UNIVERSITY OF CAPE COAST

KNOWLEDGE AND PERCEPTION OF NURSES ON THE USE OF RESTRAINTS AT ACCRA PSYCHIATRIC HOSPITAL.

BY

DEDZO CLARA EYRA

Thesis submitted to the department of nursing, University of Cape Coast, in partial fulfilment of the requirement for award of Master of Nursing degree

JUNE 2014
DECLARATION

Candidate’s Declaration

I hereby declare that this thesis is the result of my own original work and that no part of it has been presented for another degree in the university or elsewhere.

..........................................................................................................................................................

..........................................................................................................................................................

Dedzo Clara Eyra Date…………………………

Supervisors Declaration

I hereby declare that the preparation and presentation of the thesis were supervised in accordance with the guidelines on the supervision of thesis laid down by the University of Cape Coast.

Principal Supervisor’s Name: Dr Mate Siakwa

Signature:……………………………… Date:………………………………

Co-Supervisors Name: Professor Janet Gross

Signature:……………………………… Date:………………………………
ABSTRACT

The purpose of this study was to examine the knowledge and perception of mental health nurses on the use of restraint methods among mentally ill. Although there are different restraints used in other areas of health, the primary focus was on the use of seclusion, mechanical restraints, and involuntary medication.

A non-experimental descriptive cross-sectional research design was used. Stratified random sampling and then simple random sampling were used to select 108 participants from 8 wards. A researcher-developed pretested instrument was used in the data collection. Approval from the Institutional Review Board of the University of Cape Coast and informed consent were sought from the participants before the commencement of the study.

Data were analyzed using the Statistical Package for Social Sciences (SPSS) version 22, descriptive statistics cross-tabulation a chi-square test was also used. Chi square test indicated that there were no significant difference in knowledge and use of restraint between nurses on the acute wards and chronic wards.

In conclusion majority (65%) of participants indicated to often rely on restraints method to reduce aggression on the wards. 69.4% commonly used seclusion as compared to other forms of restraints. Some reasons for application of restraints as indicated by participants were restraints is used for the safety of the patients staff and significant others. It was also identified that there were no significant difference in the knowledge and use of restraints between nurses on the acute and chronic wards.
ACKNOWLEDGEMENTS

I wish to express my heartfelt gratitude to my project supervisor Professor Janet Gross, a lecturer in the Department of Nursing, University of Cape Coast, for her critical observation of my work and useful suggestions which gave me more insight into my area of academic work.

My sincere thanks goes to my husband Eugene Edem Amenuvor who had to cope with my absence during classes which takes me away the whole week for this program and words of encouragement.

To the nurses on the wards who participated in the study and made it a success, I thank u for your co-operation and support. Also to the staff at the main hospital administration and nursing administration, thank you for your support and co-operation.

To my colleagues of the 2012-2014 Master of Nursing class I say I appreciate you all as a special group.

To Charles Dwunfuor Mensah and Asamany Dela I say thank you for all your help I really appreciate it.

My last appreciation goes to those who helped me in various ways and their names have not been mentioned. To you all I say thank you.
DEDICATION

This work is dedicated to my wonderful and ever patient husband for the faith and hope you had in me.
## TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>DECLARATION</td>
<td>i</td>
</tr>
<tr>
<td>ABSTRACT</td>
<td>ii</td>
</tr>
<tr>
<td>ACKNOWLEDGEMENTS</td>
<td>iii</td>
</tr>
<tr>
<td>DEDICATION</td>
<td>iv</td>
</tr>
<tr>
<td>TABLE OF CONTENT</td>
<td>v</td>
</tr>
<tr>
<td>LIST OF TABLES</td>
<td>ix</td>
</tr>
<tr>
<td>LIST OF ACRONYMS</td>
<td>xi</td>
</tr>
<tr>
<td><strong>CHAPTER ONE: INTRODUCTION</strong></td>
<td>1</td>
</tr>
<tr>
<td>Background of the Study</td>
<td>1</td>
</tr>
<tr>
<td>Problem Statement</td>
<td>4</td>
</tr>
<tr>
<td>Purpose of the Study</td>
<td>6</td>
</tr>
<tr>
<td>Objectives of the Study</td>
<td>6</td>
</tr>
<tr>
<td>Research Questions</td>
<td>6</td>
</tr>
<tr>
<td>Significance</td>
<td>7</td>
</tr>
</tbody>
</table>

Continues
CHAPTER TWO: REVIEW OF LITERATURE

Theoretical Framework

Restraints

Mechanical Restraints

Seclusion

Involuntary Medications /Chemical Restraints

Nurses Knowledge and Perception

Family members and others involvement

Summary of Literature

CHAPTER THREE: RESEARCH METHODOLOGY

Research Design

Study Setting

Study Population

Inclusion criteria

Continues
Sample and Sampling method
Ethical Consideration
Instrumentation
Validity and Reliability
Data Collection Methods
Data Analysis
Summary

CHAPTER FOUR: FINDINGS AND DISCUSSION
Socio-demographic Data of Participants
Knowledge and Restraints methods
Participants Perception of Restraints
Statistical Analysis of Knowledge and Use of Restraints
Use of Restraints Methods
Knowledge of Nurses on Restraints Methods
Discussion
Socio-demographic Characteristics of Participants

Continues
Knowledge of Nurses on Use of Restraints 84

Perception on Restraints Methods 90

Differences in the Knowledge and Use of Restraints 93

CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary 94

Conclusions 97

Recommendations 98

REFERENCES 101

APPENDICES 122

A. Data Collection Instrument

B. Internal reliability test

C. Introductory letter

D. Institutional review board approval
LIST OF TABLES

Table 1: Demographic Data 53
Table 2: All Restraint Methods Used by Participants 55
Table 3: Restraint Methods Used Most Often by Participants 55
Table 4: Presence of Agency Procedure 56
Table 5: Rely Restraints to Reduce Aggression 57
Table 6: Process of Restraint Use 58
Table 7: Duration Of Restraints Use 59
Table 8: Frequency of Restraint Use 60
Table 9: Reasons for restraints Use 61
Table 10: Timing of Restraints Use 62
Table 11: Opinion on Use of Restraint 63
Table 12: Does Restraints Provide Safety for Patients 64
Table 13: Use Of Restraints on Patients 65
Table 14: Effect of restraints Use 66
Table 15: Restraint Method Used And Type Of Ward 68
Table 16: Commonly used Restraints Methods And Type Of ward 69
Table 17: Restraints To Reduce Aggression And Type Of Ward 70
Table 18: Presence of Agency Procedures And Type Of Ward 71
Table 19: Applying Agency’s Procedure And Type Of Ward 72
Table 20: Prescription Of Restraints And Type Of Ward 73
Table 21: Removal of restraints And type Of ward 74
Table 22: Duration Of Restraints And Type Of Ward 75
Table 23: Frequency Of Restraints Use And Type Of The Ward 76
Table 24: Reasons for restraints use And type Of ward 77
Table 25: Bathroom privileges And type Of ward 78
Table 26: Timing of Restraints And Type Of Ward 79
## LIST OF ACRONYMS

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DF</td>
<td>Degree of Freedom</td>
</tr>
<tr>
<td>E C T</td>
<td>Electroconvulsive therapy</td>
</tr>
<tr>
<td>M H C</td>
<td>Mental health care</td>
</tr>
<tr>
<td>W H O</td>
<td>World Health Organization</td>
</tr>
<tr>
<td>P R N</td>
<td>When Necessary</td>
</tr>
</tbody>
</table>
CHAPTER ONE

INTRODUCTION

This chapter introduces the research study on the knowledge and perception of nurses on the use of restraints among mentally ill patients. This chapter includes the background of the study, problem statement, purpose of the study, objectives, research questions, significance, delimitations, limitations and operational definitions.

Background

Mental health problems are an international and national concern. More than 27% of adult Europeans were estimated to experience at least one form of mental ill health during any one year (Wittchen & Jacob, 2005). The increased demands in mental health care services have caused stress and pressure among mental health care personnel (nurses) (Xianyu & Lambert, 2006). Despite the development of out-patient psychiatric care, a number of patients need in-patient psychiatric care due to the nature of mental illness; a patient may be a danger to him or herself or to other people (Salize & Dressing, 2004). These patients may also be hospitalized against their will and their right to self-determination may be restricted or they may be subjected to restraints during the interventions period (Tuohimäki, Kaltiala-Heino, Välimäki & Touri, 2004). Restraints include seclusion, physical or mechanical restraint and forced or involuntary medication, restrictions on movement inside or outside the hospital ward. (Tuohimäki, Kaltiala-Heino, Välimäki & Touri, 2004) These are ethically sensitive
interventions violating human rights and dignity during psychiatric hospital stays. At the same time, evidence of effectiveness of restraint use in managing patient aggressive behavior (Wright, 2003) or serious mental disorders (Sailas & Fenton, 2000; Sailas & Wahlbeck, 2005) is still missing. There is accordingly a growing need for ethical discussion of the use of restraints and patient violence and aggression in psychiatric care in Europe (Marangos-Frost, 2000; Kuosmanen, 2006; Olofsson & Nordberg, 2005). However, a lack of structured and evidence-based good practices, inadequate knowledge and lack of guidelines increase pressures and ethical dilemmas among nurses (Marangos-Frost, 2000; Kuosmanen, 2006; Olofsson & Nordberg, 2005).

