (as cited in Marsh-Richard, Hatzis, Mathias, Venditti & Dougherty, 2009).

The instrument has been developed in English and was administered in English because all nurses are literate in English and therefore able to understand the content of the items and to accurately indicate their level of agreement or disagreement (please see description of the population in section 3.4).

3.7 Validity and reliability of the tools

Instruments are frequently the source of error in collecting data (Brink, 2006). It is therefore important to establish the validity and reliability of the instrument before it is used (Polit & Beck, 2008). According to Polit and Beck (2008) reliability is defined as the consistency with which the instrument measures what is intended to measure on repeated measures.Validity refers to the degree to which an instrument measures what it is supposed to be measuring (Polit & Beck, 2008).

The reliability of the items in the perception of aggression scale has been confirmed, most notably in a large scale test–retest stability study of the Perception of Aggression Scale undertaken by Needham, Abderhalden, Dassen, Haug and Fischer (2005). Reliability analysis demonstrated a satisfactory internal consistency with Cronbach's alpha of 0.69 for the items related to aggression as dysfunctional and unacceptable, and 0.67 for the items related to aggression as functional and comprehensible. The average retest reliability was r = 0.76 – 0.77 for both dimensions.

The reliability of the items in the MAVAS has also been confirmed using the test-retest procedure on a sample of 30 nurses (Duxbury, 2002). An overall reliability coefficient of 0.89 using Pearson's r was found. According to Polit and Beck (2008), reliability of 0.75-0.80 and above is more than adequate for social science studies.

A pilot study was planned for the questionnaire but was not conducted because of the small size of the total target population and the already established reliability of the two instruments. However the internal consistency of the instrument used for this study was tested and was found to be at 0.69 Cronbach's alpha. According to Nunnaly (as cited in Santos, 1999) the alpha coefficient ranges from 0-1 with a higher score indicating an adequate and more reliable coefficient. Polit and Beck (2008) assert that reliability of 0.75-0.80 is more than adequate for social science research. In the view of the above argument, 0.69 Cronbach alpha was deemed adequate and the instrument used to collect data was considered reliable

In this study, content validity was used to validate the questionnaire. Content validity seeks to find the extent to which the instrument covers all the items being measured adequately (Polit & Beck 2008). Table 3.1 highlights the content validity analysis. According to table 3.1 demographic characteristics of the nurses were drawn from section A of the questionnaire. Objective 1 was addressed by the first 12 items of section B of the questionnaire which contained 12 statements describing inpatient aggression as positive and negative. Objective 2, 3 and 4 were addressed by the last 27 statements of section B which had 13 statements on the cause of inpatient aggression and 14 statements on perception on the management of inpatient aggression. The questionnaire was deemed valid as it addressed all the objectives of the study.

Table 3.1: Content validity

Objective	Questionnaire
To describe the demographic characteristics of nurses working in the psychiatric inpatient facility in Botswana.	Section A. Demographic data. (a-h)
To describe how nurses perceive aggression.	Section B; the first 12 questions
To describe nurses perceptions of the causes (internal, external, situational/ interaction) of inpatient aggression.	Internal 16, 18, 20, 25,39 External 13, 27, 38 Situational 14, 15, 17, 31, 34
To describe the management strategies nurses use to manage inpatient aggression.	Management 19, 21, 22, 23, 24, 26, 28, 29, 30, 32, 33, 35, 36, 37
To explore the association between nurses' demographic characteristics, their perceptions of aggression, the factors they perceive cause aggression and choice of management strategy.	Section A together with section B of the questionnaire

3.8 Data collection procedure

Permission to conduct the study was first sought and obtained from the University of KwaZulu-Natal's Ethics committee (Appendix 6) and then from the Ministry of Health Botswana's ethics committee (Appendix 8). The final permission for the study was obtained from the Lobatse Mental Hospital ethical committee (Appendix 10).

One week before data collection commenced an introductory information session of about two hours was held with the chief registered nurses of the respective wards in order to explain the purpose of the research and to share information pertaining to the study. Four attended the meeting. The chief nurses informed the researcher that the hospital policy does not allow researchers to enter the wards to distribute questionnaires and therefore the duty to distribute the questionnaires was left with the chief registered nurses. Following this meeting with the chief nurses an information sheet explaining the upcoming research was posted by them on each wards notice board. A week later 130 questionnaires (an extra nine questionnaires were given) containing clear and concise instructions for completing the questionnaire, an information sheet about the study (Appendix 4) and informed consent (Appendix 5) were distributed to each ward.

The researcher collected the questionnaires every day between 11:00 am and 4:00 pm from the chief registered nurses of each ward for eight consecutive days. A total of 71 questionnaires were collected after which one was disqualified following the finding that it did not fall in the inclusion criteria. That is the participant had only three days in the hospital and probably was still going through orientation of the hospital therefore was not allocated to any ward.

3.9 Data analysis

According to (Polit & Beck 2008) data analysis is a process through which a researcher orderly and coherently organises and synthesis data. The questionnaires were numbers and coded to help in capturing and auditing of data. A Statistical Package for the Social Science (SPSS) version 15.0 was used to analyse the data.

Table 1 in Appendix 1 summarises the variables and types of measurement and statistical analyses that have been performed by previous studies. For example the instrument most used to measure perception of nurses towards aggression and inpatient management was found to be the Perception of Aggression Scale (POAS), the Management of Aggression and Violence Attitude Scale (MAVAS) and the Attitude Towards Aggression Scale (ATAS). These served as frame of reference for this study about which statistical methods to use and why. Both descriptive statistics and inferential statistics were used for data synthesis. Descriptive statistics such as frequencies, means, standard deviation and percentages were used in the analysis of data to find the nurses general perception, perception on the cause and the general management of inpatient aggression in the main psychiatric hospital in Botswana.

ANOVA tests and T-test was done to compute the associations between nurses' demographics of nursing qualification, nursing experience, encounters with aggression, and their perception on the cause and management of aggression (traditional and interpersonal). According to Frankfort-Nachmias and Leon-Guerrero (2006) ANNOVA test is used to find out if there is variance in the mean scores of one independent grouping or sample with three or more levels or continuous variables which have been coded to give three or more equal groups.

A post hoc test was done to reduce Type 1 error (Frankfort-Nachmias & Leon Gurrero, 2006). Type 1 error is the acceptance of a false null hypothesis. A false null hypothesis for this study will indicate that there is no association between the nurses' demographic variables and management of aggression while in fact there is an association. A type 1 error would indicate that there is an association between the interpersonal management of inpatient aggression and the nurses demographics variables while in fact there was no association if it was not controlled. Post hoc tests are used following the rejection of the null hypothesis, that is, following ANOVA tests which have indicated an overall significance across the groups. Post hoc testing eliminates the possibility that this significance was due to type one error by showing exactly where the significance lies (Polit & Beck, 2008).

T-Test was used to find the association between nurses' demographic characteristics of age and nursing qualification and interpersonal management of aggression. T-tests were used because of its ability to compare two mean scores of two different groups (Burns & Grove, 2005).

Pearson's correlation coefficient (r) was used to find the association of nurses' perceptions, perception on the cause and management of inpatient aggression. Terr Blanche et al. (2006) state that the purpose of correlational analysis is to describe the relationship between variables, clarify the relationship among theoretical concepts, or assist in identifying causal relationships. Polit and Beck (2008) suggest that correlation analysis provides two pieces of information about the data: the nature of the linear relationship (positive or negative) between the two variables and the magnitude (or strength) of the relationship.

3.10 Ethical considerations

Researching incidents of aggression or violence in health care professions requires great sensitivity (Rippon, 2000). Rippon (2000) maintains that violence and aggression in the work environment are associated with a particular stigma because they are personally sensitive and emotive topics where private affairs (perceptions, attitudes, beliefs) are examined within the context of public conduct. Participants within organisations are therefore more likely to close ranks when they are asked to address topics that they perceive as sensitive, and therefore, as a threat Fielding (as cited in Rippon, 2000).

Thus, a number of measures were taken in this study to protect the identity of participants and to assure them of their anonymity with respect to this sensitive topic. For example, the participants were not asked to write their names on the questionnaires and each participant was asked to give consent of which decided the degree of protection they would like. The consent statement (Appendix 4) asked participants to acknowledge in writing that they freely agreed to participate in the study and to date their agreement. Participants were further given the opportunity to sign their names to this agreement if they felt comfortable identifying themselves or to indicate that while they are willing to participate, they are not comfortable signing their names.

Additionally, questionnaires and the information sheets were distributed to all the nurses in the institution, including nurses working in management positions. The information sheet contained an explanation of the study; the amount of time required to complete the questionnaire; the researcher and supervisor's contact details; a notation that there were no benefits for participating in the study and no penalties for declining; the opportunity of not responding to a statement; a description of how data will be stored, managed and used; and the assurance that the study has been ethically approved by the hospital and other agencies external to the institution.

3.11 Data management

Data collected for the study shall be used for the purpose of this study only. Data for the study is stored and shall be stored in a safe locked cupboard and only the researcher and her supervisor will have access to it. It will stay stored for a period of 5 years as it serves as the primary data for the research after which it will be destroyed.

3.12 Dissemination of findings

The results will be published via the University of Kwazulu Natal Library and in consultation with the supervisor, through an identified and accredited journal of nursing. A copy of the reviewed report will be submitted to the Botswana Health Ministry and the hospital management.

3.13 Conclusion

The chapter outlined the methodology that was used to guide the study, the ethical protection of the subjects followed as well as how the result of the study will be disseminated. The following chapter focuses on the analysis and presentation of the results.

Chapter Four
Data analysis and presentation of results

4.1 Introduction

A total of 72 questionnaires were collected from the hospital and prepared for data analysis. Following a thorough scrutiny of all the questionnaires it was found that one questionnaire did not meet the inclusion criteria and was discarded. Data was analysed and presented with the aid of frequency tables, bar graphs and percentages as deemed appropriate.

The purpose of the study was to explore how nurses' demographic characteristics, their perceptions of aggression and its causes, influence the management of inpatient aggression by nurses. The results are presented in accordance with the objectives of the study. A description of the demographic characteristics of the sample is followed by the presentation of the results with respect to their perceptions of aggression; their perception of the causes of aggression (internal, external, and situational/situational); the management strategies they use; and the association between respondents' demographic characteristics and their perception on the cause and management of inpatient aggression.

4.2 Demographic characteristics of the sample

The demographic variables for this study are age, gender, nursing qualification, nursing experience, psychiatric nursing experience, highest nursing qualification, and nurses' encounters with aggression. These variables were selected on the basis of previous studies which have found that they influence nurses' perceptions of the cause of aggression and the way in which they subsequently manage inpatient aggression (Nakahira et al., 2008). Although the respondents were asked to describe the type of ward they were working in, 28 questionnaires had data missing from this variable. It is speculated that respondents omitted this information to avoid any possibility of data being linked back to individuals or to specific wards and groups of individuals. This data is therefore not presented here.

4.2.1 Gender and age

Over two thirds (48 of the 71 or 67.6 %) of the sample were female and 23 (32.4%) were male. The average age of the sample was 36 years. The youngest respondent was 21 years old while the oldest was 59 years old. 57.8% of the respondents fell below the mean age, 5.6% scored the mean age and 36.6% fell below the mean age. The standard deviation (from the mean) was 10.269 years. 28 (39.4%) of the sample were between the ages of 21 to 30 years, 22 (31.0%) were between 31 to 40 years, 10 (14.1%) were between 41 to 50 years and 11 (15.5) were in the age group of 50 and above. Sixteen females and 12 males fell into the age group of 21-30 years, 13 females and 9 males fell into the 31 to 40 age group while 10 females and 0 males were represented in the age category of 41-50 years. There were 9 females and 2 males in the 50+ age category. Whereas women were represented in all the age categories, men were not represented in the age category of 41-50years. These findings are summarised in table 4.1.

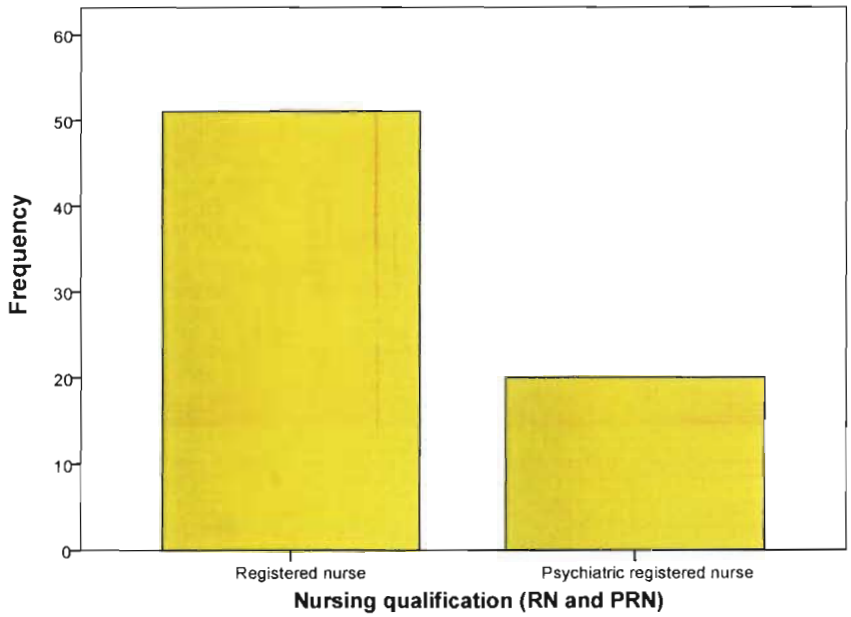
Table 4.1 Age and gender of the respondents

Demographic characteristics			Frequency	Percentage %
Age	21-30 years	Female (16) Male (12)	28	39.4
	31-40 years	Female (13) Male (9)	22	31
	41-50 years	Female (10) Male (0)	10	14.1
	51+	Female (9) Male (2)	11	15.5
Gender	Female		48	67.6
	Male		23	32.4

4.2.2 Nursing Qualification of the respondents

The nursing qualification indicates whether the nurse was qualified with a single nursing qualification of registered nurse or with an additional qualification of registered psychiatric nurse. All the nurses in the hospital are registered nurses. Of the respondents who returned the questionnaires, the majority of the sample (51 out of 71 or 71.8%) had a single registered nurse qualification while 28.2 % (20) had an additional qualification in psychiatric mental health nursing. These results are reflected in figure 4.1.

Fig 4.1: Respondents nursing qualification

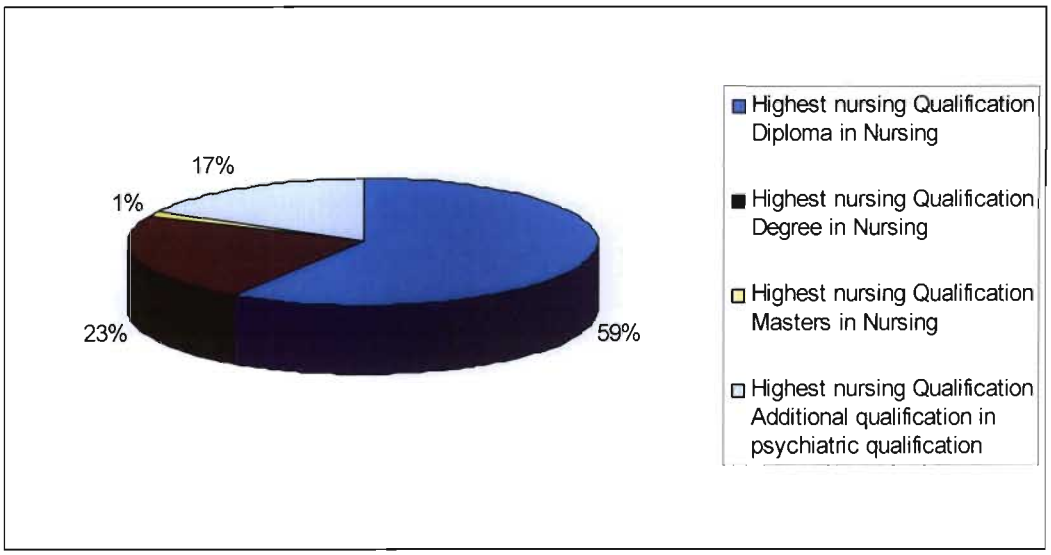


4.2.3 Highest nursing qualification of the respondents

The highest nursing qualification implies the highest professional qualification a nurse holds. Qualifications are hierarchically categorised in terms of diploma, degree and masters in nursing. Figure 4.2 below shows that more than half of the sample 42 (59.2%) had a diploma in general nursing, 16 (22.5%) had a degree in general nursing, 1 (1.4%) had masters in nursing and 12 (16.9%) indicated that they have an additional qualification in psychiatric nursing.

This latter figure of 12 is assumed to be incorrect because 20 of the respondents indicated that they held an advanced diploma in psychiatric nursing qualification (section 1.2.2). It is therefore assumed that respondents who had both a degree in nursing and an additional qualification of psychiatric nursing selected the highest possible qualification for this question (degree). If this assumption is the case, then it is possible that an additional 8 respondents in the degree category also have an additional qualification of psychiatric nursing as part of their degree status.

Figure 4.2: A pie chart showing the respondents highest nursing qualification



4.2.4 Respondents nursing experience and psychiatric nursing experience

The respondents were asked to state their nursing and psychiatric nursing experience in years and months and the figures were rounded to the nearest whole year. The general nursing experience of respondents refers to the number of years the respondent has worked as a general nurse while the psychiatric nursing experience refers to the number of years the respondents have worked in a psychiatric hospital. The results are summarised in table 4.2.

26 of the respondents had between 1 to 5 years of general nursing experience, 25 had 6-15 years of experience, and 20 had more than 16 years of experience. The average number of general years of experience was 12.11 years with a range of between 36 years and 1 year.

With respect to gender, 14 of the respondents within the category 1-5 years of nursing experience were women and 2 were men; 16 of the respondents within the 6-15 years of nursing experience were females and 9 were males while in the 16+ years of nursing experience category 18 were females and 2 were males. More than half of the male respondents 52.2% had 1-5 years of experience in nursing while 29.2% of the female respondents had 1-5 years experience in nursing.

With respect to psychiatric nursing experience, the average years of psychiatric nursing experience of respondents was 6.87 years with a range of years of psychiatric nursing experiences was between 31 years and 1 year. 40 (56.3%) of nurses had 1-5 years experience, 20 (28.2%) had 6-15 years while 11 (15.5%) had more than 16 years of experience working in a psychiatric hospital. With respect to gender and years of psychiatric nursing experience, 25 (%) women and 15 (%) men had between 1 and 5 years; 14 women (%) and 6 (%) men had between 6-15 years of psychiatric nursing experience while only 9 (%) women and 2 (%) men had 16 years and over of psychiatric nursing experience.

Table 4.2 Nursing and psychiatric nursing experience of the respondents

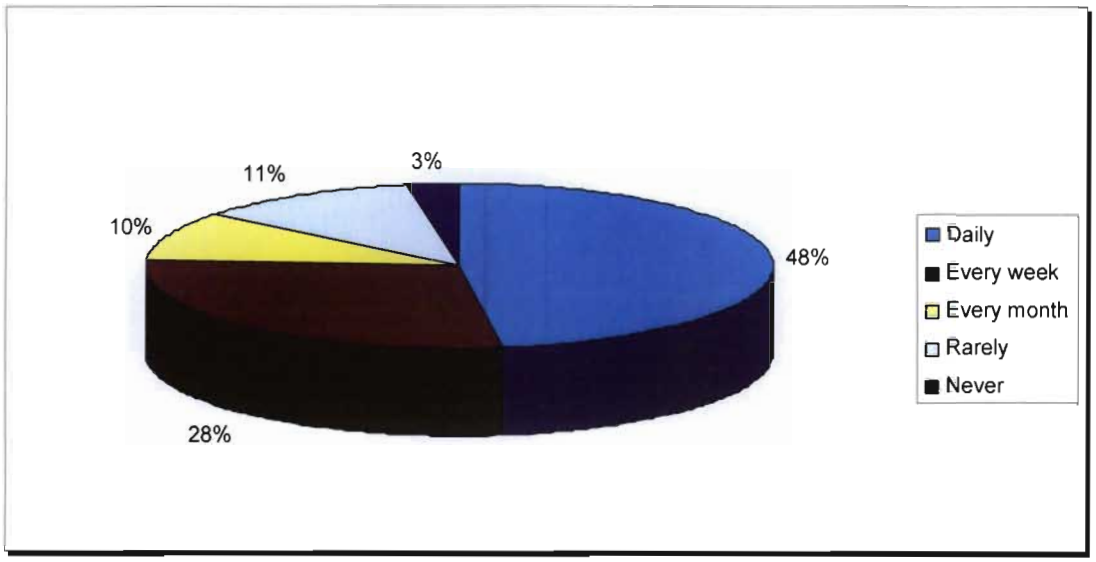
	Years	**Gender**	**Frequency**	**Percentage**
Nursing experience in years	1-5 years	F (14) M (12)	26	36.6
	6-15 years	F (16) M (9)	25	35.2
	16+	F (18) M (2)	20	28.2
Psychiatric nursing experience in years	1-5 years	F (25) M (15)	40	56.3
	6-15 years	F (14) M (6)	20	28.2
	16+	F (9) M (2)	11	15.5

Key: F = Female M = Male

4.2.5 Encounters with aggression

Uys and Middleton (2004) define aggression as behaviour aimed at causing harm which may be verbal (e.g. insult) or physical (e.g. causing an injury to self or others). The respondents were asked how often they encountered inpatient aggression from the options daily, weekly, monthly, rarely and never. A pie chat (figure 4.3) summarises the frequency of encounters of inpatient aggression by respondents. Almost half of the respondents (n= 71) 34 (48%)) said they encountered aggression on daily basis, 20 (28%) encountered it every week, 7 (10%) encountered it every month, 8 (11%) said they rarely encountered it and only 2 (3%) said they never encountered aggression at all. More respondents indicated that they encountered aggression every day.

Figure 4.3: Respondents encounters with inpatient aggression



4.3 Nurses perception of inpatient aggression

Inpatient aggression in the literature has been recognised as commonly occurring in psychiatric hospitals with the majority of nurses (about 75%) being physically threatened at one point of their careers (Munro, 2002). For this study inpatient aggression and violence were used interchangeably to refer to any incidence in which a person is verbally abused, threatened or assaulted (Uys & Middleton, 2004).

The Perception of Aggression Scale (POAS) was used to obtain nurses perceptions of aggression and thus, to accomplish objective one of the study. Six of these items are related to the view of aggression as a dysfunctional, undesirable phenomenon while six items are related to aggression as a functional, comprehensible phenomenon. The nurses were asked to indicate their level of agreement or disagreement with statements on the 5-point Likert scale with 1 representing strongly disagree with the statement, 5 representing strongly agree with statement and 3 indicating uncertainty with the statement. The results were scored on a 1 to 5 mean with a higher mean showing strong agreement with the statement and a lower mean showing disagreement with the statement. The mean score of 2.5 indicated uncertainty with the statement thus suggesting that the respondent neither agreed nor disagreed with the statement.

The results are summarised in two views reflecting aggression as a dysfunctional, undesirable phenomenon and aggression as a functional, comprehensible phenomenon.

4.3.1 Nurses perceptions of aggression as a dysfunctional, undesirable phenomenon

Table 4.3 summarises the respondents' views of aggression as a dysfunctional and undesirable phenomenon. Generally nurses seemed to strongly agree with the perception of aggression as being dysfunctional and undesirable phenomenon. This is suggested by the high mean scores for each of the items. 93.2% of the respondents agreed with the statement that aggression is hurting others mentally or physically (mean score of 4.66); 91.2% agreed aggression is an unpleasant and repulsive behaviour (mean score of 4.56); 82.2% perceived aggression as unnecessary and unacceptable (mean score of 4.11) while 80.8% perceived aggression as disturbing invasion of personal space to dominate others (mean score of 4.04). There was overall agreement with the perception of aggression as always negative and as an action of physical violence of a patient against a nurse with mean scores of 3.83 and 3.32 respectively. Overall, 81.73% of the nurses agreed with the statements that saw aggression as dysfunctional and undesirable behaviour while only 18.27% disagreed with these statements.

Table 4.3 Nurses perceptions of aggression as a dysfunctional, undesirable phenomenon

No.	Perceptions of aggression as dysfunctional and undesirable phenomenon	Mean score	Percentage	Decision
1	Aggression is an unpleasant and repulsive behavior	4.56	82.2%	Agree
2	Aggression is unnecessary and unacceptable	4.11	80.8%	Agree
3	Aggression is hurting others mentally or physically	4.66	93.2%	Agree
4	Aggression is an action of physical violence of a patient against a nurse	3.32	66.4%	Agree
5	Aggression is always negative and unacceptable; feelings should be expressed in another way:	3.83	76.6%	Agree
6	Aggression is a disturbing invasion of personal space to dominate others	4.04	80.8%	Agree
Total %	**Agree = 81.73% Disagree = 18.2%**			

Key: A = Agree D = Disagree. The higher the mean (maximum of 5) the greater the agreement with the statement and the lower the mean the less the agreement with the statement.

4.3.2 Nurses perceptions about aggression as a functional comprehensible phenomenon

There seems to be low agreement with the perception of aggression as a functional phenomenon with the mean scores for all of these six items below a 50% agreement rate. The views with their respective mean scores about aggression as a functional, comprehensive phenomenon is illustrated in table 4.4.

31.6% of the respondents agreed with the statements relating to the view of aggression as a start of a positive nurse-patient relationship while 68.4% disagreed with the statement, 39.2% agreed with the statement that aggression is a way to protect yourself, while 61.8% disagreed. The last four statements: aggression is healthy; aggression is an opportunity to get a better understanding of the patient; aggression is a form of communication and aggression is the protection of one's territory, scored means of 2.18, 2.14, 2.13 and 2.17 respectively giving an overall mean percentage of 43.1% for the four statements. Overall more than half of the respondents (59.47%) disagreed with the six statements relating to the view of aggression as a functional and comprehensible while 40.43% agreed with the statements.

Table 4.4 Respondents view on statements relating to aggression as functional, comprehensible phenomenon

No.	Statement on view of aggression as functional, comprehensible phenomenon	Mean score	Decision
7	Aggression is the start of a positive nurse -patient relationship	1.58	D
8	Aggression is a healthy reaction to feelings of anger:	2.18	D
9	Aggression is an opportunity to get a better understanding of the patient's situation	2.14	D
10	Aggression is a form of communication and as such not destructive	2.13	D
11	Aggression is a way to protect yourself	1.96	D
12	Aggression is the protection of one's own territory	2.17	D
Total %	**Agree=40.53% Disagree=59.47%**		

D = Disagrees. The lower the mean score, the less the agreement with the statement.

4.4 Perception of nurses on the cause of inpatient aggression and management of inpatient aggression

To address the second objective, respondents perception on the cause and management of inpatient aggression were captured with the Management of Aggression and Violence Attitude Scale (MAVAS). MAVAS is an internationally recognised tool that is used to measure the nurses' perception on the cause and management of inpatient aggression (Duxbury, 2003). Nurses were asked to indicate the statement they most agree or disagree with on a five point Likert scale with 1 representing strongly disagree with the statement and 5 indicating strongly agree with the statement. The nurses responses were scored on mean score of 1 to 5 with a higher number indicating greater agreement with the statement and a score of 2.5 showing uncertainty with the statement. A symbol with a star showed a weak agreement or disagreement with the statement.

Data was organised according to the internal, external and situational explanations about the cause of inpatient aggression as outlined in the theoretical framework used to guide the study (Duxbury & Whittington, 2005).