Mental health care (MHC) can be said to be a link between care and control (Norvoll, 2007; Vatne, 2003). Restraint uses are seen in both the delivery of interventions and in the handling of aggressive and violent behavior during hospitalization. Individual freedom and integrity are fundamental values of the western world. The United Nations Universal Declaration of Human Rights was proclaimed in 1948; Article 1 stated “all human beings are born free and equal in dignity and rights. They are endowed with reason and conscience and should act toward one another in a spirit of brotherhood” (United Nations Universal Declaration of Human Right, 1948, p. 54). This emphasis on the individual human rights has also influenced health services. In the last decades there have heightened focus on service users rights, empowerment and participation (Helgesson & Sjorstrand, 2008; Lewis, 2009). The theme is currently of interest and there has been a recurring debate in the media, within service user’s organization and among
mental health professionals, about the use of restraints in mental health care (Cutcliffe & Hannigan, 2002; Hoyer, Janbu & Kallert, 2008). In 2006, the Norwegian Health politicians launched a National Health plan to ensure quality and reduce the use of restraints in MHC (Sosial-og Helsedirektorelet, 2006). However, patients claim their fundamental human rights are violated in the traditional-medical oriented mental health care (Thune, 2008). This therefore stresses the need to understand the process of restraint use. There are consistent findings about differences between relatively comparable wards, hospitals and geographical areas in the amount and types of restraints use (Salize & Dressing, 2004).

According to the World Psychiatry Association (2002), involuntary interventions should be used in the patient’s best interest. The frequency with which involuntary interventions is required varies among countries. According to findings involuntary interventions is not entirely dependent on patient symptoms or behaviors (World Psychiatry Association, 2002). The use of seclusion, mechanical restraints and involuntary medication must be strictly prescribed by the doctor. It is left to the discretion of medical and nursing staff to choose the type of strategy to implement. While the use of each restraint methods in some cases may prevent injury and reduce patients’ agitation, the use of the restraint method may constitute an infringement of the patients’ autonomy, it may worsen the therapeutic relationship and increase the occurrence of violent episodes and physical injuries (Schwatz, Vingiano & Perez, 2000).
Globally, 450 million people suffer from mental health problems with 1 in 4 having experienced mental health services at some point in their life (Healthcare Commission, 2007). At the World health organization (WHO) European Ministerial Conference on Mental Health (2005), emphasis was given to the promotion of voluntary admission and interventions as the basis of services and involuntary interventions being the exception. Common forms of restraints used during in-patient interventions include seclusion and mechanical restraints, and forced or involuntary medication (Healthcare Commission, 2007).

**Problem Statement**

The use of involuntary medication, mechanical restraint and seclusion as restraint methods, are used to prevent injury when dealing with patients who become aggressive. Most literature talks about the patients’ feelings towards the use of restraints rather than the personnel or service provider who implements these interventions (Lewman, 2000). McCue (2004) stated that the use of involuntary medication, mechanical restraint and seclusion are acknowledged as being one of the most controversial practices used in the mental health service delivery worldwide. He also reported that the interventions stimulate an on-going debate and ethical dilemma among service providers especially nurses. Theories on how to help those who struggle with emotional problem have been developed that emphasizes people resources, network, empowerment and participation (Baybrook, 2003). Restraint as an intervention is still used worldwide. The continuous use of restraints stresses the need to understand more about the process of these interventions and it’s use as a whole (Thune, 2008).
The Royal College of Psychiatrists’ National Audit of Violence (n.d.) found that 36% of inpatients reported that they have been personally attacked, threatened, or made to feel unsafe while in hospital. This figure increased to 41% for clinical staff and 77% for nursing staff. Eighteen (18%) of visitors to the units reported that they have been personally attacked, threatened, or made to feel unsafe (Royal College of Psychiatrists’ National Audit of Violence (n.d.). Seclusion is one of a few restraint measures used to control these violent patient behaviors (Mason & Whitehead, 2001; & Parks, 2003). In Ghana, the use of involuntary medication, mechanical restraints and seclusion are allowed in the cases of emergency, where non-forceful interventions have been used unsuccessfully. According to the Mental Health Act, (2012) of Ghana, the use of restraints is also allowed in the situation where the client is admitted based on a court order.

There were inadequate published documents in Ghana on the knowledge of nurses, in the use of involuntary medication, mechanical restraints and seclusion. Though there were inadequate published studies, there have been individual comments in the daily newspapers and journals with regards to the care delivered at the mental health facilities, mostly with reference to the use of restraints on the mentally ill (Basic needs, 2012). Individuals have reported use of restraints in prayer camps and herbal centers. There are no reports on the knowledge and perception of nurses on the use of restraints.
Purpose of the Study

The purpose of this study is to examine nurses’ knowledge and perception on the use of restraints (mechanical restraints, seclusions and involuntary medication) at the Accra Psychiatry Hospital in the Greater Accra Region of Ghana. The use of restraints in Ghana’s mental health facilities has increased this researcher’s concern about the use and how knowledgeable the nurses are who apply this procedure in their practice. The study would also provide framework to guide restraints practices. Due to inadequate studies with regards to the topic area, the study would also serve as a basis for future research.

Objective of the Study

The objectives of the study were to:

• Determine the knowledge of nurses on the use of restraints.

• Examine the perception of nurses on the use of restraints.

• Explore if there is a difference between the knowledge and use of restraints among nurses on acute wards and chronic wards.

Research Questions

The research questions of the study were:

• What is the knowledge of nurses on the use of restraints?

• What is the perception of nurses on the use of restraints?
• Is there a difference between the knowledge and use of restraints among nurses on acute and chronic wards?

Significance

Interventions such as the administering of involuntary medication, the use of mechanical restraints and seclusion are interventions frequently used in mental health. However, with little evidence of study about effectiveness and therapeutic value of these interventions it is apparent to this researcher of the need for these interventions to be reviewed. The findings of this present study may help mental healthcare authorities to understand nurse’s knowledge and perceptions towards the use of these interventions so that alternatives could be developed to improve the standard of care, in the mental health setting. The findings of this study would also serve to guide mental health care managers in the planning of workshops, mental health care programs and seminars on the use of restraints. This study would also contribute to limited literature and serve as a basis for further research, in dealing with violent and aggressive behaviors among mentally ill patients.

Limitations

All studies or investigation have restrictions. These restrictions maybe limited research funding, lack of research support, limited available measuring instruments and methods of data analysis.

Most of the nurses were hesitant to participate in the study. They were not sure of anonymity if they answered the questionnaire. This study was to include nurses from position of staff nurse to principal nursing officer. Most of the in-
charges were the principal nursing officers and did not want to participate in the study. The reasons the principal nursing officers gave was that they do not participate in research work. Therefore this study cannot be said to represent the knowledge of the entire nursing population.

**Delimitations**

Delimitation seeks to discuss the boundaries within which the study is conducted. The data for this study was gathered using a questionnaire. In this study study participants included registered mental health nurses who have practiced for six months and above. Out of the three psychiatric hospitals in Ghana the researcher limited the study to the Accra psychiatric hospital. Research based on questionnaires depends on the voluntary cooperation of the participants. Participants can differ from non- participants compromising the generalizability of the results (Hung, Hom, & Kowloon, 2007).
CHAPTER TWO

REVIEW OF LITERATURE

This chapter sought to discuss a comprehensive review of literature. A search of google and google scholar electronic bases yielded 9,200 results of which 97 nursing articles, journals, with studies related to the use of restraint and restraints methods. Forty-seven were selected and reviewed this was because the selected data focused on information directly linked to the topic of choice. Fourteen of the article gathered were not related to the knowledge and perception of nurses on the use of restraints but had useful information that was used. Thirty-six of the searched article yielded results related to restraints use in prisons, on children in the pediatric wards, and the use in nursing homes and geriatrics units. Although most of the results did not support the present topic, some were reviewed to give a better understanding to the study. Keywords used for the search included; restraints, restraints methods, knowledge, perception, nurses, mechanical restraints, chemical restraints, involuntary, medication, psychiatric wards, mental health, seclusion, interventions and psychiatric hospitals.

The literature review presents the theoretical framework of the study specifically Peplau’s Interpersonal Relation Theory. The review is then organized in the following sections: Restraints which includes the purposes of the use, explanation of mechanical restraints, seclusion, and involuntary medicines; other types of restraints; Nurses’ knowledge and perceptions which includes process of
restraint use; family members or other involvement, orders and risks of restraint
use.

**Theoretical Framework**

This study would be guided by a theoretical framework developed by Hilderguard Peplau in the year 1952 (Blackwell, 1998). This theory was chosen because it considers nursing as an interpersonal relationship between the nurse and the patient. The interpersonal focus of Peplau’s theory requires that the nurse attend to the interpersonal processes that occur between the nurse and patient. According to the theory interpersonal process is maturing force for personality. Interpersonal processes include the nurse-patient relationship, communication, pattern integration and the roles of the nurse (Blackwell, 1998). The theory stresses the importance of nurses’ ability to understand their own behaviors to help others identify perceived difficulties. There are four phases of the interpersonal-relationship theory the phases include: the orientation phase, identification phase, identification phase, and exploitation phase (Gaskin, 2007). Orientation phase, according to the theory during this phase the patient has a felt need and therefore seeks professional assistance. The nurse then helps the individual to recognize and understand his/her problem and determine the need for help. Identification phase, during this phase the patient identifies with those who can help him/her. The patient participates in goal setting and has a feeling of belonging and selectively responds to those who can meet his or her needs. Exploitation phase, during the phases the patient attempts to derive dull value from what he/she are offered through the relationship, is to use professional assistance for problem solving.
alternatives, the principles of interview techniques must be used in order to explore, understand and adequately deal with the underlying problem (Gaskin, 2007). Resolution phase, the patient gradually puts aside old goals and adapts new goals. This is a process in which the patient frees himself from identification with the nurse. In application of the theory to this study, the theory was modified to guide the study. Orientation phase is to identify the problem which is in this study; what is the knowledge and perception of nurses on the use of restraint, and is there a difference in the knowledge and use of restraints among nurses on the acute and chronic wards (Gaskin, 2007). Identification phase is the second phase of the theory which seeks to select appropriate professional assistance, in this study was to identify with the literature where other professionals had already studied into the problem. In this phase gaps would be identified. Exploitation phase would be applied in this study during the chapter three of the study where professional assistance is sought through the administering of questionnaire in order to explore and understand how to deal with the underlying problem (Gaskin, 2007). Resolution phase which in the theory is the termination of professional relationship, in this study the resolution phase will include the findings, recommendations and conclusions.

**Restraints**

According to Albert (2007), described restraints as ways of limiting, controlling, or stopping something. One of the goals of every mental health care service provider is to calm any agitated patient and gain his/her co-operation in the evaluation and interventions process. Some service providers may view forced or
involuntary medication, mechanical restraints and seclusion as the safest and most efficient practice for the agitated patient but are relatively unaware that these interventions are associated with an increased incidence of injury to both patient and staff (Stewart, 2010). These injuries are both physical and psychological (Stewart, 2010).

In psychiatry settings or hospitals, Mason and Wuthead, (2000), as well as Clark and Bowers, (2002) agreed that aggressive behaviors and threat of violence constitute serious emergencies which may be very difficult to handle by health workers. Restraints methods are measures used to control these violent behaviors. When mentally ill patients pose severe threats that cannot be controlled by verbal interventions, the use of emergency interventions or strategies in the form of medications, administered orally/intramuscularly are used for the purpose of sedating patients. Mechanical restraints are used for the purpose of confining the patient’s body movements. The use of seclusion may be necessary when the patient’s violent behaviors or threats need to be contained. Patients are kept in a bare, non-stimulating and sparsely decorated room (Clark & Bowers, 2002).

Steinert and Gebhardt, (2000) and Parks, (2003), also believed that contrary to the frequent pre-assumption of patients are restrained to reduce violence and aggression; the application of restraints is predominantly indicated by a patient’s psychopathology and violent behaviors. Over the past decade, however, these practices have come under intense scrutiny. Researchers and clinicians have chronicled significant physical and psychological risks including disabling, physical injuries, significant trauma and death (Steinert & Gebhardt, 2000).
According to a survey by the Australian Bureau of Statistics (2005), mental health care providers have become obsessed with ensuring the safety of their staff, such that with slight forms of aggression, patients are immediately medicated, restrained or secluded. According to the survey there is always a heavy presence of guards patrolling the wards. This fundamentally distracts from the therapeutic nature of the ward environ (Australian bureau of statistics, 2005).

It has been estimated that almost half of nursing staff and one in seven patients are subject to a physical assault per year (Healthcare Commission, 2007). Although the majority of such attacks result in little or no physical injury, psychological responses can be significant, with reports of consequent anger, anxiety, post-traumatic stress disorder symptoms, guilt, self-blame and shame (Needham et al., 2005).

To use a restraint, Zerrin, (2011) as well as Prosser, Whittington and Riley, (2012) agreed that the initial assessment of a patient must ensure that the behavior or action is not the result of a organic source. They also indicated that clinical judgments must be applied to determine that it is safe and all threatening causes such as withdrawal symptoms and anxiety among others have been ruled out. Verbal intervention strategies should be attempted prior to the use of any form of restraint. Fisher, (2010), stated that, involuntary medication, restraints and seclusion were useful for preventing injuries and reducing agitation. However, Fisher (2010) did acknowledge that the use of these interventions caused adverse physical, psychological effect for both staff and patient and pointed out that non-
clinical factors such as cultural biases, role perception and attitudes are substantial contributors to the frequency of seclusion and restraint use.

The results of a study conducted by Mohr, (2011) stated that the use of restraints put patients at physical risk for injury and death and could be traumatic even without physical injury. Mohr (2011) also stated that, although the intervention could prevent injury to patient and staff, a physical altercation with a patient could also result in a variety of injuries to both. These injuries could be avoided if effective ways were available to manage the patient without restraint use.

According to Marangos-Frost and Wells (2000), upon admission to the ward, both the patient and the parent, guardian, temporary caregiver, or legal custodian, as appropriate, must be informed and provided a copy of the facility’s policy regarding the use of seclusion, mechanical restraints, and involuntary medication during an emergency safety situation. This policy must be communicated in a way that is understood by the patients and his or her parent, guardian, temporary caregiver, legal custodian (Marangos-Frost & Wells, 2000). When necessary, the facility must provide interpreters or translators (Donovan, Siegel, & Zera, 2003). Donavan, Seigel and Zera (2003) also recommended that an acknowledgement, in writing, from the patient and the parent, guardian, temporary caregiver, or legal custodian, as appropriate, that he or she has been informed of the facility’s policy on the use seclusion, mechanical restraints, and involuntary medication in an emergency safety situation. The acknowledgement must be placed in the patients’ record.
A descriptive explorative study conducted in Hong Kong by Campbell, (2009), used two psychiatry wards, and a sample of 57 nurses. Campbell concluded that two-thirds of the nurses believed that restraints should be used in order to prevent patient from harming self and others. It did not state the total nurse’s population and whether the study was on an acute ward or chronic ward. Given the small sample size nurses knowledge with regards to restraint use cannot be said to represent the entire population of nurses in Hong Kong.

Another comprehensive study conducted by Rokins, (2012), involved a postal questionnaire survey of 269 nurses in regional secure and psychiatric intensive care (acute) units in England and Wales concerning their last experience in the use of restraints. Most nurses (96%) reported positive outcomes in the restraint use, but some negative aspects of restraint use were identified. A quarter of respondents expressed concerns about the impact on patients (e.g. patients relationships with nursing staff). Some found the experience of restraint use demeaning and stressful. Some organizational factors were thought to increase restraint use and included the poor management of restraint interventions, lack of monitoring and understaffing. There were also doubts about some of the techniques used (e.g. joint locks which induce pain to gain compliance) and the impact restraint use has on other patients (Rokins, 2012). The authors did not state the criteria used in determining when to use restraints or the knowledge of nurses on restraint use in the chronic wards.

To ensure that safety of the patient, seclusion should not be used as a form of punishment for the convenience of staffs. Some nurses find the use of restraint
methods especially seclusion as a very convenient restraint method when a patient shows the least signs of aggression or violence. Restraint methods can be said to be a safe haven for agitated patient when applied properly (Evans, 2002). It can also be a source of anxiety and feeling of neglect, isolation and loneliness when not applied properly (Evans, 2002).

Mechanical restraints can be said to be the binding of a patient's extremities with some form of materials to limit body movements. Although not seen to be often used as seclusion, it is said to be equally effective in calming an aggressive or agitated patient (Duxbury & Whittington, 2005). This method is said to be used on patients who are physically aggressive and can cause harm to self and others. Mechanical restraints although used in the hospital setting can be said to be used often among patient who are experiencing alcohol withdrawal symptoms where their extremities are tied to the bed post with gauze during the process of withdrawal seizures (Duxbury & Whittington, 2005). Mechanical restraint prevents the patient from falling of the bed. Mechanical restraints are restraint methods witnessed when most patients are being brought to the hospital by relatives. They are tied up with metal chains, dry lines, belts, pieces of clothes and in handcuffs. Mechanical restraint is seen as one of the interventions used in calming patients. It can be very stressful for the patient because the patient is tied down in a particular position which can cause detrimental body injuries and impair blood flow.
Mechanical Restraints

Mechanical restraints means to restrict, limit, confine or deprive of personal liberty or freedom of action, to shut in by material barriers, to draw or bind tightly, restrict movement of (part of the body), hold (a person) down and back (Brown, 1993; Gove, 1971; Simpson, 1989). The use of mechanical restraints is indicated in the cases of unsteadiness, wandering and disruptive behaviors among others and these signs are often secondary to psychiatry conditions (Brown, 1993; Gove, 1971; Simpson, 1989). O'Halloran and Frank, (2000) also defined mechanical restraint as affixing any form of device to any part of an individual’s body, for the purpose of preventing that individual’s freedom of movement. In the past, the term mechanical restraint was usually used only when referring to metal restraint devices such as handcuffs, chains, ankle shackles, and the like. However, any device used for restraint (be it a roll of gauze, a towel or sheet, a plastic zip tie or leather or fabric cuff/strap, and the like), is a mechanical form of restraint (O'Halloran & Frank, 2000).

From the first half of the 19th century, the use of the mechanical restraints (straitjacket, coercion chair, protection bed, hydrotherapy) was included in psychiatry, as a form of psychological interventions to help patients regain self-control (Colaizzi, 2005). During the same period, a strong anti-restraint movement in Great Britain replaced mechanical restraint interventions by physical restraints in some asylums with success (Belkin, 2002; Haw & Yorston, 2004). A padded seclusion room, a contrivance by English physician John Conolly, as well as wet packs and tight wrapping sheets were used as a last resort (Angold, 1989;
Colaizzi, 2005). Advocates of mechanical restraints criticized the anti-restraint movement and questioned physical restraint which, in their view, allows personal force against patients which could result to physical harm to both patient and staff. They also questioned seclusion because it left the patient more liable to neglect and social isolation (Angold, 1989; Colaizzi, 2005).

The use of restraint still had a central role in the interventions of mentally disturbed patients at the beginning of the 20th century (Brown, 1993; Gove, 1971; Simpson et al., 1989). In the 20th century, the uses of physical therapies (insulin-shock, ECT, psychosurgery, sedatives, and especially chlorpromazine at mid-century) were reinforced by the development of a medical model (Brown & Tooke, 1992). Regardless of these innovations, the widespread and unregulated use of restraints has been continued up to the present time (Dix, 2008).

Most studies related to mechanical restraint in adolescent psychiatry are from the United States. In the study by Delaney and Fogg (2005), from 100 young people admitted to inpatient units, 69% were mechanically restrained during the study period of 14 months. Most of those (93%) mechanically restrained were given a diagnosis of a psychotic disorder. According to a Finnish study, about 40% of child and adolescent patients had experienced some type of restraint procedure during their in-patient interventions period (Sourander et al., 2002)

Mechanical forceful-prone-restraint is most accurately defined as placing an individual’s body face-down upon a mobile surface (such as a long back board, an ambulance wheeled stretcher, a bed, or any similar device) and then using a
mechanical device, of any sort, to affix the victim’s body to the mobile surface mechanically preventing the victim from moving out of the prone position (O'Halloran, Lewman & Frank, 2000).