4.4.1 Respondents' views on the internal causes of inpatient aggression

The internal causes of inpatient aggression are the factors within the patient that contribute to the occurrence of aggression such as mental illness and age of the patient (Nijman, 2002). The respondents' views were scored on a five point mean score. The higher the mean score the greater the agreement with the statement and the lower the mean score the greater the disagreement with the statement.

Nurses agreed, in order of greater agreement, that patients are aggressive because they are ill (mean score of 3.61); that there are types of patients who are aggressive (mean score of 3.55); that patients who are aggressive should try to control their feelings (mean score of 3.41) and that it is difficult to prevent patient from becoming aggressive (mean score of 3.20). There was an average mean percentage agreement score of 68.5% for these four internal factors as causing aggression. On the other hand, 57.2% of the respondents disagreed with the statement that aggressive patients would calm down when left alone while 42.8% agreed with the

statement. Table 4.5 summarises the nurses' responses on the statements of the internal case of inpatient aggression.

Table 4.5 Nurses perceptions of the patient-related (internal) causes of aggression

No.	MAVAS Statement	Mean score of staff	View of nurses
16	It is difficult to prevent patients from becoming aggressive.	3.20	A
39	Patients are aggressive because they are ill.	3.61	A
18	There are types of patients who are aggressive.	3.55	A
20	Patients who are aggressive should try to control their feelings.	3.41	A
25	Aggressive patients will calm down when left alone.	2.14	D

Key: A = Agree D = Disagree. The higher the mean the greater the agreement with the statement and the lower the mean the less the agreement with the statement.

4.4.2 Nurses perceptions of the environment as the cause of in-patient aggression

These are factors within the environment rather than within the individual or the patient which may contribute to the occurrence of inpatient aggression (Duxbury et al., 2008). The statements were scored on a five point mean of 1-5 with a higher mean indicating greater agreement with the statement and a lower mean indicating disagreement with the statement. A letter with an asterisk sign indicated a weak or strong agreement with the statement.
Generally the nurses saw the environment as the cause of inpatient aggression with the majority of them agreeing more with the statements that patients would be less aggressive if the physical environment were different (mean score of 3.61) and that a restrictive environment contributes to aggression (mean score of 3.42).

The two mean scores for environment as the cause of inpatient of aggression (table 4.6 items 13 and 27) was high. However, the mean score for the perception that patients are aggressive because of the environment they are in indicated a weak agreement with this statement with a borderline mean percentage agreement score of 57.4%. This suggests that while nurses agree that the physical environment is a cause of aggression, it is possible that they see the concept

environment as encompassing more that just physical aspects. This might explain why two thirds (66%) of the respondents perceived the environment as the cause of inpatient aggression while one third (34%) did not perceive environment as a cause of in-patient aggression. The results are illustrated in table 4.6.

Table 4.6 Nurses perceptions of the environment as the cause of inpatient aggression

No.	**MAVAS** Statement	Mean score of staff	View of nurses
13	Patients are aggressive because of the environment they are in.	2.87	*A
27	Restrictive environment can contribute towards aggression	3.42	A
38	If the physical environment were different patients would be less aggressive.	3.61	A

Key: A= Agree D= Disagree. The higher the mean the greater the agreement with the statement and the lower the mean the less the agreement with the statement.

4.4.3 Nurses perceptions of the interactional causes of inpatient aggression

The situational causes are the factors specifically pointing to the patient/staff interactions within the ward as the cause of patient aggression (Duxbury et al., 2008). The statements were scored on a 1-5 mean score with a high mean indicating greater agreement with the statement and a lower mean indicating disagreement with the statement. A letter with an asterisk indicated weak agreement or disagreement with the statement.

In this study 74% respondents agreed with the statements that said improved communication can reduce the incidences of patient aggression (mean score of 3.70); 69% agreed that other people make patients violent (mean score 3.46); 68% agreed that poor communication between staff and patients leads to patients aggression (mean score 3.41) and 65% agreed that situations can cause patients to become aggressive (mean score 3.27). Just above half (56%) of the respondents agreed with the statement that said patients become aggressive because staff do not listen to them as shown by an asterisk sign indicating a weak agreement with the statement (mean score of 2.80). Overall, 66.56% of the respondents in this study agreed with the statement that situations contribute to the occurrence of inpatient aggression. Table 4.7 illustrates the results.

Table 4.7 Nurses perceptions of the interactional causes of inpatient aggression

No	MAVAS Statement	Mean score of staff	Percentage	View of interaction as cause of aggression
14	Other people make patients violent or aggressive.	3.46	69	A
15	Patients commonly become aggressive because staff do not listen to them.	2.80	56	*A
17	Poor communication between staff and patients leads to patient aggression.	3.41	68	A
31	Improved communication between staff and patients can reduce the incidences of patient aggression.	3.70	74	A
34	It is largely situations that can contribute towards the expression of aggression by patients.	3.27	65	A

Key: A = Agree D= Disagree. The higher the mean the greater the agreement with the statement and the lower the mean the less the agreement with the statement.*A= weak agreement or disagreement with the statement

4.5 The nurses perceptions of the management of inpatient aggression

The management of aggression was divided into two scoring categories: old or traditional management and new or interpersonal management strategies for aggression (Duxbury et al., 2008). The traditional (old) management of aggression strategies encompass the perceptions of seclusion as an effective approach for managing violence; medication as valuable approach in treating patient; the use of prescribed medication frequently and the use of restraint for patients' own safety. These statements agree more with the use of seclusion, medication and restraint as the best management strategies in the management of inpatient aggression.

Interpersonal management strategies was made up of the last ten remaining ten statements: different approaches are used on this ward to manage aggression; the practice of secluding patients should be discontinued; the use of negotiation, expression of aggression do not always require staff intervention; physical restraint is sometimes used more than necessary; the use of alternative methods could be used more frequently; patients could be handle more effectively; prescribed medication can sometimes lead to aggression; seclusion is sometimes used more than necessary and lastly the use of de-escalation is successful in preventing

violence. The above mentioned statements on the management of inpatient aggression oppose the use of the traditional management of aggression and advocate for the other management strategies. n for traditional management will be 71 and for the interpersonal management of aggression will be 70 as one respondent was found to have missed answering one question under this management.

4.5.1 Nurses perceptions of the traditional methods of managing aggression

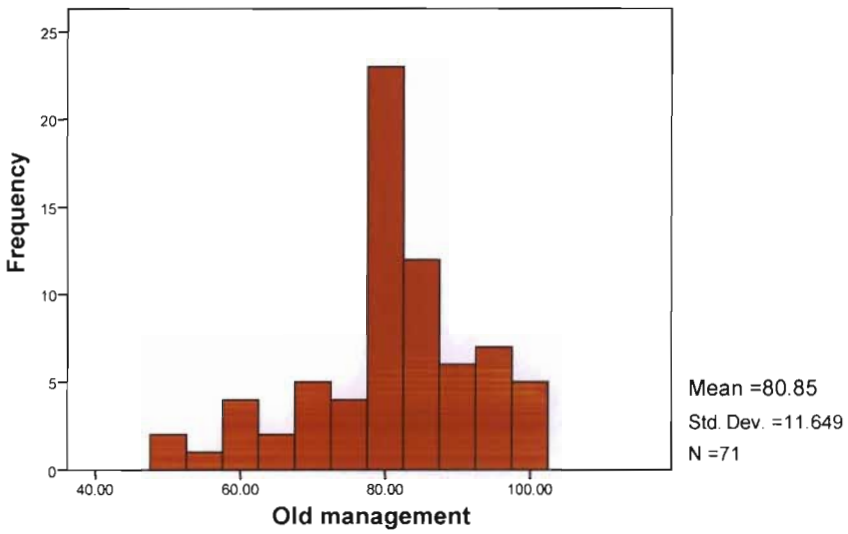
86.2% of respondents agreed more with the statement that seclusion is the best strategy in the way patients should be managed (mean score 4.31); 82.8% agreed that patients are restrained for their own safety (mean score 4.14); 82% agreed that medication is a valuable approach in treating inpatient aggression (mean score of 4.10) and 72.4% agreed that medication should be used more frequently (mean score of 3.62). Generally the high mean percentage of 80.5 with scores ranging between 50-100% for these four statements suggests that the nurses agreed more with the traditional management of aggression. The results are further illustrated by table 4.8 and figure 4.4 which show a histogram indicating the lowest and highest mean percentage scored by nurses.

Table 4.8 MAVAS statements on the traditional (old) management of aggression management of inpatient aggression

No	MAVAS Statement	Mean score	Percentage	View on management
21	When a patient is violent seclusion is one of the most effective approaches.	4.31	86.2	A
22	When a patient is violent seclusion is one of the most effective approaches.	4.14	82.8	A
24	Medication is a valuable approach for treating aggressive and violent behaviour	4.10	82	A
36	Prescribed medication should be used more frequently for aggressive patients	3.62	72.4	A

Key: A = Agree with the statement

Fig 4.4 **Histogram showing the distribution of mean scores of nurses on their view on perception of inpatient management of aggression**



4.5.2 Nurses perceptions of interpersonal (new) management of aggression

83.6% of the respondents agreed with the statement that said different approaches of management are used in this ward (mean score of 4.18); 66.4% agreed that the use of de-escalation is successful in preventing violence (mean score of 3.32); 71.2% agreed that alternative approaches could be used more frequently (mean score 3.56); 65.6% agreed that patients could be handled more effectively on the ward (mean score 3.28) and 73.8% agreed that negotiations can be more effective in managing the patients (mean score 3.69). 53% and 51% agreed that medication can lead to aggression and physical restraint is used more than necessary, even though it was a borderline agreement as shown by A*.

49.6 % of the respondents agreed with the statements that said seclusion is sometimes used more than necessary with a low mean of (2.48) while only 36.6% agreed with the statement that the practice of seclusion should be discontinued (mean score 1.83).

Generally the mean percent score of 60.5 was scored on the interpersonal management of aggression with the minimum mean score of 46 and the highest score of 80. The results are

illustrated in table 4.9 below which show the respondents distribution of mean scores under the interpersonal management of aggression.

Table 4.9 Respondents' views on the interpersonal management of inpatient aggression

No.	Statement	Mean score of staff	Percentage	View on interpersonal management of aggression
19	Different approaches are used on this ward to manage aggression.	4.18	83.6	A
23	The practice of secluding violent patients should be discontinued.	1.83	36.6	D
26	The use of negotiation could be used more effectively when managing aggression and violence.	3.69	73.8	A
28	Expressions of aggression do not always require staff intervention.	2.14	42.8	D
29	Physical restraint is sometimes used more than necessary.	2.59	51.8	*A
30	Alternatives to use containment and sedation to manage patient violence could be used more frequently.	3.56	71.2	A
32	Patients' aggression could be handled more effectively in this ward.	3.28	65.6	A
33	Prescribed medication can sometimes lead to aggression.	2.66	53.2	*A
35	Seclusion is sometimes used more than necessary.	2.48	49.6	D
37	The use of de-escalation is successful in preventing violence.	3.32	64.4	A

Key: A = Agree D = Disagree. A* weak agreement or disagreement. The higher the greater the agreement with the statement and the lower the mean the less the agreement with the statement.

4.6 Association between nurse's demographic variables on perception of inpatient aggression, perception on the cause and perception on management

One respondent did not answer one of the questions under management section therefore the sample size for the interpersonal management of aggression is 70 and the size for the traditional management strategies, 71.

The management of aggression was divided into two scoring categories: traditional management and interpersonal management of aggression. The mean scores of each were

found. The traditional management mean score was 80.8571 and the interpersonal management score was 60.4571. These mean scores suggest that respondents agreed more with the management of inpatient aggression as involving traditional methods than interpersonal measures.

A decision was therefore taken to establish the factors contributing to why nurses use traditional management strategies rather than the interpersonal management strategies. This was accomplished by establishing how the nurses' demographics variables influence the use of the two different interpersonal management styles: interpersonal and traditional.

ANOVA tests and T-test was done to compute the associations between nurses' demographics of nursing qualification, nursing experience, encounters with aggression, and their perception on the cause and management of aggression (traditional and interpersonal). According to Frankfort-Nachmias and Leon-Guerrero (2006) ANNOVA test is used to find out if there is variance in the mean scores of one independent grouping or sample with three or more levels or continuous variables which have been coded to give three or more equal groups. In this study, the three categories are level of experience; 1-5 years, 6-15years and 16+ categories. This test is also used to determine wherether the variance between the samples is larger than the variance within the sample. If the variance is larger between samples than the variance within the sample, then there is likely to be a significant variation in how nurses' demographic characteristics influence the management of inpatient aggression.

A post hoc test was done to eliminate the possibility of a Type 1 error which in this case, would be the rejection of the null hypothesis when in fact, it is true (Frankfort-Nachmias & Leon-Guerrero, 2006; Homack, 2001). In this study the null hypothesis is that there is no association between the nurses' demographic variables and management of aggression. A type one error would mean reaching the conclusion that there is a difference between groups of nurses when in fact there is no difference. T-Test was used to find the association between nurses' demographic characteristics of age and nursing qualification and interpersonal management of aggression. T-tests were used because of its ability to compare two mean scores of two different groups (Burns & Grove, 2005).

Results are summarised as Interpersonal management in table 4.10 and as traditional management in table 4.11 and then further narrated below each table. A p value is indicated where an association was found.

Table 4.10 Respondents demographics and their perception on interpersonal management of inpatient aggression.

Variable		Percentage mean score	N(70)	Test done	Overall p value	P Value between groups
Age	21-30	60.5714	28	One way ANNOVA	0.015	0.037 between 50+ and 31-40
	31-40	57.0476	21			
	41-50	63.6000	10			
	50+	63.8182	11			
Gender	Female	61.0638	48	T-test		
	Male	59.2174	23			
Nursing Qualification	RN	60.2800	50	T-Test		
	PRN	60.900	20			
Nursing experience	1-5yrs	59.200	25	One way ANNOVA	0.039	
	6-15yrs	59.1200	25			
	16+	63.7000	20			
Psychiatric Nursing experience	1-5 yrs	58.8205	39	One way ANOVA	0.025	0.25 between 1-5years and 16+
	6-15yrs	61.2000	20			
	16+	64.9091	11			
Highest qualification in nursing	Dip	60.439	41	One way ANOVA		
	Deg	61.000	16			
	Mas	68.000	1			
	AQN	59.166	12			
Encounters with aggression	Daily	59.0909	33	One way ANOVA		
	Weekly	62.5000	20			
	Monthly	60.0000	7			
	Rarely	61.0000	8			
	Never	62.0000	2			

Key: Dip- diploma; Deg- degree; Mas-masters; AQN-additional qualification in psychiatric nursing. The higher the mean score the more nurses are likely to use the interpersonal management approaches. P value given where statistical difference was found.