Seclusion

Seclusion can be defined as the voluntary or involuntary temporary isolation of a patient in either a specifically designed room, usually non-stimulating, bare or sparsely decorated (seclusion room), or any other single room, locked from the outside with a window for observation (Healthcare Commission, 2005). To seclude means to shut off, to enclose or confine a person in a segregated place, in order to prevent interaction with, or influence from the outside (Brown, 1993; Gove, 1971; Simpson et al., 1989). According to Husum, (2010), confining a patient in a single room or in seclusion in Norway resembles the concepts of open area seclusion, segregation nursing, segregation area, quiet rooms or sheltered area. However, there is some variation in the Norwegian use of the concept. The seclusion area can range from a single room to small, separate units or areas inside wards. Norwegian mental health law requires that patients in seclusion should not be left alone and should be accompanied by staff. Compared to other forms of restraints methods, seclusion is not used that often. An annual census in England and Wales during from 2005 through 2008 found that between 3% and 4% of inpatients had experienced one or more episode of seclusion, but 8% to 12% of patients experienced at least one episode of mechanical restraint during their stay (Healthcare Commission, 2005,2007,2008).
It was evident that seclusion was done to control patient’s aggressive behavior but, this brought negative feelings in patient related to staff and the interventions. Moreover, according to Happell and Koehn (2011), seclusion has negative psychological outcomes on patients including feelings of anger towards staff, powerlessness, sensory deprivation, disempowerment, humiliation, feelings of rejection, fear of confined spaces. They also associated seclusion with punishment. Seclusion is found to deteriorate patient’s psychosocial functions and worsen symptoms of mental illness (Seo, 2012). However, seclusion is considered a safe environment in which patients are able to regain control over their own actions and promote mental health (Happell & Koehn, 2011). Isolation and decrease in sensory input are regarded as providing relief from distress generated through interpersonal interactions and a heightened sensitivity to external stimulation (Kuosmanen, 2009). Schumann and Alfandre, (2008), noted that restraining made the patient more aggressive, due to which seclusion was done as the last. They also agreed that seclusion was considered beneficial to prevent harm to other patients (Schumann & Alfandre, 2008).

In contrast, Boyd (2008) reported that during seclusion a patient’s trust and dignity are violated, constituting a breach of patient’s rights and posing an ethical dilemma. Furthermore, if seclusion becomes necessary it is important that throughout the seclusion the patient receives a high level of nursing care in a way that maintains his dignity. The legal framework obligates nurses to help a patient meet biological needs by providing food and fluids, a comfortable environment and opportunity for the use of toilet. Besides this, frequent monitoring, observation
and assessment of secluded patient’s behavior, conditions and vital signs with proper documentation at least every 15 minutes, are also essential. Documentation entails the whole incident and reason of seclusion, care given during seclusion, patient’s response and assessment of further need of seclusion. Debriefing before and following seclusion is most important for staff and patient to clarify the rationale for the seclusion, offer mutual feedback and identify alternative coping methods that might help eliminate the use of seclusion in the future (Schumann & Alfandre, 2008).

Since seclusion is the last option, there remains a need to use some least restrictive or alternative measures before deciding the final decision to seclude. These include environmental manipulation, de-escalation technique, assessment, increased observation and pharmacological management (Petit, 2005). Manipulating the environment involves reducing the stimulation from the environment after thorough assessment of patient’s triggering factors, patient comfort such as offering the patient chair or a glass of water to calm him/her down and staff attitude that is giving respect and time to the patient instead of shouting on the patient (Ramadan, 2007). De-escalation or talking down involves psychosocial techniques aimed at calming the patient emphasizing on the assessment of the immediate situation, verbal and non-verbal communication and problem solving strategies (Davison, 2005). Staff needs to assess and observe patient’s disturbed behavior frequently before they pose any risk to other patients. For this, staff to patient ratio needs to be increased. Moreover, there is an immense
need to have a policy of staff training about emergency psychiatric care, crisis management and therapeutic communication (Petit, 2005).

The findings of a study conducted by Vine (2011), stated that the decision to use seclusion as a restraint method is a clinical one. It is to be considered after less restricted methods have been tried and excluded. He went on to state that while seclusion can provide safety and containment for the patient it can also be a source of distress for the patient, family members, friends and significant others. Vine also stated that seclusion must be discontinued immediately when a less restrictive options becomes available.

Restraints such as seclusion are one of those common practices in psychiatry settings which involved ethical principles and creates ethical dilemmas for nurses. In the socio-cultural context, seclusion is considered as one of the most ethically and legally controversial practices (Videbeck, 2010). In western society, adopting a patient centered approach, patient’s identity and autonomy are given more importance as compared to eastern society, where healthcare professional are considered authoritative and given the right to do what is best in respect to patients (Firoozabadi & Bahredar, 2009). However, nurses are expected to respect patient’s rights and treat them with dignity and not like an object.

**Involuntary Medication/Chemical Restraint**

Synonyms to the word involuntary include, coerced, forced, unintended, unintentional, and unwilling among others. Antonyms to the word involuntary include deliberate, freewill, intentional, uncoerced, unforced, voluntary and willful
among others. Some related words to involuntary include accidental, unplanned, unpremeditated, automatic, impulsive, spontaneous, unconscious, unknowing and unprompted among others. Chemical restraints refer to medication that is prescribed to restrict the patient’s freedom of movement for the control of extreme violent physical behavior (Daniel, Potki, & Reeves, 2001). Chemical restraints are medications used in addition to, or in replacement of, the patient’s regular drug regimen to control extreme violent physical behavior. The medications that comprise the patient’s regular medical regimen (including PRN medications) are not considered chemical restraints, even if their purpose is to treat ongoing behavioral symptoms (Daniel, Potki, & Reeves, 2001). Chemical restraints can also be defined as the use of medicines to calm a patient, limit his movement, or both (Brook, Lucey & Gunn, 2000). Chemical restraint may also be called rapid tranquilization. It may allow the patient to talk with nurses, be examined, and receive interventions without harming himself or others. Chemical restraints may be used alone or along with physical restraints. Types of chemical restraints include sedatives and anti-anxiety medicines (Brook, Lucey & Gunn, 2000). Involuntary medication is also referred to as assisted interventions and by critics as forced drugging (Brook, Lucey & Gunn, 2000). It refers to medical interventions undertaken without a person's consent. In almost all circumstances, involuntary medication or interventions refers to psychiatric interventions administered despite an individual's objections. These are typically individuals who have been diagnosed with a mental illness and were deemed by a court to be a danger to themselves or others (Montvale & Thomson, 2004).
Seclusion / Environmental restraint means putting a patient into a limited area, such as a locked room, for a period of time. It may be used to remove a patient from a stressful situation and give him a chance to calm down (Thomson, 2004).

Restraint incidents are often followed by additional containment measures, such as seclusion or drug-induced sedation, commonly known as involuntary medication (Stewart et al., 2009). Involuntary medication is also defined by Vorselman, (2003), as the administration, with or without seclusion or restraint, of a rapid tranquilizer. This is done to temporarily restrict the patient’s freedom of movement; it is intended to control his or her behavior in a way that reduces the risk to their own safety or that of others.

Involuntary interventions (also referred to as assisted interventions and by critics as forced drugging) it also refers to medical interventions undertaken without a person's consent. In almost all circumstances, involuntary intervention refers to psychiatric interventions administered despite an individual's objections. These are typically individuals who have been diagnosed with a mental illness and are deemed by a court to be a danger to themselves or others (Konopaske, Dorph-Petersen, Pierr, Wu, Sampson & Lewis, 2007).

From the above, both definitions agreed on involuntary medication as administration of drugs without the approval of the patient involved. They both agreed that this intervention is implemented for the safety of patient and significant
others. In the definitions they both named involuntary medication as a rapid tranquilizer and forced drugging respectively.

Unlike most other medical disciplines, psychiatry is a medical field in which, under certain conditions, patients can be forced or coerced into accepting interventions (Curtis & Diamond, 1997). Involuntary medication of psychiatric patient has a long history. Seen from a modern perspective, many of the old approaches to treating mental disorders are now seen as both inadequate and involuntary. Most restraint interventions aim to achieve the administration of psychotropic drugs in the short term and to enhance compliance in the long term (Geller, 1995; Miller, 1999).

Involuntary medication is the most common method used on psychiatric wards to contain mentally ill patients who are violent toward themselves or others (Raboch, Kalisova & Nawka, 2010). These psychiatry interventions are controversial, because while they are intended to protect patients and those around them, they restrict freedom and are usually applied against a patient’s will. This causes serious ethical dilemmas for patients, nurses, clinicians and policymakers (Ashcraft & Anthony, 2008).

Involuntary medication may have the opposite result, discouraging patients from accepting interventions while hospitalized, and leading to avoidance or cessation of interventions in the community (Curtis & Diamond, 1997; McPhillips & Sensky, 1998). Most patients with psychiatry disorders refuse medication for a variety of reasons, including experience with or fear of side effects. In other cases
the refusal is based on lack of awareness of illness or on delusional beliefs. Many such patients must ultimately be medicated involuntarily (Brown & Tooke, 1992).

Although professionals within and between countries have not found consensus on the best method of restricting patients, involuntary medication is the preferred method of dealing with emergencies in certain countries, such as Australia, the United Kingdom and the United States (Vorselman, 2003). However, Dutch psychiatric professionals use forced medication in only 22% of the situations when coercion is needed; instead, they prefer seclusion as the method of containment (59%) (Vorselman, 2003).

The Dutch preference for seclusion is not supported by scientific evidence or legal regulations, because under the Netherlands Mental Health Act, seclusion and forced medication are ranked equally for management of acute violence (Vorselman, 2003; Raboch, Kalisova & Nawka, 2010). Involuntary medication is used less often, due to a non-evidence based cultural norm that intramuscular administration of medication is a more serious violation of the integrity of an individual’s body than being locked up in a seclusion room. This prejudice was probably partly the product of the Dutch legislation, which greatly restricts involuntary medication as part of planned involuntary interventions (Ashcraft & Anthony, 2008). It has been shown that seclusion and involuntary medications are preferred by equal numbers of Dutch patients, this cultural norm is not necessarily shared by those who suffer its consequences. This lack of evidence makes it difficult for psychiatric nurses to decide which measure provides the most effective
and least intrusive method of dealing with violent behavior (Vorselman, 2003; Raboch, Kalisova & Nawka, 2010).

It has been argued that administering medication to control aggressive or harmful behaviour is in the patient’s best interests (Olsen, 2001), and seclusion and physical restraint can be avoided (Lind, 2004). However, there are concerns about the potential physical dangers associated with involuntary medication use, which can also be seen as controlling and restraints by patients. Nurses who use psychotropic medication for its sedative effects risk disabling and deskilling their patients and impairing their ability to find a personal resolution to conflict (Thapa, 2003).

There have also been multiple concerns regarding the use of involuntary medication of patients with mental illness. Patients often report that side effects outweigh the benefit of the psychotropic medication, while the health clinician often thinks the patient may become dangerous without medication (Thomas, 2006). People with very serious mental problems, pose a threat to both themselves and others and therefore should be forced into interventions (Paterson, 2010). According to Paterson this would be a benefit for both them and the people around them. Psychotropic medication is therefore administered as an immediate response to control agitation or threatening, destructive or assaultive behaviors in order to prevent harm to self or others. Forcing an unwilling inpatient to receive antipsychotic medication has been perceived by some to be an unnecessarily restraints, perhaps traumatic, and possibly even punitive assault on a person's privacy, and autonomy (Ray, Myers, & Rappaport, 1996).
A study conducted using a grounded theory method described by Vuckovich, (2003). The purpose of the study was to examine psychiatric nurses’ experiences of administering medication to involuntary psychiatric patients. The results revealed a basic social process of justifying involuntary medication. Although the 17 Californian nurses interviewed all reported success in avoiding the use of involuntary medication, each had an individual approach to using the nurse/patient relationship to do this. However, all the nurses used individual approaches to reconcile themselves to using the restraint (Vuckovich, 2003).

**Other Types of Restraints**

Technological surveillance is the use of tagging pressure pads, closed circuit television, or door alarms. They are often used to alert staff that the person is trying to leave or to monitor their movement. Although not restraint in themselves, they could be used to trigger restraint use. These methods are increasingly being included within an individual agreed upon plan of care, provided they operate within organizational policy, clear guidance and risk assessment (Mattson & Sacks, 2005).

Emotional/psychological restraint refers to verbal or emotional abuse includes threatening significant physical harm or threatening or causing significant emotional harm to an adult through the use of: derogatory or inappropriate names, insults, verbal assaults, profanity, or ridicule; or harassment, coercion, threats, intimidation, humiliation, mental cruelty, or inappropriate sexual comments (McPhillips & Sesky, 1998). Conduct that may be considered verbal or emotional
abuse includes the use of oral, written, or gestured communication that is directed at an adult or within their hearing distance, regardless of their ability to comprehend. In mental health or psychiatry setting, emotional restraint can be in forms of threatening patients with the use of seclusion, mechanical restraints, and chemical restraints in order to sustain good behavior in patients (Geller, 1995). The emotional harm that may result from verbal or emotional abuse includes but is not limited to anguish, distress, fear, unreasonable emotional discomfort, loss of personal dignity, or loss of autonomy (Friedman, 1999).

Psychological restraints would include depriving a person of lifestyle choices by, for example, telling them what time to go to bed or get up. Psychological restraint might also include depriving individuals of equipment or possessions they consider necessary to do what they want to do, for example taking away walking aids, glasses, outdoor clothing or keeping the person in nightwear with the intention of stopping them from leaving (Allen, 2000).

Medical restraints are also called physical restraints used during certain medical interventions. Medical restraints are designed to restrain patients with the minimum of discomfort and pain and to prevent patients injuring themselves or others (Donovan, Plant, & Peller, 2003). There are many kinds of mild, safety-oriented medical restraints which are widely used. For example, the use of bed rails is routine in many hospitals and other care facilities, as the restraint prevents patients from rolling out of bed accidentally. Newborns frequently wear mittens to prevent accidental scratching. Some wheelchair users have a belt or a tray to keep them from falling out of their wheelchairs. In fact, not using these kinds of
restraints when needed can lead to legal liability for preventable injuries (Hillard & Ziteck, 1998). Medical restraints are generally used to prevent people with severe physical or mental disorders from harming themselves or others. A major goal of most medical restraints is to prevent injuries due to falls. Other medical restraints are intended to prevent a harmful behavior, such as hitting people (Donovan, Plant, & Peller, 2003).

There are many types of medical restraints, four-point restraints, fabric body holders, straitjackets which are typically only used temporarily during psychiatric emergencies. Safety vests and jackets can be placed on a patient like any other vest garment in order to restrain. Safety vest and jackets typically have a long strap at each end that can be tied behind a chair in order to prevent the patient from getting out of the chair, or to the sides of a bed to keep the patient in bed (Petit, 2005). Posey vests are commonly used with elderly patients who are at risk of serious injury from falling. Limb restraints are used to prevent activity in various limbs; they are wrapped around the wrists or ankles, and tied to the side of a bed, to prevent patients from harming themselves. Mittens may also be used on psychiatric patients or patients who manage to use their hands to undo limb restraints (Fassler & Cotton, 1992).

Physical restraint means the use of body contact by staff with a patient to restrict freedom of movement or normal access to his or her body. Unlike mechanical restraints, physical restraints do not include the use of pieces of material, cloths and belts. Physical touch associated with prompting, comforting or assisting that does not prevent the patient’s freedom of movement or normal access
to his or her body. Physical escort can also be used for the temporary touching or holding of the hand(s), wrist(s), arm(s), shoulder(s) or back for the purpose of inducing the patient to walk to a safe location or physical intervention for the temporary holding of the hand(s), wrist(s), arm(s), shoulder(s), or leg(s) which does not otherwise restrict freedom of movement or access to one’s body, for the purpose of terminating unsafe behavior (Richter & Whittington, 2006).

**Nurses Knowledge and Perception**

During the last few years, nurses are required to demonstrate new ethical sensitivity to people suffering from mental health problems (WHO, 2005). The lack of professional competence and inadequate knowledge on restraint use may affect the equal interventions of patients. There may be qualified nurses who are not able to recognize the meaning of the compulsory interventions for a patient or nurses who do not perceive the ethical implications of interventions related to the use of restraints (WHO 2005; Olofsson & Norberg, 2001; Marangos-Frost & Wells 2000; Olofsson, 1998). The reason for this may be the inadequacy of staff’s knowledge and perceptions towards their fundamental task in working with people with mental health illness (Tuori, 1999).

Qualified nurses around the world share the problems of psychiatric nursing and education. Ensuring high quality, ethically sensitive nursing care especially in the management of distressed and disturbed patients, necessitates a critical appraisal of the use of restraints (Kisely et al., 2005). However, alternative
ways of dealing with unwanted or harmful behaviors need to be developed and continuing use of restraints should be questioned (Sailas & Fenton, 2005).

A study conducted in 2006 by a Netherlands researcher noted that, mental health nurses are faced with an increasing number of aggressive incidents during their daily practice (Jansen, 2006). Restraints such as seclusion are often used to manage patient aggression in the Netherlands (Jansen, 2006). The nurses reported being regularly confronted with aggression in general and mostly with non-threatening verbal aggression. They perceived patient aggression as being destructive or offensive and not serving a protective or communicative function. The nurses generally perceived themselves as having control over patient behavior and reported considerable social support from colleagues. Although the nurses in this study were frequently confronted with aggression, they did not experience the aggression as a major problem (Jansen, 2006).

The majority of the nurses in the above study reported that in their perceptions, they are rarely or sometimes confronted with aggression therefore there is less need to use any form of restraint method. Although nurses perceived never/rarely being confronted with aggression, the mean in the above study of perceived number of incidents was 181 times a year (Jansen, 2005).

Oud’s (2001), findings agreed with the above study conducted by Jansen that mental health nurses are mostly confronted with, non-threatening verbal aggression and least with sexual intimidation and physical aggression. The nurses rarely viewed patient aggression as serving a protective or communicative purpose.
whiles nurses in the study by Jansen (2006) viewed the patient’s aggression as serving a protective and communicative function.

Hung, Hom and Kowloon (2007), reported that nurses are often personnel who initiate restraint use and attribute the use to ensuring the safety of the restrained and others. A focus group interview was used in the study conducted by Hung, Hom and Kowloon was to determine the perception and knowledge of the nursing staff on the use of restraints. In the study a sample size of twenty-two nurses consisting of three males and nineteen females was used. The authors concluded that restraints and restraint use have been mostly focused on nurse’s inadequate or inaccurate knowledge about the use of restraints. They also concluded that restraint use is a complex issue that needs to be understood in relation to the dynamics of the environment (Hung, Hom & Kowloon, 2007).

Jansen (2006) and Oud (2001) both agreed that nurses practicing in the mental health service are faced with some form of non-threatening verbal aggression as a daily routine. The third group of researchers Hung, Hom and Kowloon (2007) concluded that nurses frequently use restraints as intervention to control aggression and violence due to inaccurate and inadequate knowledge about the use and associated risks.

The knowledge and perception of nurses toward restraints use is considered one of the main reasons for variations in their use. To apply restraints methods nurses are to assess the patient, take a health history and carry out a physical exam (Minnick, Mion, Leipzig, Lamb & Palmer, 1998). The purpose of the assessment is
to learn the cause of a patient's behavior and work with him/her to help avoid the use of restraints (Minnick, Mion, Leipzig, Lamb & Palmer, 1998). However, if the patient is at risk of harming himself or others, nurses would need to apply major restraints first (Whitman, Davidson, Rud, & Sereika, 2001).