4.6.1 Association of respondents ages and interpersonal management of aggression

There is variation in the mean scores of the nurses in the categories of different age groups. 50+ age group scored a mean of 63.81; 41-50 age group scored 63.60; 21-30 age group scored 60.57 and 31-40 age group scored 57.05 mean percentages. The higher the mean scores is indicative of the more use of the interpersonal management of inpatient aggression. Age and interpersonal management were significantly associated at 0.015 at 0.015 confidence level. The location of the significant was at age 50+ years and 31-40 years.

4.6.2 Association of respondents gender and interpersonal management of aggression

There was a difference in the mean scores of females and males in the interpersonal management of aggression. The higher mean score indicated a greater use of interpersonal management strategies for aggression.

The female respondents had a higher mean score (61.0638) than the males (59.2174). This suggests that women respondents agreed more with interpersonal management of aggression than the male respondents. More men (39%) than women (27%) fell within the age group of 31-40 years which was least group to be found using the interpersonal management of aggression when age was associated with the use of interpersonal management. Even though the results show a difference in mean scores of female and males, a statistical significance was not found between gender and interpersonal management of aggression.

4.6.3 Association of the respondents nursing qualification and interpersonal management of aggression

The mean score of registered nurses was found to be 60.2800 and that of the psychiatric registered nurses was 60.9000. There was no significant difference noted in the mean scores and the t-test results indicated no association between nursing qualification and perceptions of the interpersonal management of aggression (p value of 0.73). The results reveal that nursing qualification was not associated with their agreement with statements on the use of interpersonal management.

4.6.4 Association of the respondents nursing experience and interpersonal management of aggression

The results of the respondents in table 4.10 reflects that nurses in the age category of 16+ years nursing experience agreed more with the interpersonal management of aggression than the other nurses in the category of 1-5 years and 6-15 years of nursing experiences as indicated by a high mean score of 63.7000. There is no significant difference in the use of interpersonal management of aggression between the nursing experience groups 1-5 years and 6-15 years as shown by the mean scores of 59.2000 and 59.1200. The age and perception of interpersonal management was found to be significant as 0.039 overall. The location of the significance could not be located within group.

4.6.5 Association of respondents psychiatric nursing experience and interpersonal management of aggression

Respondents in category 16+ of psychiatric nursing experience agreed more with the interpersonal management of aggression (mean score of 64.90) than those in categories 6-15 years (mean score of (61.200) and those in category 1-5 years of psychiatric nursing experience (mean score 58.82). The higher mean score indicates greater use of interpersonal strategies in the management of inpatient aggression. The data suggests that nurses with more experience in psychiatric nursing (16+) use more interpersonal management strategies for aggression(64.90) than those with 6-55 years (mean score 61.20) put in brackets and 1-6 years (mean score of 58.82) experience in psychiatric nursing. It is also suggestive that nurses in 6-15 years of psychiatric nursing experience use more interpersonal management strategies than those in 1-5 years of psychiatric nursing experience. Psychiatric nursing experience and interpersonal management was found to be significantly associated at 0.025. The location was 16+ and 1-5 years of psychiatric nursing experience.

4.6.6 Association of nurses highest qualification and interpersonal management of aggression

Results in table 4.10 reflects that a high mean score was found for the one respondent who had a masters degree with a mean score of 68.0000, followed by a score of 61.0000 for those who had a degree in nursing. The diploma in nursing holders followed with a mean score of 60.439 and lastly those with an additional qualification had a low mean score of 59.1667. The results were not found to be statistically significant.

4.6.7 Association of the respondents encounters with inpatient aggression and interpersonal management of aggression

Table 4.10 shows that there is a slight variation in the mean scores of respondents on the encounters with aggression and management of aggression. Respondents who said they encountered aggression every week had a high mean score of 62.5000, followed by those who said that never encountered aggression with a mean score of 62.000. Those who said they encountered aggression every day had the lowest score of 59.0909. The association between encounter with aggression and interpersonal management of aggression was not significant with p value of 0.518.

4.6.8 Association of the respondents and traditional management of aggression

The respondents' demographic characteristics are summarised in the table below and they are further narrated beneath the table. P value was not given as no single statistical significance was found between the demographic characteristics of the study and traditional management.

Table 4.11 Respondents demographics and their perception on traditional management of inpatient aggression.

Variable		Percentage	N	Test done
Age	21-30 years	79.46	28	One way ANNOVA
	31-40 years	78.86	22	
	41-50 years	85.50	10	
	50+	84.09	11	
Gender	Female	83.02	48	T-tests
	Male	76.30	23	
Nursing qualification	Registered nurse	80.49	51	T-tests
	Psychiatric registered nurse	81.75	20	
Nursing experience	1-5 years	78.46		One way ANNOVA
	6-15 years	82.00		
	16+	82.50		
Psychiatric nursing experience	1-5 years	71.38	26	One way ANNOVA
	1-6 years	83.75	25	
	16+	80.90	20	
Highest nursing qualification		80.59	42	One way ANNOVA
		81.56	16	
		80.00	1	
		80.83	12	
Encounters with aggression	Daily	79.41	34	One way ANNOVA
	Every week	78.75	20	
	Every month	87.14	7	
	Rarely	86.86	8	
	Never	80.00	2	

Key: p values of no statistical significance were not found except for gender at 0.022

4.6.9 Association of respondents' ages and traditional management of aggression

There is a difference in mean percentage of respondents in the categories of age groups. 41-50 years age group scored mean score of 85.50; 50+ age group scored mean of 84.09; 21-30 years age group scored mean of 79.46 and the 31-40 age group scored mean of 78.86. A high mean indicate less use traditional methods in managing inpatient aggression. Age and traditional management were not associated as shown by high p value of 0.328.

4.6.10 Association of respondents' gender and traditional management of inpatient aggression.

A difference was noted in the mean scores of female and males. Female respondents scored 83.02 percents mean score while their mean counterpart scored 76.30. The higher the mean score the less of traditional methods in managing inpatient aggression. The results are suggestive that female nurses were less likely to view traditional methods as the best than the male nurses. Gender and traditional management of aggression were associated at p value of 0.022.

4.6.11 Association between nursing qualification and traditional management of aggression.

Registered psychiatric nurses scored a mean of 81.75 while registered nurses scored a mean of 80.49. A higher mean indicate less use of the traditional methods of treatment. There was no significance between nursing qualification and traditional management of aggression (p value of 0.886).

4.6.12 Association between nursing experience and traditional management of in-patient aggression

There is a difference in the mean scores of respondents' nursing experiences. Respondents in the nursing experience category 16+ scored more than other respondents (mean score of

82.50); 6-15 years scored mean of 82.00 while 1-5 years group scored mean of 78.46. The higher the mean is indicative of less use of the traditional management. The results show that respondents in the nursing experience category of 16+ agreed less with the statement on the views relating to the traditional management of aggression than those in category of 6-15 years and 1-5 years. The nursing experience category of 6-15 years also disagreed with the statements on the use of traditional methods more than those in the 1-5 years category. Even though there was difference in mean scores, nursing experience and traditional management were not statistically associated as shown by p value of 0.425.

4.6.13 Association between psychiatric nursing experience and traditional management of aggression

A difference was found in the mean scores of psychiatric nursing experience. 6-15 years category scored a mean of 83.75, 16+ category scored mean of 80.91 and the 1-5 years category scored mean of was 71.38. The higher the mean score is less indicative of agreement with the statements on the use of traditional management of aggression. The results indicate that nurses in category 6-15 years of experience agreed less with the use of traditional methods than those in 16+ and 1-5 years category. Those in 16+ psychiatric nursing experience category agreed less with the statements on traditional methods than those in 1-5 years category. There was no statistical significance in the psychiatric nursing experience and traditional management of aggression (p value of 0.396).

4.6.14 Association of nurses encounters with aggression and traditional management of in-patient aggression.

Respondents who said they encountered aggression every month had a high mean score of 87.14; those who said they rarely encountered aggression scored mean of 86.88; respondents who said they never encountered inpatient aggression scored mean of 80.00; those who encountered aggression every week scored mean of 79.41 and lastly those who said they encountered aggression every week had a low mean score of 78.75. Encounter with inpatient aggression was not associated with traditional management of aggression (p value of 0.254).

4.6.15 Association of highest nursing qualification and traditional inpatient management of in-patient aggression

The results in table 4.11 show that high mean scores were found for respondents with a degree in nursing (mean score of 81.56); additional qualification in psychiatric nursing (mean score of 80.833); diploma in nursing (mean score of 80.59) and lastly, with a masters qualification (mean score of 80.00). The results were not found to be statistically significant. Nurses' highest qualification was not a predictor of how they view the traditional methods of treatment.

4.6.16 Association of perception and management of aggression (both traditional and interpersonal)

A Pearson's correlation coefficient test was done to find an association between perception and interpersonal management of aggression. The perception of aggression scores were divided into two scores. The aggression perception score 1 was developed from the first six statements of the Perception of Aggression Scale (POAS) scale which view aggression as a negative phenomenon. The perception score 2 was developed from the last six items which view aggression as a positive phenomenon. Generally there was no correlation between perception and management of aggression scores. Table 4.12 illustrate the results and these are narratively presented below.

Aggression perception 1 (aggression as dysfunctional) was significantly correlated with aggression perception 2 (aggression as functional) at -.312 at 0.01 confidence level. Aggression perception1 score was significantly associated with the use of interpersonal management strategies with a correlation score p value of 0.255 at a 0.05 confidence level. Even though there was a correlation between aggression perception 1 and interpersonal management of aggression with p value of (0.255) , the number is closer to zero than to 1 which suggests that aggression perception 1 (aggression as dysfunctional) is not a predictor of the use of interpersonal management strategies. There was no correlation at all between aggression perception 2 and the interpersonal management of aggression.

Table 4.12 Perception of respondents on inpatient aggression and management

		Aggression perception 1	Aggression perception 2	Management score %
Aggression perception 1	Pearson Correlation	1	-.312(**)	.255(*)
	Sig. (2-tailed)		.008	.033
	N	71	71	70
Aggression perception 2	Pearson Correlation	-.312(**)	1	-.113
	Sig. (2-tailed)	.008		.354
	N	71	71	70
Management score %	Pearson Correlation	.255(*)	-.113	1
	Sig. (2-tailed)	.033	.354	
	N	70	70	70

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

4.6.17 Association between perception and interpersonal management of inpatient aggression

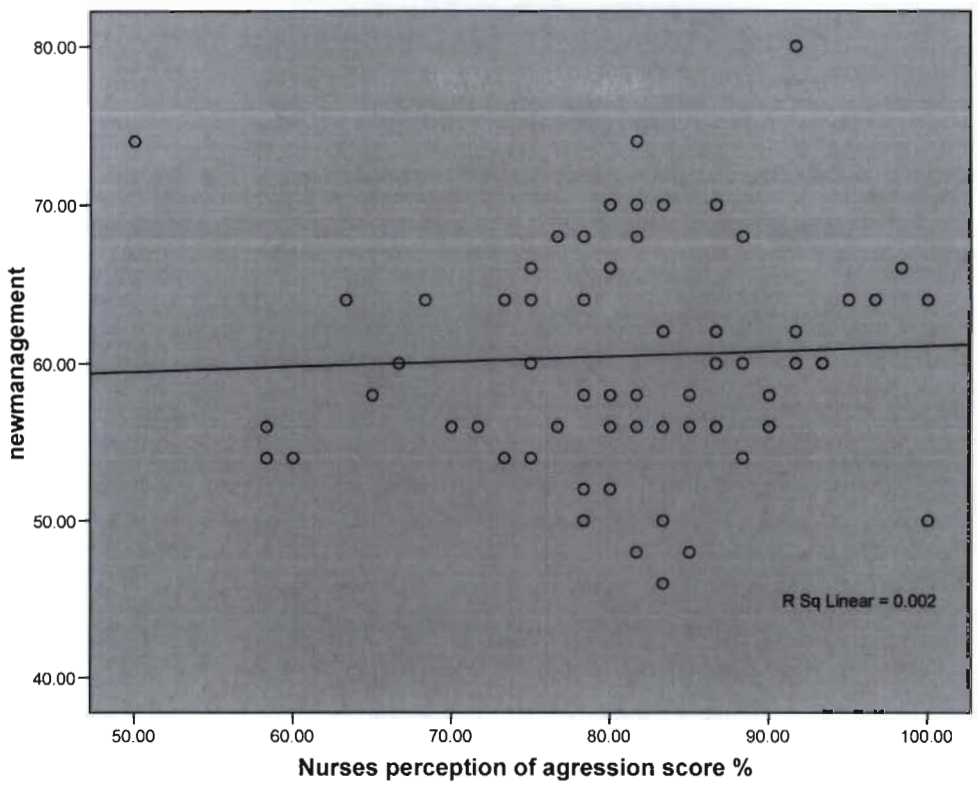
Pearson's correlation coefficient (r) was used to find the association between nurses' perceptions on the cause of aggression and management of aggression and perception and management of aggression table 4.13 show the associations between perception both (perception 1 or negative and perception 2 or positive). Interpersonal management was not associated with perception of aggression as negative and positive respectively. Interpersonal management was positively associated with interpersonal traditional management at 0.249 at 0.05 confidence level. The findings are illustrated by a scatter plot (fig 4.5). The scatter plot shows that a horizontal line managed to link together only two scores while the rest are scattered around. This shows a weak association between respondents' perception and interpersonal management of aggression. If there was a strong association between perception and interpersonal management of inpatient aggression the horizontal line would have connected many scores together. Therefore a flat line crosses very few scores signifying a very weak association of perception and interpersonal management of aggression.