According to Whitman et al., (2001) the following process may be used before the application of restraint methods; for violent or self-destructive behavior management, de-escalation is used, this is when nurses use methods to help calm a patient and help the patient better control his behavior. Nurses should work with patients to learn what may cause him to become upset and possibly violent. De-escalation can begin as soon as signs that a patient may lose control of his behavior are noticed. Nurses should intervene by first speaking to the patient calmly and with respect. Nurses may also offer the patient food or drink. It is important to listen to the patient's concerns and try to understand them, such as asking what is bothering the patient or making him anxious (nervous) or agitated (easily angered). Nurses should explain what may occur if the patient cannot calm himself, and then help the patient identify ways to eliminate the use of restraints. Nurses should try to direct the patient's attention away from what is causing him stress. Nurses should also place the patient in a time-out. This is when the patient stays in an unlocked room for 30 minutes or less. Nurses may ask the patient with dementia especially what his needs are, such as if he needs food or drink. This may help keep hunger or thirst from making him agitated and violent. Nurses should also provide a calm environment to help prevent agitation in patients with dementia. This may include lowering noise levels and providing music or massage. It may
also include allowing patients to keep familiar items, such as photos of loved ones (Whitman, Davidson, Rud, & Sereika, 2001).

**Process of Restraint Use**

Risk assessment forms must be completed at admission; updated when there is a significant change in mental status, behavior, or physical/medical condition. These should be documented in the patient record and reviewed by the interventions team (Bucht, Eriksson, Karlsson, & Sandman, 2001). Bucht et al., (2001) agreed that the risk assessment form must be completed by a licensed practitioner or mental health personnel. The assessment must identify any specific situations and issues including; chronological and developmental age, size, gender, physical, medical, and psychiatric condition, personal history of physical and/or sexual abuse and cultural issues that may trigger behavior that might require the use of seclusion, mechanical restraints or chemical restraints (Bucht, Eriksson, Karlsson, & Sandman, 2001). Prior to the use of seclusion, mechanical restraints and chemical restraint, the patient must have an assessment that support that the use of isolation or restraints is necessary to assure the physical safety of the patient (Sailas & Wahlbeck, 2006).

To use restraints nurses should explain to patients the type of restraint that may be used and the reason for using it. The nurse should also tell the patient what he needs to do to avoid the use of restraints (Sailas & Wahlbeck, 2006). When the restraint process is to be applied the senior nurse will need to explain to the patient what is about to happen. During the process the senior nurse will have to protect
the patient's head while other nurses each manage an arm or leg (Sailas & Wahlbeck, 2006). The patient may also be restrained on his back or side (Stewarts, 2010). If the patient is restrained on his stomach, he is positioned so he can move his head to the side to make breathing easy. Sailas, Wahlbeck (2006) and Stewarts (2010) agreed that nurses should monitor the restrained patient at all times. Nurses should do an assessment of the restrained patient every 15 minutes. This includes checking the patient's vital signs, such as blood pressure, pulse and breathing. Sailas, Wahlbeck and Stewarts also agreed that nurses should check to make sure the restraints are on the patient correctly and that they are not too tight. They also agreed that nurses should frequently check whether the patient needs to change positions and assist him or her do it. This helps prevent skin breakdown. Nurses also should check whether the patient needs food, water, medical care, or to use the toilet (Stewarts, 2010). An order of restraint can last up to four hours. Restraint use will be terminated as soon as the patients’ behavior is tolerable and can be integrated into the general population after assessment. This may include the patient agreeing to act in a safe manner or no longer making threats against others.

When the restraint order ends, a caregiver will examine the patient and document all that happened (Stewarts, 2010).

**Family Members and Others Involvement**

Petit, (2005) stated that nurses are to ask the patient if he/she wants his family to be told about or involved with the use of restraint. If the patient says yes, the patient's family is asked if they want to be involved. With consent from the patient and his/her family, nurses, should tell the family when restraints are used,
then explain to the family the rules on the use of restraint. Petit added that nurses are to ask family members about any physical disability that may increase the patient's risk if restraints are used. Nurses may ask about past health care, health problems, or physical abuse. They may also ask about ways to help the patient control his behavior. Nurses are to ask family members to help calm the patient and help him understand how he can avoid restraint. Nurses are to try and involve the family in the discussion that takes place after the restraint use and documentation (Petit, 2005).

**Restraints Orders and Removal**

Only a licensed practitioner who has been trained in the use of isolation, mechanical restraint, and physical holding restraint may order these interventions (Wynn, 2003). The order must be for the least restrictive intervention possible that is most likely to be effective (Wright, 2003). According to Wynn and Wright all orders must specify the type of restraint method seclusion, mechanical restraint or chemical restraint. And if mechanical restraint is ordered, the order must specify the type of restraint device(s) to be used and the number of points of restraint; the licensed practitioner’s name and credentials; the date and time when the order was obtained; and the maximum length of time the intervention was ordered (Wynn 2003&Wright, 2003).

If the licensed practitioner who ordered the use of these interventions is not the patient’s treating physician, the treating physician should be consulted as soon as possible and the consultation must be documented in the patient’s record.
(Davison, 2005). Davison further indicated that if the patient does not have a designated physician for interventions of mental illness or serious emotional disturbance, the mental health residential interventions facility’s physician should be consulted and the consultation must be documented in the patient’s record. If the order for restraint is verbal, the order must be received by a registered nurse or a licensed practical nurse and signed by the ordering licensed practitioner within twenty-four hours of the order (Davison, 2005).

A new order is required if there is a change in the intervention utilized, including increasing the number of points of restraint or the application of additional restraint devices (Chien, 1999). Chien also indicated that the use of seclusion, mechanical restraints, or physical holding restraint has been discontinued, it may be used again only with a new order, even if a previously ordered time limit has not expired (Chien, 1999).

According to Gallinagh, Nevin, McIlroy, Mitchell, Campbell, Ludwick and McKenna (2002) behavioral criteria for release from seclusion, mechanical restraints or physical holding restraints must be specified by the licensed practitioner who ordered the use of seclusion, mechanical restraints or physical holding restraints. Gallinagh et al., also went on to state that, in the absence of a licensed practitioner, the behavioral criteria must be specified by a licensed practical nurse, a registered nurse or by mental health personnel with a minimum of a bachelor’s degree or two years of full time equivalent experience in the mental health inpatient interventions facility. The seclusion, mechanical restraints or physical holding must be terminated as soon as the behavioral criteria for release
have been met (Gallinagh, et al., 2002). According to the Mental Health Act (2012) of Ghana the order of seclusion, mechanical restraints and involuntary medications are ordered by the head of facility or the medical superintendent. In the absence of the medical superintendent, the ward in-charge or a senior nurse would make the order to use restraints and also to remove it after a thorough assessment of the patient had been made. Seclusion and mechanical restraints may only continue if the unsafe situation persists and should be discontinued if the unsafe situation ends (Mental Health Act, 2012).

Restraints are usually used for the safety of the patient and the staff as well. Most agencies around the world today have established standards and guidelines in the application of restraint methods especially seclusion and mechanical restraints. These guidelines vary from one location to another. Some places ban certain types of the restraints intervention altogether whiles others have time limits governing the use of restraints (National Institute for Mental Health, 2004).

According to Gallinagh, et al., (2002) only a licensed practitioner may renew the original order, including a verbal order, if a patient continues to need seclusion, and mechanical restraint, beyond the time limit of the original order. They also went on to state that under no circumstance may seclusion and mechanical restraint exceed 24 continuous hours. Seclusion and mechanical restraint may not be ordered on a PRN basis or as a standing order. Mechanical restraint may not be used simultaneously with seclusion (Gallinagh, 2002).
Each order for isolation or mechanical restraints is limited to a maximum of 4 hours for adults 18 years of age and older, 2 hours for youth ages 9 through 17, and 1 hour for children under age 9. Each order for physical holding restraint for any age patient is limited to a maximum of thirty (30) minutes (Hillard & Ziteck, 1998).

**Risks of Using Restraints**

The use of restraints in mental hospital is considered by most mental health care practitioners as an intervention to be used as a last resort when there are left with no other alternatives (Donat, 2005). Although restraint methods can be therapeutic it can serve as risks to some patients. A patient who is mechanically restrained or placed in seclusion would not be able to do his normal daily tasks. The patient may feel isolated, alone, rejected, anxious, depressed or deeply sad (Ray & Rappaport, 1995). Patients may also not be able to control when they urinates. This may increase risk for a urinary tract infection. Mechanical restraints may cause skin breakdown and bruising (Davison, 2005). Davison and Ray (2005) and Rappaport (1995) agreed that the use of frequent mechanical restraints and lack of movement may lead to loss of muscle strength. The patient may have problems with balance and be at risk for falling. Lack of movement can also lead to a lung infection (Davison, 2005; Ray & Rappaport, 1995). Ray and Rappaport (1995) indicated that if the restraints move out of the right position, the patient may have decreased blood flow to his arms and legs. The patient may also have trouble breathing. They also went on to state that if the patient should struggle against mechanical restraints this may lead to an increase in the patient's body
temperature, the patient may become dehydrated and may also have skin and muscle damage. Struggling may lead to lactic acidosis. This is a buildup of lactic acid in the muscles. Too much lactic acid can lead to heart problems (Davison, 2005; Ray & Rappaport, 1995). According to Vuckovich (2003) the medicines used for chemical restraint involuntary medications may cause nausea. The patient may become confused, restless and agitated. Involuntary medications may cause low blood pressure (Vuckovich, 2003). They may not work well with other drugs the patient takes. The patient may have body movements that he cannot control and be at risk of falling. According to Whittington, Baskind and Petterson (2006) certain medicines can decrease how well a patient breathes. He may also be at risk for seizures and loss of consciousness.