Table 4.13 Respondents association between perception of nurses and interpersonal management

		Aggression perception 1	Aggression perception 2	Old management	New management
Aggression perception 1	Pearson Correlation	1	-.312(**)	.329(**)	.082
	Sig. (2-tailed)		.008	.005	.502
	N	71	71	71	70
Aggression perception 2	Pearson Correlation	-.312(**)	1	-.102	-.005
	Sig. (2-tailed)	.008		.398	.965
	N	71	71	71	70
Old management	Pearson Correlation	.329(**)	-.102	1	.249(*)
	Sig. (2-tailed)	.005	.398		.038
	N	71	71	71	70
New management	Pearson Correlation	.082	-.005	.249(*)	1
	Sig. (2-tailed)	.502	.965	.038	
	N	70	70	70	70

** Correlation is significant at the 0.01 level (2-tailed). * Correlation is significant at the 0.05 level (2-tailed).

Figure 4.5 Scatter plot of perception and interpersonal management of aggression



4.6.18 Association of perception of the nurses on the cause and interpersonal management of in-patient aggression

Pearson's correlation coefficient (r) was used to find the association between nurses' perceptions on the cause of aggression and management of aggression and perception and management of aggression.

Table 4.14 Nurses perception on the cause of aggression and interpersonal management of aggression

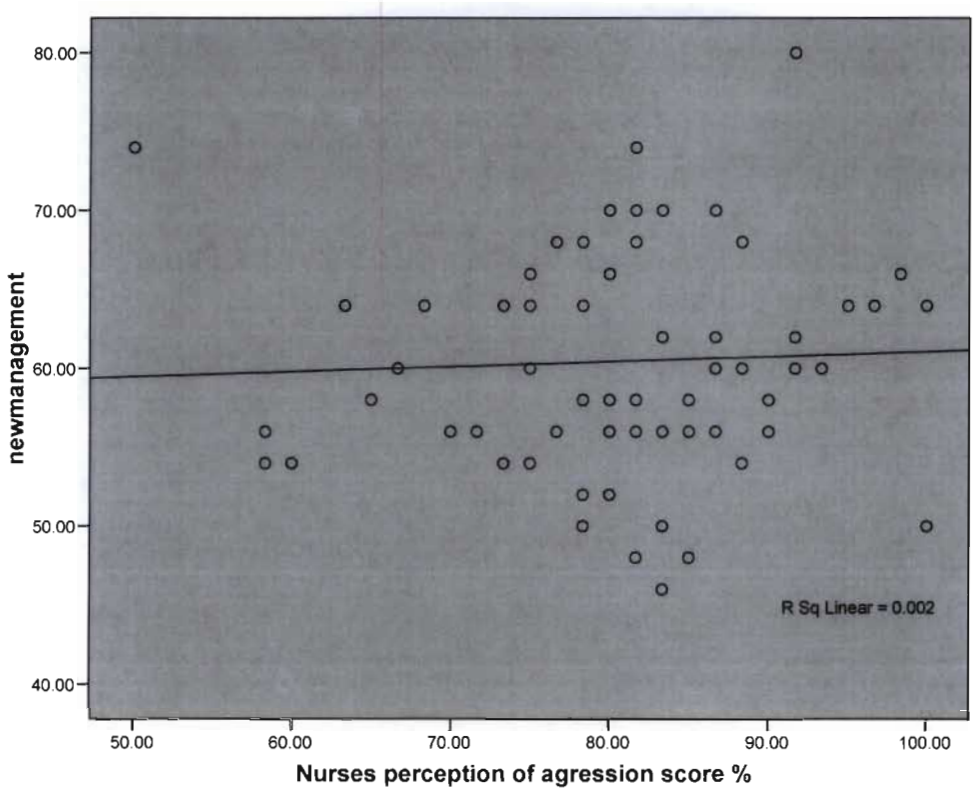
		Interpersonal management	Internal causes of aggression score %	External causes of aggression score %	Situational causes of aggression score %
New management	Pearson Correlation	1	-.069	.003	-.227
	Sig. (2-tailed)		.572	.980	.058
	N	70	70	70	70
Internal causes of aggression score %	Pearson Correlation	-.069	1	.380(**)	-.036
	Sig. (2-tailed)	.572		.001	.768
	N	70	71	71	71
External causes of aggression score %	Pearson Correlation	.003	.380(**)	1	-.283(*)
	Sig. (2-tailed)	.980	.001		.017
	N	70	71	71	71
Situational causes of aggression score %	Pearson Correlation	-.227	-.036	-.283(*)	1
	Sig. (2-tailed)	.058	.768	.017	
	N	70	71	71	71

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Patient-related (internal) causes of aggression and environmental (external) causes of aggression were associated at 0.380 at a confidence level of 0.01. Interactional (situational causes and environmental or external causes were associated at -0.283 at 0.05 confidence level. Overall there was an association between perception of the causes of aggression and interpersonal management with p value 0.048. The number 0.048 is closer to zero than to one. Perceptions of the causes of aggression is therefore, not seen as the predictor for using interpersonal management strategies.

Figure 4.6 Scatter plot of perception on the cause and management of aggression



4.6.19 Association of perception and traditional management of in-patient aggression

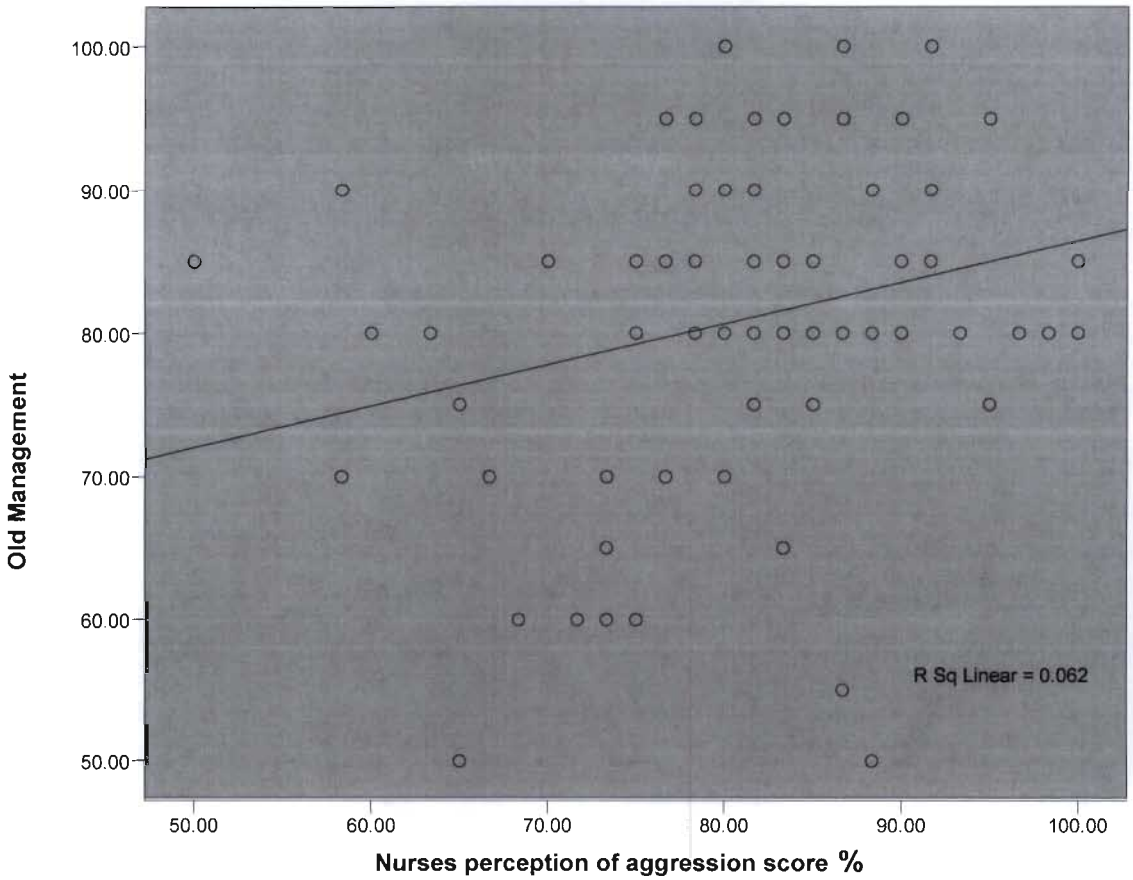
Traditional management was positively associated with aggression perception 1 (p value of 0.329) at confidence level of 0.01 (Table 4.13). There was no association between perception aggression2 and traditional management. Generally traditional management and aggression perception was significantly associated even though the association was weak at 0.248 with a confidence level of 0.05. This shows that the number 0.248 is closer to 0 than to 1. So this means the way the nurse perceives aggression will not be a predictor of the management that they will use. The results are further elaborated by the scatter graph figure 4.6 which shows only one score being crossed by a straight line while the other scores are scattered every where.

Table 4.15 Respondents association of traditional management and nurses perception of aggression

		Old management	Nurses perception of aggression score %
Old management	Pearson Correlation	1	.248(*)
	Sig. (2-tailed)		.037
	N	71	71
Nurses perception of aggression score %	Pearson Correlation	.248(*)	1
	Sig. (2-tailed)	.037	
	N	71	71

* Correlation is significant at the 0.05 level (2-tailed).

Figure 4.7 Scatter graph showing the association between nurses perception and traditional management of aggression



4.6.20 Association of nurses perceptions of the cause of aggression and traditional management strategies

Patient-related (internal) causes of aggression and environmental (external) causes of aggression were associated at 0.380 at a confidence level of 0.01. Interactional (situational causes and environmental or external causes were associated at -0.283 at 0.05 confidence level. Overall there was an association between perception of the causes of aggression and interpersonal management with p value 0.048. Traditional management was positively associated with patient (internal) causes of aggression at 0.319 at 0.05 confidence level.

Overall there was an association between perception of the causes of aggression and general (both traditional and interpersonal) management with p value 0.048. The number 0.048 is closer to zero than to one. Perceptions of the causes of aggression are therefore not seen as the predictor for using interpersonal management strategies. The findings are illustrated by a scatter plot (please see Fig 4.7. The scatter plot shows that only two scores (80.00) are linked while the rest are scattered around. This shows a weak association between the respondents' perception on the cause of inpatient aggression and management of aggression. If there was a strong association between perception on the cause and management of inpatient aggression the horizontal line would have connected many scores together. Therefore a flat line crosses very few scores signifies a very weak association.

Table 4.16 Respondents association between perception on the cause and traditional management of aggression

		Old management	Internal causes of aggression score %	External causes of aggression score %	Situational causes of aggression score %
Old management	Pearson Correlation	1	.319(**)	.201	-.003
	Sig. (2-tailed)		.007	.092	.978
	N	71	71	71	71
Internal causes of aggression score %	Pearson Correlation	.319(**)	1	.380(**)	-.036
	Sig. (2-tailed)	.007		.001	.768
	N	71	71	71	71
External causes of aggression score %	Pearson Correlation	.201	.380(**)	1	-.283(*)
	Sig. (2-tailed)	.092	.001		.017
	N	71	71	71	71
Situational causes of aggression score %	Pearson Correlation	-.003	-.036	-.283(*)	1
	Sig. (2-tailed)	.978	.768	.017	
	N	71	71	71	71

* Correlation is significant at the 0.05 level (2-tailed). ** Correlation is significant at the 0.01 level (2-tailed).

4.7 Conclusion

More females than males participated in this study. Generally the majority of the respondents fell in the age categories 1-5 years of age and 31-40 years with more males than females falling in the age group 21-30 years (more than 50% of the entire male respondents). Female respondents were found to have more nursing and psychiatric nursing experience than the male respondents.

Generally nurses perceived aggression as either positive or negative even though they agreed more with aggression as being negative. Respondents agreed with the factors about the perceptions of the cause of aggression as internal, external and interactional. Nurses agreed more with the statements relating to the use of traditional methods in the management (mean score 80.85) of aggression than those relating to use of the interpersonal management (mean percentage score of 60.5).

No association was found between the traditional management and the nurses' demographic variables of age, nursing qualification, nursing experience, psychiatric nursing experience and encounters with inpatient aggression. Gender was significantly associated with traditional management of inpatient aggression at p value of 0.022. A weak positive association was found for perception of aggression and traditional management (p value of 0.248 at confidence level of 0.05) and for perception on the internal cause of aggression and traditional management (p value of 0.380) at confidence level of 0.01. The use of traditional management strategies was positively associated with patient (internal) causes of aggression at 0.319 at a 0.05 confidence level.

An association was found between age and the interpersonal management of aggression with a p value of 0.015. The nursing experience and psychiatric nursing experience a nurse had were significantly associated with the interpersonal management of aggression (p value of 0.039 and 0.025). Gender difference was also noted to vary when associated with interpersonal management of aggression even though it was not statistically significant.

Chapter five will discuss the major findings of the study, recommendations and limitations of the study.

Chapter Five

Discussion of major results, recommendations, limitations and conclusion

5.1 Introduction

A positivistic, descriptive, exploratory and non-experimental design was used to achieve the purpose and objectives of the study (Polit & Beck, 2008) (see page 9). A questionnaire comprising two internationally recognised and validated questionnaires was used to collect data from registered nurses working in the Lobatse psychiatric hospital (Aderhalden et al., 2002; Duxbury, 2003). The entire registered nurse population of the hospital (N =121). The sample size was calculated and found to be 96 but non response to the hand delivered questionnaires led to sample size of n=71 (58.7% of the entire population). Participation in this study was voluntary and all the necessary measures to safeguard the integrity of the study and the respondents' anonymity and integrity were taken (Chapter 3 section 3.8 and 3.10). Thereafter, data were collected and the results were analysed and presented in chapter 4. This final chapter concludes the study with a discussion of the findings, the limitations of the study and recommendations for nursing research, practice, education and organisational development.

5.2 Discussion

From the perspective of the conceptual framework, nurses' perceptions of the inpatient episode of aggression and their subsequent management strategies are mediated by a range of personal characteristics (demographic variables of age, gender, education and previous experience with aggression) and his/her views on the causes of aggression. The discussion is organised around the conceptual framework and indirectly, the study objectives, and supported and/or disconfirmed by different studies (see chapter 1 section 1.6 for the conceptual framework).

5.2.1 Description of the factors mediating nurses perceptions of aggression and their management strategies

Mediating factors internal to the nurse are the demographic variables of gender, age, nursing qualifications, nursing experience and finally, encounters with inpatient aggression. The major findings with respect to each variable will be highlighted, followed by an integrating summary of these findings and the extent to which these findings are similar or dissimilar to those of similar studies.

5.2.1.1 Nurse-related mediating demographic factors

The sample was predominantly female (67.6%) with males accounting for 32.4% of the size. The gender distribution for this sample is similar to that of the hospital with more women (71%) than men (29%) accounting for the total size. The mean age of the sample was 36 years, with almost two-thirds of the sample falling on the mean (5.6%), over half (57.8%) below the mean and just under one-third (36.3%) occurring above this mean age. While women were distributed across all the age categories, the majority of the male population (91%) were under 40 years of age with a significant portion of this group (50%) between the ages of 21-30. Although the entire sample were registered nurses, only just over one-quarter had an additional qualification in psychiatric nursing (28.1%). Given the problem with the data about the type of education (diploma and/or degree) outlined in chapter four, section 4.2.3, the only assumption that can be made here is that the majority of the sample (66%) were diploma qualified.

The entire sample has years of both general nursing and psychiatric nursing experience. Although over half of the sample has between 1-5 years experience in both nursing and psychiatric nursing, two-thirds of the total male sample is clustered within this lower range while the women are more evenly distributed across the entire experience range with just under half of their total falling above the 6 year range.

Aggression is a frequently occurring experience for this sample. Just under half of the entire sample (48%) said they experience aggression on a daily basis while 28% said they encountered it on weekly basis. 14% of the sample rarely or never encountered aggression,

with 10% encountering it on a monthly basis. These findings suggest that this sample encounters in-patient aggression more frequently than not.

5.2.1.1.1 Synthesis discussion of nurse-related demographic variables

These nurse-related demographic factor findings suggest that while there are more women than men in the sample, the majority of the men are generally younger and therefore less experienced in terms of years of psychiatric nursing, than the women. Increasingly more men are entering nursing (Orlovsky, 2006; Williams, 2001) and this might account for the majority of the men falling into the younger age category as compared to the women who are reasonably distributed across the age ranges. These findings are also consistent with global trends in nursing where over the last decade, the number of men entering this historically female-oriented profession, has increased (Cutcliffe & Ward, 2006; Marks, 2007; Orlovsky, 2006; Williams, 2001). Furthermore, the differential response rate between the men (66%) and women (81.6%) in this sample has been found to occur in other studies (Hans et al., 2006; Nakahira et al., 2008; O'Connel et al., 2000). These authors found that female nurses tend to respond more readily to requests for data than do their male counterparts. Why this might be the case has not been established although these authors and others authors have speculated that the sensitive nature of the topic might account in part for their non-participation Dillman, Sinclair & Clark (as cited in Senn, Verberg, Desmarais & Wood, 2000).

Although the entire sample has some degree of experience in working in a psychiatric setting, the majority have no formal training in the speciality of psychiatric nursing and hence, in aggression management. This study finding suggests that this psychiatric hospital is predominantly staffed by nurses who are not formally trained in the specialty but develop some kind of "know-how" in the discipline and aggression management through experience. It is possible that the kind of "know-how" with respect to aggression management being developed by these nurses is the use of traditional rather than interpersonal strategies for managing episodes of in-patient aggression. Duxbury's (1999) finding suggest that general nurses without psychiatric training model their aggression management strategies on psychiatric nurses who in turn, generally favour more restrictive methods might be considered an outcome of nurses not being formally trained in psychiatric nursing and therefore, in aggression management.

Limited formal training in psychiatric nursing might account in part, for the frequency with which this sample reported experiencing in-patient aggression. The literature suggests that nurses do encounter inpatient aggression on a regular basis and that the extent of this exposure varies from study to study. For example, Lam (2002) found that 39.5% of the nurses in their Australian sample reported encountering inpatient aggression at least on a daily or weekly basis. On the other hand, Jonker et al. (2008) found that nurses in Netherlands reported rarely or sometimes being confronted with inpatient aggression. However, these authors suggest that this reporting is influenced by the lack of clear incident reporting procedures, different understandings about what constitutes aggression and aggressive behaviour and the belief that aggression is simply a part of the daily work of the psychiatric nurse (Foster et al., 2007; Jonker et al., 2008; Lawoko et al., 2004; Rippon 2000).

5.2.2 Nurses perceptions of aggression

There was an overall agreement with the perception of aggression as always negative and as an action of physical violence of a patient against a nurse (81.73%). For instance 93.2% of the respondents agreed with the statement that aggression is hurting others mentally or physically and 91.2% agreed aggression is an unpleasant and repulsive behaviour. Almost two thirds of the nurses also disagreed with the functional view of aggression 59.4%. 31.6% of the respondents agreed with the statements relating to the view of aggression as a start of a positive nurse-patient relationship while 68.4% disagreed with the statement, 39.2% agreed with the statement that aggression is a way to protect yourself, while 61.8% disagreed.

The nurses in the current study reported primarily negative and some positive perception towards inpatient aggression although the majority of the nurses perceived aggression as dysfunctional and undesirable and disagreed with the functional perspectives of aggression. In other words, most nurses regarded it as a repulsive behaviour signifying the intent to dominate and/or to harm and rather than a form of communication about the internal state of the patient and his or her need for emotional containment and therapeutic engagement with the nurse.

Previous studies conducted in European countries and Japan have also suggested that nurses have both negative and positive perception towards inpatient aggression even though

different descriptions of the behaviour were used. Palmstierna and Barredal (2000) found that nurses have both negative and positive perception towards inpatient aggression even though a more negative view was dominant. Nurses also agreed more with the statements that aggression is an unpleasant and repulsive behaviour and aggression is unnecessary and unacceptable. Jansen et al. (2006) in their study found that nurses view inpatient aggression as destructive and as well as positive. Finnema et al. (2004) found that nurses hold both positive and negative perceptions about inpatient aggression and the negative view were dominant. A negative perception towards aggression was found in male nurses in a study by Palmstierna and Barredal (2006). The method nurses choose in managing aggression is highly likely to reflect the perception a nurse hold towards inpatient aggression and the use of traditional methods is likely to indicate a negative perception as is the case in this study (Jansen et al., 2006).

5.2.3 Nurse perceptions of the causes of in-patient aggression

Nurses in this study agreed with all the three perceptions on internal, external and situational/ interactional model cause of in-patient aggression. From the internal perspective nurses agreed that patients are aggressive because they are ill (72%) and (57.2%) of the respondents disagreed with the statement that aggressive patients would calm down when left alone. Nurses saw the environment as the cause of inpatient aggression with the majority of them agreeing more with the statements that patients would be less aggressive if the physical environments were different (72%) and that a restrictive environment contributes to aggression (68%). There was a weak agreement with the statement that said patients become aggressive because staff do not listen to them with a borderline mean percentage agreement score of 57.4%. Finally from the situational perspective cause, 74% respondents agreed with the statements that said improved communication can reduce the incidences of patient aggression, 69% agreed that other people make patients violent. Just above half (56%) of the respondents agreed with the statement that said patients become aggressive because staff do not listen. Overall, nurses agreed equally with the perception on the internal (68.0%), external (66.0%) and situational interactional (66.7%) causes of inpatient aggression.

Multiple causative factors of inpatient aggression have also been demonstrated in other studies on the causes of inpatient aggression (Duxbury & Whittington, 2005; Finnemma et

al., 1994; Ilkiw-Lavalle et al., 2003). These authors found that situational factors, factors external to the patients and the patient's illness all interact actively in contributing to the occurrence of inpatient aggression. Although nurses in the current study agreed that other people make patient aggressive, nurses from the Duxbury et al. (2008) study had different views about this statement. The Swiss nurses disagreed with this view while the UK nurses were not sure whether other people make patients angry. Even though the Swiss nurses in Duxbury et al.'s study (2008) did not agree more with the situational cause of inpatient aggression nurses in this study and other studies did agree with this model and do recognise their contribution to the occurrence of inpatient aggression (Duxbury & Whittington, 2005; Ilkiw-Lavale & Grenyer, 2003). The recognition of the multicausal factors of inpatient aggression by nurses should be a departing point of management of inpatient aggression. This is in line with Irwin (2006) when he suggested that patient's aggression does not occur in a vacuum and that understanding this may be a way forward in planning care in mental hospitals.

5.2.4 Nurses management strategies

Although the results of this study acknowledged multicausal factors of inpatient aggression the use of traditional management of aggression was still dominant in the study. Traditional methods of management of inpatient aggression were commonly and more frequently used (mean overall percentage score of 80.5%) than interpersonal management strategies of aggression (mean percentage score of 60.5%). In this study more than 80% of nurses agreed with the use of seclusion, medication and physical restraints with 72% agreeing that medication should be used more frequently. 83% of the respondents agreed that other approaches were used in the hospital, 71.2% agreed that alternative approaches could be used more frequently, 73.8% agreed that negotiation can be more effective in managing the patient and about 50% believed that medication can cause patient aggression and physical restraints is used more than necessary.

Nurses in this study preferred the traditional management of inpatient aggression over the interpersonal management. The nurses saw the use of medication, physical restraints and seclusion of the patients as the best strategies in the management of inpatient aggression. Although the dominance of the traditional management was well recognised in this study, nurses agreed that alternative methods of de-escalation and negotiation should be used.

The preference of traditional methods of aggression management is well recognised in literature (Duxbury & Whittington, 2005; Nakahira et al., 2008; Schermer, 2003). Duxbury et al. (2008) reported that nurse respondents in the UK and Switzerland in general preferred traditional management of inpatient aggression and one nurse in another study voiced that it is what has always been used (Duxbury & Whittington, 2005). Ilkiw-Lavalle and Grenyer (2003) also reported this over reliance on the traditional approach to management of inpatient aggression by nurses. Although over reliance on traditional methods is well demonstrated in the literature, respondents in this study as well as the Swiss and UK nurse in the study by Duxbury et al. (2008) agreed that negotiations and other alternatives could be more effective in the management of inpatient aggression. This is the attitude that should be encouraged as it is in line with the characteristics and qualities of a psychiatric nurse: good listener, good communication skills, patient, good interpersonal skills and showing interest in helping individuals (Uys & Middleton, 2004).

5.2.5 Associations between the nurses' demographic characteristics and interpersonal and traditional management of inpatient aggression

Interpersonal management is influenced by gender and age (0.15), nursing and psychiatric nursing experience (p value of 0.039 and 0.025) and the perception of aggression as dysfunctional, undesirable phenomenon (0.255). The use of traditional management of inpatient aggression was seen in the study to vary by nursing and psychiatric nursing qualification and gender. Male nurses in this study were more likely than female nurses to agree with the statements on the use of traditional methods of management (p value 0.022). The perception a nurse might have of inpatient aggression contributed to their agreement with the statement on the use of traditional methods. However those who agreed with the internal cause more were likely to agree with the traditional management of aggression (p value of 0.329)

The results indicated that the older nurses with more nursing and psychiatric nursing experience were more likely to agree more with the use of interpersonal management of aggression than the young and the inexperienced. Male nurses than female nurses in this study were more likely to agree with the use of traditional methods of management. There was a general association between traditional management of aggression and perception of

the cause of inpatient aggression and those in agreement with the internal cause of inpatient aggression were likely to agree with the traditional management of inpatient aggression.

The results of this study are consistent with other studies which found that youth and inexperience to have less of a mediating effect on nurses' responses to aggression than being older and more experienced (Cunningham, Connor, Miller, & Melloni, 2003; McKenna et al., 2003). Older well educated nurses with more nursing and psychiatric experience have been found to agree more with the use of interpersonal management of aggression than the young and the inexperienced (Holzworth & Wills, 1999; Jonker et al., 2008; Lowe et al., 2003). Jonker et al. (2008) suggest that this might be due to the ability of these nurses to recognise signs of violent behaviour earlier and intervene appropriately. Whittington et al. (2009) for example, found that the older staff seemed to strongly disapprove of the use of more coercive methods than younger and the inexperienced but they also observed that those who have used more traditional methods before tended to agree more with its use. The authors attributed this to the assumption that repetitive measures lead to personal mastery and to effect change there is likely to be resistance in most cases to avoid unpleasant feelings and disappointment (Whittington et al., 2009).

Male nurses in this study were more likely than their female counterparts to use the traditional management of inpatient aggression. Similar results were found in the study by Whittington et al. (2009) in which the male staff were found to prefer the use of more coercive methods in managing inpatient aggression. The authors questioned the gender differences in the nursing profession and made an assumption that probably hospitals staffed with more female nurses than males would results in the use of more interpersonal methods. The authors suggested that nurses seem to dissociate themselves from the caring and therapeutic values the profession is generally associated with. The other explanation may be that that male nurses than female nurses are more affected by inpatient aggression and therefore finding themselves in situations demanding them to act (Nijman et al., 2005). Again since male nurses are new recruits in nursing (Orlovsky, 2000) they are probably young and inexperienced to recognise and manage inpatient aggression objectively (Jonker et al., 2008)

This study found an association between general perception of aggression and inpatient aggression, the internal cause of aggression and traditional management of aggression. Other

studies have found the link between the perceptions nurses hold about aggression and the cause and the management of aggressive behaviour (Duxbury 2002; Jonker et al., 2008; Palmstierna & Barredal, 2006). Studies by Nakahira et al. (2008) and Jansen et al. (2006) suggests that nurses who appraise aggression as a functional and desirable behaviour resorted to the use of interpersonal methods more compared to those who perceived it as dysfunctional and unnecessary behaviour who resorted to the more use of more traditional and controlling approaches.