Summary of Literature

Based on the review of related literature most authors and researchers agreed that the use of restraints in the mental health facility was necessary (Brown 1993; Collazi, 2005; Dix, 2008; Geller, 1995; Miller, 1999; Stewards, 2010; Dorph-Peterson, Perri, Sampson & Lewis, 2007). The use of restraints ensures that the patient, staff and significant others on the ward were protected from harm. Some authors also believed that the use of restraints could be based on organizational factors which may leave the service providers no choice but to use restraints as an intervention to protect the patient and others on the ward (Dorph-Peterson, Perri, Sampson & Lewis, 2007).
There was little literature focusing on the knowledge and perception of nurses on the use of restraints. Some of the results showed that some nurses found the experience of restraint use demeaning and stressful (Happell & Koehn 2011; Boyd 2008 & Seo, 2012). According to Oud (2011); Nijman, (1997); Rippon (2000) and Jansen (2005) some nurses had no problems using restraints in their care delivery. Some authors also stated that there was the need to train nurses on a regular basis on the use of restraint in the face of aggressive and violent situation, although the use of restraints is still stirring an ongoing debate around the world (Hung, Hom & Kowloon, 2007). Some literature indicated that the use of restraints creates ethical dilemmas for nurses. Patient’s dignity and autonomy are given more priority. Therefore this present study sought to examine the knowledge and perception of nurses on the use of these restraint methods to identify whether the right processes were used in applying these interventions.
CHAPTER THREE

RESEARCH METHODOLOGY

The purpose of this chapter is to discuss the study design study setting, population, inclusion criteria, sample and sampling method, research ethical clearance, instrumentation, validity and reliability, data collection methods and data analysis. This chapter also describes the methods and interventions that were used by the researcher in the data collection. This chapter will guide the methodology in order to answer the research questions in the study which were; what is the knowledge of nurses on the use of restraints? What is the perception of nurses on use of restraints? Is there a difference between the knowledge and use of restraints among nurses on acute and chronic wards?

Research Design

A non-experimental descriptive cross-sectional research design was used. This design was directed towards determining the extent of the situation as it existed at the time of the study. Variables were not controlled or manipulated. The research was exploratory in nature. This is because the study took place in its natural setting and findings were grounded in reality and not in the researcher’s personal belief.

Study Setting

The study setting was the Accra Psychiatry Hospital located in Adabraka. Adabraka which is located in the city of Accra. Accra is the capital town of Ghana.
Accra Psychiatry Hospital was commissioned in 1906 to accommodate 200 patients. Currently the hospital caters for about 489 patients. The hospital is run by a management team headed by a medical superintendent. The hospital employs 339 registered mental health nurses.

**Study Population**

This study focused on registered mental health nurses. This population was chosen because the study is based on the nurses’ knowledge on the use of restraints.

**Inclusion Criteria**

The inclusion criteria for participants were; nurses who were licensed registered mental health nurses, with rank from staff nurse to principal nursing officers; nurses who had worked for six months or longer; nurses who have had at least one experience of an aggressive event within their work setting. Participant had to be fluent in the English language. Participants had to be willing to participate voluntarily in the study.

**Sample and Sampling Methods**

A sample is a subset of the whole population, which is investigated by the researcher and whose characteristics will be generalized to the entire population (Struwig et al., 2004). The sample subjects are individuals who have been selected to partake in the study.
According to the National Institute for Health Research (2005), sampling and sample size are crucial issues in pieces of quantitative research which seek to make statistically based generalizations from the study results to the wider world. To generalize in this way, it is essential that both the sampling method used and the sample size are appropriate, such that the result are representative and that statistics can discern association or differences within the result of the study (Sailas & Fenton, 2000).

The total number of registered mental health nurses at the Accra Psychiatry Hospital was 339. The research used sampling table formulated by Sailas and Fenton, (2000) was used and a sample size of 108 was derived. This formula was used because it was easy to use and had no bias. The usage of 108 subjects was recognized as an adequate chosen sample and could be seen as a representative of the study population.

A multi sampling method was used, that is stratified random sampling and then simple random sampling. These methods of sampling were used because the population for the study was on different wards. Information was sought from the nursing administration as to the type of wards available for the study. Twelve wards were identified but eight were chosen because restraints use were less common on the other wards. Eight wards were used and grouped as strata with four acute wards and four chronic wards. Each ward was allocated a number to be involved in the study. The researcher identified that there were more nurses on the acute wards than the chronic wards. From each of the ward a simple random sampling method was employed. The simple random sampling which involved the
use of the lottery method. Numbers were assigned to the participants. Those same numbers were written on pieces of paper and put in a bowl and the researcher picked out the total number of participants allocated for that ward. The individuals whose numbers were picked were included in the study. This process was carried out on selected wards in order to arrive at the sample size.

This multi sample method was used to enhance representativeness. Due to the hesitation and withdrawal of some of the participants, ultimately a convenience method of collecting the data was used in order to meet the quota for the wards and stated sample size for the study.

**Ethical Consideration**

There are ethical implications at every stage of the research process; however ethical principles were used to the guide the study. These principles included the use of beneficence, non-maleficence, fidelity, and veracity.

Beneficence is defined as an act of mercy, kindness and charity. It is suggestive of altruism, love, humanity and promoting the good of others (Baybrook, 2003). The language of the principles or rule of beneficence refers to the moral obligation to act for the benefits of others (Arneson, 2004). In application to the study, the purpose of the study was to benefit the participants and contributing to the pool of human knowledge.

Non-Maleficence is a principle that asserts an obligation not to inflict harm intentionally based on the Hippocratic maxim, primum non nocere, first do no
harm (Stedman, 2006). In application, this study would not cause any harm to the participants either physical or psychologically.

Fidelity is a principle that deals with the trust relationship (Pudiak, & Bozarth, 1994). To apply fidelity, the researcher is to ensure that there is the building of trust between the researcher and the participants where the rights of the participants are safeguarded.

Veracity, is a principle of telling the truth and not intentionally deceiving and misleading others (Carter, 1998). In this study the principle of veracity was applied when participants were duly informed of the nature of the study, its importance and their roles in it before agreeing to participate. Being part of the study was solely voluntary and participants were assured of guaranteed confidentiality.

An introductory and approval letter from the Institutional Review Board of the University of Cape Coast and the Department Of Nursing was sent to the Medical Superintendent for ethical clearance before the commencement of the study. Permission was granted by the medical superintendent to carry out the study in the hospital.

Participants were allowed to withdraw without any negative consequences and if they did not want to answer any question they were allowed to do so. Verbal consent was obtained from all participants as they were not coerced to take part in the study. No interviews were conducted. All administered questionnaires were under lock and key and the respondent’s information were coded onto a computer.
and reported as a group data. For the sake of confidentiality columns for names were not provided on the questionnaire but codes were used.

Before conducting the study the researcher ensured that participant voluntarily agreed to take part in the study and they could decline or withdraw at any point in the research process. Participants were informed and it must be understood that there would be no negative consequences such as feeling of embarrassment, loss of self-esteem or physical harm. Throughout the study the researcher guaranteed the confidentiality and respect of the participants at all time.

**Instrumentation**

Data were collected using a researcher-developed pretested instrument (Appendix A). The items in the instrument were developed after reading various literature, journals and articles related to the study area. The instrument used for the data collection consisted of semi-structured questionnaire with closed ended questions and was made of 30 items. The items in data collection instrument were designed to examine the knowledge and perception of nurses on use of restraints on the mentally ill at the Accra Psychiatry Hospital. The questionnaire had an introduction that reassured the participants of total confidentiality and anonymity. It also instructed participants on how to answer the questions in each of the various sections in the instrument. The questions were categorized into three parts; demographic data, knowledge of nurses on restraints methods and the perception of nurses on restraints method. A structured Likert-scale format was used for answering the questions. Questions asked were simple and direct for easy
understanding. Questions were devoid of threats and judgments. Questions asked were listed in a logical sequence and under headings which were related to the specific questions in the study.

Validity and Reliability

Reliability refers to instruments’ scores or observation, which are reliable if they consistently measure the same construct (Struwig & Stead, 2001). A validity and reliability test known as the Cronbach’s alpha reliability coefficient (Appendix B) was performed to test the reliability of the instrument. This test is to measure internal consistency that is, how closely related a set of items are as a group. A high value of alpha is often used (along with substantive argument and possibly other statistical measures) as evidence that the items measure an underlying construct. The cronbach’s alpha reliability coefficient normally ranges between 0 and 1. The closer the coefficient is to 0.1, the greater the internal consistency of the items in the scale. Cronbach’s alpha coefficient increases either as the number of items increases, or as the average inter-item correlation increases (that is when the number of items are constant). The result of the reliability test on the present instrument was presented as seven meaning the reliability of the instrument was acceptable as further explained in the Appendix B.

The present instrument was tested using ten registered mental health nurses at the Pantang Psychiatry Hospital. The purpose for pre-testing the instrument was to enable the researcher to identify problems with the items on the instrument. Both
chronic and acute wards were used in the pretesting. During the pretesting of the instrument a problem was identified. And the question was modified for clarity.

**Data Collection Methods**

Data were collected from the 27th of January 2014 to the 14th of February 2014. The instrument was self-administered after all major ward activities including meals time, administering of medication, ward rounds, wound dressing and documentations were completed. Prior to the administration the researcher met with the in-charges of each ward and explained the purpose for being on the wards. The in-charges of the various wards then called on all nurses on the ward and the researcher educated the staff on the research topic and the purpose for being in the hospital and on the wards. During the data collection process, many of the nurses who were interested in taking part withdrew after looking at some of the questions on the instrument. The partially filled questionnaires were then collected from the participants who were no longer interested and discarded. Participants who still had interest in the study were then selected to take part in the data collection process in order to meet up with the quota allocated the ward.