A link between negative perception and traditional management of aggression has been established in the literature (Palmstierna & Barredal, 2006; Whittington et al., 2009). This may offer an explanation as to why there is dominance in the use of traditional methods in this study generally as more nurses agreed with aggression as a negative and repulsive phenomenon. Even though nurses with negative perceptions have shown to use more traditional management of inpatient aggression, findings in Nakahira et al. (2008) indicated that nurses with negative attitudes were more prepared to talk to patients while nurses with positive attitudes preferred to use medication in managing inpatient aggression. The authors assumed that the nurses may not see medication as a coercive method of management.

The use of traditional management strategies was positively associated with patient (internal) causes of aggression. The results suggest that the view of respondents on the internal cause of aggression were somehow influential in their concurrence with traditional management of aggression. It has been found that the perception nurses have about which model of aggression causation is likely to influence their management of the behaviour (Duxbury, 2002; Whittington & Higgins, 2002). Studies point to the internal model (patient's illness) as the cause of aggression by patients in aggression literature (Duxbury & Whittington 2005; Ilkiw-Lavalle et al., 2003). The perception of nurses on the internal cause of inpatient of aggression is associated with the more use of traditional management as the best management in eliminating the behaviour (Duxbury, 2002; Foster et al., 2007). This may also account for the more biomedical orientation to the management of inpatient aggression which is reported in most studies which suggest if a nurse attribute the cause of inpatient aggression to the patient illness they will opt for methods of aggression reduction that aim at reducing that illness (Duxbury, 2002). A shift in this thinking has to occur as it has been shown that different factors interact to produce inpatient aggression. Therefore, a more complete package which is inclusive of risk management, communication skills, de-escalation,

negotiation skills while ensuring the safety of all involved when managing inpatient aggression is necessary (Delaney et al., 2001; Hahns et al., 2006; Jonker et al., 2008).

5.3 Recommendations of the study

A number of recommendations drawn from the study are presented to inform the following areas: clinical practice, nursing education, nursing management and nursing research.

5.3.1 Clinical practice

Nurses should see patient aggression as a way to start relationship but instead nurses most of the time view aggression as negative and unacceptable as in the case of this study. It is important to target the perception nurses have towards inpatient aggression as it is these perceptions that have been found to influence their management strategies. This can be done through assisting nurses in a workshop format, to explore and to uncover their own beliefs about aggression and its causes and to consider the implications the different perceptions have for subsequent management strategies and the quality of the nurse-patient encounter. For example, if perceptions of causes are closely associated with management strategies, transforming perceptions from aggression as dysfunctional and undesirable to functional and comprehensible, might transform the way in which nurses subsequently manage episodes. However, this workshop would have to be sensitively facilitated in a confidential and interpersonally safe environment since the effectiveness of this workshop is based on nurses "looking deep" within themselves to uncover and to talk about beliefs that may not be consistent with their personal philosophy, the institutional philosophy or that of psychiatric nursing. Furthermore, the effectiveness of such a transformational intervention is based on on-gong and sustained support for nurses in the process as well as opportunities for further professional education.

5.3.2 Nursing Education

More nurses in this study are registered diploma holders with no training in psychiatric nursing. There is great need for more nurses to be trained in mental health and more professionally developed as other researchers have found that the level of education and

qualification nurses have has a great influence on how they perceive and subsequently manage inpatient aggression (Jonker et al., 2008).

The training on aggression management should include a comprehensive package on: risk management, communication skills, use of de-escalation, use of medication and physical restraint objectively and therapeutically ensuring safety of every one involved. This can be done through formulation of aggression training manuals which include indicators of inpatient aggression and early prevention which will facilitate objective management of aggression as opposed to the current management of aggression which have been found to be reactive.

5.3.3 Nursing management

Nurses in this study regarded a restrictive environment as contributing to the occurrence of inpatient aggression. There is a great need for the environment to be restructured so that the patients can have their own space and privacy. The hospital had a capacity of only 180 beds but frequently it accommodates almost 282 patients and other are forced to sleep on the floor. An association has been made between inpatient aggression and overcrowding of patients in a mental hospital (Bradley et al., 2001; Wijk, 2006). It is also suggested a policy that says patients get separated according to the level of the presenting signs and symptoms of their illness be formulated. This is important as some patients get annoyed and become aggressive because they are put in the same place with other patients whom they believe are more mentally ill than they are. This study found that the young and inexperienced are more likely to use the more hash and traditional management of inpatient aggression. The hospital should make it a policy that all nurses posted to psychiatric wards following completion of their general nursing three year diploma in nursing be trained in aggression minimization with the aim of enlightening them on how to identify aggressors and to intervene appropriately and objectively ensuring safety of all. The aggression minimization programmes have been found to increase the knowledge, skills and confidence of nurses when managing aggressive patients (Ilkiw-Lavale, 2006). Further more, although not the focus on this study, debriefing following episodes of aggression with staff and patients is necessary to reduce the potential for post traumatic stress disorders. Debriefing should therefore be an aspect of comprehensive package.

5.3.4 Nursing research

Further research in the area of aggression is recommended to look at the perception of inpatient aggression from other health professionals and patients. A comparative study would highlight points of commonality and difference in the perceptions nurses, other health professionals and clients hold. This information could inform the content of aggression management training programmes as well as the content of client education programmes on aggression. There is also a need to explore the extent of aggression in other health settings on a large scale as well as the perceptions of all staff of patient aggression and the hospital policies on the problem of aggression as well as staff and patient safety. This is important as inpatient aggression has an impact on both the staff and patients' physical and mental well being.

5.4 Limitations of the study

Aggression and its management is a sensitive issue especially in the mental hospitals and therefore this might have affected participation in this study. Although this was the case 58% of the population took part in the study and this was considered adequate for the study and for statistical purposes.

The major limitations of the study emanated from the methodological issues. The sample size was determined by the response rate and those who volunteered to participate in the study. Although the response rate was good (58.7%), there is an element of subjectivity when the sample is used to represent the whole population. It is possible that those who had personal interest in the study responded and their views might be different from those who did not respond. Therefore generalization of the results for the whole hospital should be interpreted with caution.

Two combined self reporting questionnaires were used to collect data in this study. Questionnaires as a method of data collection are often criticized due to the lack of in depth information in areas of concern as it is impossible to determine or control the honesty of the answers and the seriousness with which the questionnaires were completed. Therefore the use of other methods for example interviews could have been employed to enhance the quality of the self report data through probing as they don't allow the 'I don't know' type of responses

(Polit & Beck, 2008). However due to the sensitivity of topic, self reporting instrument as a method of data collection were deemed appropriate as it helped to maintain anonymity and nurses were free to answer them (Burns & Grove, 2005).

Lastly there was lack of willingness to participate in the study. It is possible that the nurses who were reluctant to participate considered their work more important than the study while others could have been concerned about what would happen to the data and the possibility of individual persons being linked to the data. However, great care was taken to protect the anonymity of the participants. It should be noted that some months prior to data collection in the hospital the Voice online Newspaper Botswana (Baitse, 2009 p. 1) made allegations that pointed at the hospital staff as contributing to the cause of the deaths in the hospital. The paper made allegations that restraining the patients caused their injuries and sometimes death of patients'. This could have resulted in some staff refraining from participating in the study.

Despite the limitations of the study the results of the study could be used in the development of aggression management programmes and policies that are informed by local research findings. The major strength of this study is that it provides research into areas which have been severely limited and neglected in Botswana. This research also serves as a foundation for further research in Botswana in the area of aggression and its management in the hospital settings.

5.5 Summary and conclusion

The study has provided some insight into the nurses' perceptions of aggression, its causes and management in the institution of study.

Inpatient aggression poses a clinical problem for both the nurses and patients globally. Nurses in this study demonstrated that all three models on the cause of aggression interact actively in producing inpatient aggression. Although this was their view, the more traditionally oriented perspective of management dominated in this study. This may have been reinforced or caused by the generally negative perceptions towards inpatient aggression, the influence of both the lack of experience in nursing and psychiatric nursing experience, their perception on the cause and the gender differences of nurses in this study. Although a negative view of aggression dominated, some nurses had a positive view of it. Many nurses also agreed that

negotiation and alternatives methods to management of inpatient aggression could be used more effectively in the hospital. To this end, a number of recommendations were made (from p. 78 to p. 80). These recommendations for nursing practice, education, management and research are cantered around further and targeted education and training in mental health and specifically, in the comprehensive management of aggression which includes communication skills, use of de-escalation, use of medication and cautious physical restraint.

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Appendix 1

Table 1. of variables

Study title and author/s	Variables used in the study	Instrument used	Statistical tests
The management of Aggression and Violence Attitude Scale (MAVAS): a cross sectional survey Duxbury et al., (2008)	• age • years of experience • gender	MAVAS	• T –tests
Perception of aggression among psychiatric nurses in Switzerland Abderhalden et al., (2002)	• gender • age • professional qualification • post diploma in education nursing • experience with violence	POAS	• ANOVA test • Krusskal-Wallis • Persons correlation • Multivariate analysis of covariance (MANCOVA)
An evaluation of staff and patient views of and strategies employed to manage inpatient aggression and violence on one mental health unit: a pluralistic design Duxbury (2002)	Staff variables • gender • both qualified and unqualified • level of experience patient variables • patients admitted with different diagnosis • length of stay • number of admissions	MAVAS MSOAS	• Chi square • t-tests • Spearman's rho
The perception of aggression by nurses: psychometric scale testing and derivation of short instrument. Needham et al., (2004)	• age • gender • nursing experience	POAS	• test retest using Spearman –rank correlation
The effects of training courses on the mental health nurse attitudes on the reason on the reason of patient aggression and its management. Hans et al., (2006)	• training in aggression • gender • educational level • post education • professional experience • management of aggression	MAVAS	• Chi –square • Mann-Whitney test
Causes and management of patient aggression and violence : Staff and patient perspectives Duxbury and Whittington, (2005)	• causes of aggression • management of aggression	MAVAS	• MAVAS-T- test to compare patient and staff vies
Psychiatric nurses attitude towards inpatient aggression: A preliminary report on the development of Attitude Towards Aggression Scale (ATAS) (Jansen et al., 2006)	Attitudes socio-demographic variables of nurses • gender • level of education • level of experience • positions of the ward • contractual status • ward type	ATAS	• Factor analysis for skewed data Kruskall-Wallis test, Mann-Whitney test, Bonferonni)
Attitudes towards dementia related aggression among staff in Japanese aged care settings (Nakahira et al., (2008)	• attitude • management • level of education • position • employment status • level of experience	ATAS	• factor analysis • Correlation • Pearson – t-test to compare mean factor scores and respondents characteristics

Appendix 2 Questionnaire

Nurses' perspectives on aggression in the psychiatric in-patient environment

Thank you for taking the time to complete this questionnaire. Once you have completed it, please seal it together with the consent statement in the self-addressed envelope and keep it until the researcher returns to collect it from you.

- This questionnaire is in two parts. The first part (section A) asks you for basic demographic data. The second part (section B) gives you a list of 39 statements and asks you to place a cross in the box that best represents your agreement or disagreement with each statement about aggression.
- **Aggression is defined here as any incidence in which a person is verbally abused, threatened or assaulted in circumstances related to their work.**
- It will take about 20 minutes of your time to complete the questionnaire.

SECTION A: Demographic Data

a. Please tick the appropriate box for your gender:

Female	Male
1	2

b. Please indicate your age in years: _____

c. Please indicate your total number of years of nursing experience: _____

d. Please indicate your number of months & years working in a psychiatric hospital:

Months: _____Years: _____

e. Please tick AS MANY BOXES as describe the ward you presently working:

Secure ward	Male ward	Female ward	Open	Long-term	Acute	Admission
1	2	3	4	5	6	7

f. Please tick your present nursing qualifications:

Registered nurse	Psychiatric registered nurse
1	2

g. Please tick your highest nursing qualification:

Diploma in nursing	Degree in nursing	Masters in nursing	Additional qualification in psychiatric nursing.
1	2	3	4

h. Please tick how often you encounter violence in your work setting?

Daily	Every week	Every month	Rarely	Never
1	2	3	4	5

Section B: Views on aggression

The following list of 39 statements asks you to agree or disagree by ticking a number in the column next to the item that best represents your choice. Depending on how strongly you feel about the statement will influence the position of the number you tick. The more you agree with the statement the closer your number choice will be the strongly agree statement. On the other hand, the more you disagree with the statement the closer your number choice will be to the strongly statement. If you neither agree nor disagree, you will circle the middle number.

		Strongly disagree	Disagree	Uncertain	Agree	Strongly agree
Item	Statement	1	2	3	4	5
1	**Aggression is an unpleasant and repulsive behavior**					
2	**Aggression is unnecessary and unacceptable**					
3	**Aggression is hurting others mentally or physically**					
4	**Aggression is an action of physical violence of a patient against a nurse**					
5	**Aggression is always negative and unacceptable; feelings should be expressed in another way:**					
6	**Aggression is a disturbing invasion of personal space to dominate others:**					
7	**Aggression is the start of a positive nurse -patient relationship**					
8	**Aggression is a healthy reaction to feelings of anger:**					
9	**Aggression is an opportunity to get a better understanding of the patient's situation**					
10	**Aggression is a form of communication and as such not destructive**					
11	**Aggression is a way to protect yourself**					
12	**Aggression is the protection of one's own territory**					
13	**Patients are aggressive because of the environment they are in:**					

14	**Other people make patients aggressive or violent**					
15	**Patients commonly become aggressive because staff do not listen to them**					
16	**It is difficult to prevent patients from becoming violent or aggressive**					
17	Poor communication between staff and patients leads to patient aggression					
18	**There appear to be types of patients who frequently become aggressive towards staff:**					
19	**Different approaches are used on this ward to manage patient aggression and violence**					
20	**Patients who are aggressive towards staff should try to control their feelings**					
21	**When a patient is violent, seclusion is one of the most effective approaches to use:**					
22	**Patients who are violent are often restrained for their own safety:**					
23	**The practice of secluding violent patients should be discontinued**					
24	**Medication is a valuable approach for treating aggressive and violent behaviour**					
25	**Aggressive patients will calm down automatically if left alone**					
26	**The use of negotiation could be used more effectively when managing aggression and violence**					
27	**Restrictive care environments can contribute towards patient aggression and violence:**					
28	**Expressions of aggression do not always require staff intervention**					
29	**Physical restraint is sometimes used more than necessary**					
30	**Alternatives to the use of physical restraint, seclusion and sedation to manage patient violence could be used more frequently:**					
31	**Improved one to one relationships between staff and patients can reduce the incidence of patient aggression and**					

	violence					
32	**Patient aggression could be handled more effectively on this ward**					
33	**Prescribed medication can in some instances lead to patient aggression and violence**					
34	**It is largely situations that contribute towards the expression of aggression by patients**					
35	**Seclusion is sometimes used more than necessary:**					
36	**Prescribed medication should be used more frequently to help patients who are aggressive and violent:**					
37	**The use of de-escalation is successful in preventing violence**					
38	**If the physical environment were different, patients would be less aggressive**					
39	**Patients are aggressive because they are ill.**					

Appendix 3 Permission to use the instrument: MAVAS

Dear Kebope

I am more than happy for you to use MAVAS - My only request to people is that they cite me in any publications they do and if possible would you let me have a copy of your data when you get it in as I am making some international comparisons on results

Kind regards

Joy

Dr Joy A Duxbury
Reader in Mental Health Nursing
Divisional Leader for Mental Health
Tel: 01772 895110
JDuxbury@uclan.ac.uk

>>> <mongiea@yahoo.com> 07/04/2009 01:17 >>>

This letter serves as a request to use the MAVAS. My name is Kebope Mongie Kealeboga and I am from Botswana. I am a master's student with the University of Kwa-Zulu Natal in South Africa doing Masters in Mental Health. I am doing a research as a requirement for the course and my topic is on aggression. When I was doing the literature review I saw the MAVAS and it's the tool I have identified to use for collect data with. The research will be done in a psychiatric hospital in Botswana. Therefore this letter serves to request permission to use the tool (MAVAS) as its one of the requirements of the school ethical committee.

Yours faithfully

Kebope Mongie Kealeboga

Student No: 208508804
University of Kwa-Zulu Natal
Howard College
Faculty of health Sciences
School of Nursing
Durban 4001
South Africa

Appendix 4 Information about the Research Study

Title:	Exploring nurses perceptions of in-patient aggression in a psychiatric institution in Botswana (Lobatse Mental Hospital)
Student Investigator:	Ms Kebope Mongie Kealeboga
Contact number/s:	Botswana: 0026771769627 South Africa: +27712402658
Student No:	208508804
Position:	Post-graduate nursing student studying mental health/psychiatric nursing in the School of Nursing, University of KwaZulu-Natal.
Research Supervisor:	Dr. Lyn Middleton
Contact number/s:	+27 31 2601655
Institution:	School of Nursing, Desmond Clarence Building, Faculty of Health Sciences, University of KwaZulu-Natal, Durban, South Africa.

You are invited to participate in this research study.

The purpose of this study is to better understand how in-patient aggression is perceived by nurses working in a psychiatric institution and your opinions on this topic are therefore very important to the study.

All the nursing staff (approximately 121) of the hospital has been invited to participate.

I ask that you read this form before agreeing to be in the study and completing the consent statement and the study questionnaire.

Your participation in this study is voluntary and your participation does not involve any physical risk or emotional risk to you. There are also no benefits for you in participating in this study.

The consent statement asks you to indicate your consent to participate in the study and whether you are willing or not, to sign the consent statement with your name. If you are uncomfortable signing the statement, ticking the box next to the statement "I freely consent to participate in this study" indicates your informed consent to participate.

It will take you about 20 minutes (more or less) to complete the questionnaire. There are 39 statements about nurses' perceptions of in-patient aggression. You are asked to place a mark on a scale of how much you agree or disagree with each statement. If you do not wish to respond to a statement, please leave it and go to the next statement.

The records of this study will be kept confidential. In any sort of report we might publish, we will not include any information that will make it possible to identify a participant. Research records will be stored securely and only researchers will have access to the records. Results of this study may be used for publications in scientific journals and presentations at scientific meetings.

If you have any questions about this study, or would like additional information to assist you in reaching a decision about participation, please feel free to contact either me or my supervisor on the telephone numbers given above.

This study has been reviewed and received ethics clearance through the University of KwaZulu-Natal and the Botswana Ministry of Health.

If after reading this information sheet you are willing to share your perceptions of this topic, please complete the consent statement.

Thank you for taking the time to read this sheet and for your interest in this study.

Yours sincerely,

_____ Date: _____

Student Investigator: Ms K.M (Mongie) Kealeboga

Appendix 5 Statement of Consent

I have read the information sheet and understand the information about the study ***"Exploring nurses perceptions of in-patient aggression in a psychiatric institution in Botswana".***

I understand that if I have any questions about this study I can contact the researcher or her supervisor and I have been provided with their contact telephone numbers.

a. In ticking this box I freely consent to participate in this study: ☐

b. I am however, NOT comfortable signing my name in consent: ☐

OR

c. I am comfortable signing my name in consent as given below:

Participant's signature: _____
(Signature is needed if you have checked box c.)

Date: _____Place:_____

Signature Researcher..... Date.....

Appendix 6 Ethical clearance for the study from University of Kwazulu Natal

UNIVERSITY OF
KWAZULU-NATAL

RESEARCH OFFICE (GOVAN MBEKI CENTRE)
WESTVILLE CAMPUS
TELEPHONE NO.: 031 – 2603587
EMAIL: ximbap@ukzn.ac.za

3 JULY 2009

MRS. KM KEALEBOGA (2008508804)
SCHOOL OF NURSING

Dear. Mrs. Kealeboga

ETHICAL CLEARANCE: "AN EXPLORATION OF NURSES' PERCEPTIONS OF INPATIENT AGGRESSION AND THEIR MANAGEMENT STRATEGIES IN A PSYCHIATRIC INSTITUTION IN BOTSWANA"

I wish to confirm that ethical clearance has been granted for the above project, subject to permission being obtained to use the research instrument:

This approval is granted provisionally and the final clearance for this project will be given once the above condition has been met. Your Ethical Clearance Number is HSS/0371/09M

Kindly forward your response to the undersigned as soon as possible

Yours faithfully

MS. PHUMELELE XIMBA
ADMINISTRATOR
HUMANITIES & SOCIAL SCIENCES ETHICS COMMITTEE

cc. Supervisor (Dr. L Middleton)
cc. Mr. S Reddy

Appendix 7 Letter requesting for permission from Botswana Ministry of Ethics Committee

Kebope Mongie Kealeboga
P O Box 21289
Gaborone
Botswana

17 July 2009

Ministry of Health Botswana
Ethics Committee
Private bag 0038
Gaborone
Botswana

Dear Sir/Madam

REQUEST FOR A PERMISION TO CONDUCT A STUDY AT LOBATSE MENTAL HOSPITAL

My name is Kebope Mongie Kealeboga. I am a government of Botswana sponsored student currently studying with the University of KwaZulu Natal, Howard College in South Africa. I am doing course work masters in Mental Health Nursing. As one of the requirements for my masters' course work I have to conduct a mini dissertation as part of my studies.

The purpose of the letter is to request a permission to conduct a study at the above mentioned hospital. The title of the study is: Exploring nurses' perceptions of inpatient aggression and their management of inpatient aggression in a psychiatric Institution in Botswana.

Attached are the research proposal and the letter of approval from the University of KwaZulu Natal's ethical committee.

Thank you.

Kealeboga Kebope Mongie
Student No: 208508804

.....

Appendix 8 Permission to conduct the study from the Botswana Ministry of Health Ethics Committee

Telephone: (267) 363200
FAX (267) 353100
TELEGRAMS: RABONGAKA
TELEX: 2818 CARE BD

MINISTRY OF HEALTH
PRIVATE BAG 0038
GABORONE

REPUBLIC OF BOTSWANA

REFERENCE NO: PPME 13/18/1 PS IV (38) 16 July 2009

Health Research and Development Division

Notification of IRB Review: New application

Ms Kebope Mongie Kealeboga
P.O. Box 21289
Gaborone

Protocol Title:	**An exploration of nurses; perceptions of inpatient aggression and their management strategies in a psychiatric institution in Botswana**
HRU Protocol Number:	HRU 00540
Sponsor:	Government
HRU Review Date:	July 14, 2009
HRU Expiration Date:	July 13, 2010
HRU Review Type:	HRU reviewed
HRU Review Determination:	Approved
Risk Determination:	Minimal risk

Dear Ms Kealeboga

Thank you for submitting a new Application for the above referenced Protocol.
This approval includes the following:

1. Application form
2. Proposal
3. Consent form

This permit does not however give you authority to collect data from the selected site without prior approval from the management. Consent from the identified individuals should be obtained at all times.

1

The research should be conducted as outlined in the approved proposal. Any changes to the approved proposal must be submitted to the Health Research and Development Division in the Ministry of Health for consideration and approval.

Furthermore, you are requested to submit at least one hardcopy and an electronic copy of the report to the Health Research, Ministry of Health within 3 months of completion of the study. Approval is for academic fulfillment only. Copies should also be submitted to all other relevant authorities.

If you have any questions please do not hesitate to contact Mr. P. Khulumani at pkhulumani@gov.bw, Tel +267-3914467 or Mary Kasule at mkasule@gov.bw or marykasule@gmail.com Tel: +267-3632466

Continuing Review
In order to continue work on this study (including data analysis) beyond the expiry date, submit a Continuing Review Form for Approval at least three (3) months prior to the protocol's expiration date. The Continuing Review Form can be obtained from the Health Research Division Office (HRDD), Office No. 9A 11 or Ministry of Health website: www.moh.gov.bw or can be requested via e-mail from Mr. Kgomotso Motlhanka, e-mail address: kgmmotlhanka@gov.bw As a courtesy, the HRDD will send you a reminder email about eight (8) weeks before the lapse date, but failure to receive it does not affect your responsibility to submit a timely Continuing Report form

Amendments
During the approval period, if you propose any change to the protocol such as its funding source, recruiting materials, or consent documents, you must seek HRDC approval before implementing it. Please summarize the proposed change and the rationale for it in the amendment form available from the Health Research Division Office (HRDD), Office No. 9A 11 or Ministry of Health website: www.moh.gov.bw or can be requested via e- mail from Mr. Kgomotso Motlhanka, e-mail address: kmotlhanka@gov.bw . In addition submit three copies of an updated version of your original protocol application showing all proposed changes in bold or "track changes".

Reporting
Other events which must be reported promptly in writing to the HRDC include:
- Suspension or termination of the protocol by you or the grantor
- Unexpected problems involving risk to subjects or others
- Adverse events, including unanticipated or anticipated but severe physical harm to subjects.

Do not hesitate to contact us if you have any questions. Thank you for your cooperation and your commitment to the protection of human subjects in research.

Yours sincerely

P. Khulumani
For Permanent Secretary

PERMANENT SECRETARY
MINISTRY OF HEALTH
RESEARCH UNIT
16 JUL 2009
P/BAG 0038
GABORONE
REPUBLIC OF BOTSWANA

Appendix 9 Letter to the Lobatse Mental Hospital requesting permission to conduct the study

Kebope Mongie Kealeboga
P O Box 21289
Gaborone
Botswana

11 may 2009

Lobatse Mental Hospital
P O Box Lobatse
Botswana

The Manager

Dear Sir/Madam

REQUEST FOR A PERMISION TO CONDUCT A STUDY IN LOBATSE MENTAL HOSPITAL

My name is Kebope Mongie Kealeboga. I am a government of Botswana sponsored student currently studying with the University of KwaZulu Natal, Howard College in South Africa. I am doing course work masters in Mental Health Nursing. As one of the requirements for my masters' course work I have to conduct a mini dissertation as part of my studies.

The purpose of the letter is to request a permission to conduct a study in this hospital. The title of the study is: Exploring nurses' perceptions of inpatient aggression and their management of inpatient aggression in a psychiatric Institution in Botswana.
Attached are the research proposal and the letter of approval from the University of KwaZulu Natal's ethical committee and the Ministry of Health Botswana.

Thank you.

Kealeboga Kebope Mongie
Student No: 208508804

.....

Appendix 10 Permission to conduct the study from Lobatse Mental Hospital

REPUBLIC OF BOTSWANA

TELEPHONE: 267-5330267/343/773
TELEFAX: 267-5332174
MOBILE: 267-71303416

LOBATSE MENTAL HOSPITAL
P.O. BOX 126 LOBATSE
paul.sidandi@it.bw

17th July 2009

Ms Kebope Mongie Kealeboga
Mental Health Student
University of Kwa Zulu Natal
c/o
P.O. Box 21289
Gaborone

SENIOR CONSULTANT PSYCHIATRIST
SIGNATURE .....
2009 -07- 22
LOBATSE MENTAL HOSPITAL
P.O. BOX 126 LOBATSE
REPUBLIC OF BOTSWANA

Re: Request for Permission to Conduct Research Project

Thank you for your letter dated 17th July 2009. Permission is hereby granted for you to conduct research on the topic:

An Exploration of Nurses Perceptions of Inpatient Aggression and their Management Strategies in a Psychiatric Institution in Botswana

On arrival please contact the Nursing Department for advise on how best to go about the project.

Please submit an Electronic Copy of the Research Protocol as contained in the Application Form to Health Research and Development Division of the Ministry of Health, the Research Proposal and the Consent Form.

At the end of the research project, you will be required to lodge one hard copy and one electronic copy of the results with the Hospital Library.

Yours sincerely,

Dr. Paul Sidandi
Senior Consultant Psychiatrist

The Chief Nursing Officer,
Lobatse Mental Hospital