**Data Analysis**

After the questionnaires were collected they were coded and the researcher checked for completeness and errors in order for the data to be ready for the next step in the research process. The statistical package for social science (SPSS) version 22 was used for analyzing the data. Descriptive statistics such as frequency table and a chi square test were to answer the research question; is there a
difference in the knowledge and use of restraints among nurses on the acute and chronic wards. The tools used provided the researcher with support during the interpretation, condensation and the synthesizing phase.

Summary

This chapter fundamentally outlines the methodology that was used in when conducting the research that has been proposed herewith. A clear sketch has been given as to who participated in the research study, how the sample was selected, the method in which the data were collected and the statistical analysis that was exercised.
CHAPTER FOUR

FINDINGS AND DISCUSSION

The purpose of this chapter is to present the results of the study. The discussion seeks to outline main facts of the study findings based on the following research questions:

1. What is the knowledge of nurses on the use of restraints?

2. What is the perception of nurses on the use of restraints?

3. Is there a difference between the knowledge and use of restraint among nurses on acute and chronic wards?

This chapter begins with the demographic background of the participants. The results of the data analysis are reported and organized around the research questions. Also in this chapter the researcher discusses the results in attempt to determine or establish an understanding of the findings in relation to the research questions.

Data were analyzed using the Statistical Package for social sciences (SPSS) version 22. Results were presented using descriptive statistics. Percentages and ratios were computed. Data were also analyzed using cross-tabulation was used to descriptively analyze the findings. A chi square test was used to statistically analyze data. The total number of participants used was 108.
Socio-demographic Data of Participants

Participants involved in the study included registered mental health nurses who are still practicing in the psychiatry hospital.

Table 1

Demographic Data (N=108)

<table>
<thead>
<tr>
<th>Description</th>
<th>Responses</th>
<th>Frequency</th>
<th>Percentages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20-29</td>
<td>80</td>
<td></td>
<td>74.1</td>
</tr>
<tr>
<td>30-39</td>
<td>25</td>
<td></td>
<td>23.1</td>
</tr>
<tr>
<td>40-49</td>
<td>2</td>
<td></td>
<td>1.9</td>
</tr>
<tr>
<td>50-59</td>
<td>1</td>
<td></td>
<td>0.9</td>
</tr>
<tr>
<td>Sex</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>28</td>
<td></td>
<td>25.9</td>
</tr>
<tr>
<td>Female</td>
<td>80</td>
<td></td>
<td>74.1</td>
</tr>
<tr>
<td>Religion</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Christian</td>
<td>102</td>
<td></td>
<td>94.4</td>
</tr>
<tr>
<td>Muslim</td>
<td>4</td>
<td></td>
<td>3.7</td>
</tr>
<tr>
<td>Eckist</td>
<td>2</td>
<td></td>
<td>1.9</td>
</tr>
<tr>
<td>Married</td>
<td>49</td>
<td></td>
<td>45.4</td>
</tr>
<tr>
<td>Single</td>
<td>58</td>
<td></td>
<td>53.7</td>
</tr>
<tr>
<td>Divorced</td>
<td>1</td>
<td></td>
<td>0.9</td>
</tr>
<tr>
<td>Marital status</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-3</td>
<td>37</td>
<td></td>
<td>34.3</td>
</tr>
<tr>
<td>1-6</td>
<td>2</td>
<td></td>
<td>1.9</td>
</tr>
<tr>
<td>N/A</td>
<td>69</td>
<td></td>
<td>63.9</td>
</tr>
<tr>
<td>Number of children</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6-10 months</td>
<td>41</td>
<td></td>
<td>39</td>
</tr>
<tr>
<td>1-5 years</td>
<td>45</td>
<td></td>
<td>40</td>
</tr>
<tr>
<td>Number of years employed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6-8 years</td>
<td>14</td>
<td></td>
<td>14</td>
</tr>
<tr>
<td>10-16 years</td>
<td>6</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>29-30 years</td>
<td>2</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Type of ward</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute ward</td>
<td>69</td>
<td></td>
<td>63.9</td>
</tr>
<tr>
<td>Chronic ward</td>
<td>39</td>
<td></td>
<td>36.1</td>
</tr>
<tr>
<td>Staff nurse</td>
<td>70</td>
<td></td>
<td>64.8</td>
</tr>
<tr>
<td>Senior staff nurse</td>
<td>31</td>
<td></td>
<td>28.7</td>
</tr>
<tr>
<td>Position</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nursing officer</td>
<td>6</td>
<td></td>
<td>5.6</td>
</tr>
<tr>
<td>Senior nursing officer</td>
<td>1</td>
<td></td>
<td>0.9</td>
</tr>
<tr>
<td>Continuing education</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>89</td>
<td></td>
<td>82.4</td>
</tr>
</tbody>
</table>
From the above, the data sought to describe the age of the participants. One can see that a majority (74.1%) of the respondents were between the ages of 20-29 years, while minority (0.9 %) were between 50-59 years.

The respondents in the study were made up of (28) males representing 25.9% and (80) females representing 74.1%. Almost 95% of the participants were Christians, 3.7% were Muslims and 1.9% was Eckist. From the table, 45.7% of the respondents were married and 53.7% were single, 0.9% was divorced.

The majority, 63.9% of the respondents had no children, with 34.3 having between 1-3 children. 1.9% had between 4-6 children. Approximately one-third of the respondents had been employed between 6 and 10 months. However, a majority (57%) had worked at the facility between 1 and 10 years.

Majority 63.9% of participants were identified to be on the acute wards and 36.1% were participants on the chronic wards. Most of the participants were staff nurses (64.8%) making up with a minority (0.9%) senior nursing officer.

Majority of participants (82.4%) have not had continuing education on the use of restraints. 17.6% had had continuing education. For the participants who had continuing education. 9.3% had had between one and six months. 1.8% had their continuing education on between one to two years. Although seven participants had continuing education, they did not state the length of time.
Knowledge on Restraints Methods

This section sought to analyze the knowledge of nurses on restraints methods among nurses.

Table 2

Restraints Methods Used By Participants

<table>
<thead>
<tr>
<th>Restraint methods used (tick all that apply)</th>
<th>Frequencies</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seclusion</td>
<td>88</td>
<td>42.3</td>
</tr>
<tr>
<td>Mechanical Restraints</td>
<td>26</td>
<td>12.5</td>
</tr>
<tr>
<td>Physical Restraint</td>
<td>45</td>
<td>21.6</td>
</tr>
<tr>
<td>Involuntary Medication</td>
<td>49</td>
<td>23.6</td>
</tr>
</tbody>
</table>

Majority of the participants (42.3%) used seclusions whiles 12.5% used mechanical restraints, 21.6% had used physical restraints and 23.6% had used involuntary medication. Others (20.0%) had used PRN medication.

Table 3

Most Commonly Used Restraint Methods (N=108)

<table>
<thead>
<tr>
<th>Commonly used restraints</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seclusion</td>
<td>75</td>
<td>69.4</td>
</tr>
<tr>
<td>Mechanical Restraint</td>
<td>3</td>
<td>2.8</td>
</tr>
<tr>
<td>Physical Restraint</td>
<td>14</td>
<td>13.0</td>
</tr>
<tr>
<td>involuntary Medication</td>
<td>16</td>
<td>14.8</td>
</tr>
</tbody>
</table>
Majority of participants 69.4% indicated to have used seclusion most commonly whiles 2.8% used mechanical restraints more commonly and 14.8% used involuntary medication more commonly.

*Table 4*

*Presence of Agency Procedure (N=108)*

<table>
<thead>
<tr>
<th>Agencies procedure</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>20</td>
<td>18.5</td>
</tr>
<tr>
<td>Yes</td>
<td>61</td>
<td>56.5</td>
</tr>
<tr>
<td>No idea</td>
<td>27</td>
<td>25.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Follow Procedure in Applying</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seldom</td>
<td>3</td>
<td>2.8</td>
</tr>
<tr>
<td>Sometimes</td>
<td>23</td>
<td>21.3</td>
</tr>
<tr>
<td>Often</td>
<td>24</td>
<td>22.2</td>
</tr>
<tr>
<td>Always</td>
<td>13</td>
<td>12.0</td>
</tr>
</tbody>
</table>

The majority of respondents 56.5% were aware of the agency procedure outlining the use of restraints. However, 25.5% had no knowledge of the agency’s procedure. Of the 61 who indicated to know of the agency’s procedure 12.0 % always followed the agency procedure.
Table 5

Restraints to Reduce Aggression (N=108)

<table>
<thead>
<tr>
<th>Restraints to reduce aggression</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seldom</td>
<td>5</td>
<td>4.6</td>
</tr>
<tr>
<td>Sometimes</td>
<td>48</td>
<td>44.4</td>
</tr>
<tr>
<td>Often</td>
<td>37</td>
<td>34.3</td>
</tr>
<tr>
<td>Always</td>
<td>18</td>
<td>16.7</td>
</tr>
</tbody>
</table>

Majority of participants, 44.4% sometimes rely on restraints to reduce aggression whiles 16.7 always rely on the use of restraints to reduce aggression.
Table 6

Process of Restraint Use (N=108)

<table>
<thead>
<tr>
<th>Question</th>
<th>Never</th>
<th>Seldom</th>
<th>Sometimes</th>
<th>Often</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you determine if the use of restraint is prescribed by a doctor</td>
<td>Frequency 26 13 44 11 14</td>
<td>Percent 24.1 12 40.7 10.2 13</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is the removal of restraint prescribed by a doctor</td>
<td>Frequency 49 18 34 6 1</td>
<td>Percent 45.4 16.7 31.5 5.6 0.9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do restrained patients have bathroom privileges?</td>
<td>Frequency 15 2 21 22 48</td>
<td>Percent 13.9 1.9 19.4 20.4 44.4</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Respondents were asked if they determined the use of restraints by the prescription from a doctor, most of the participants (40.7%) sometimes rely on the prescription from a doctor, whiles 24.1% of participants indicated they never verified if prescription of restraints was by a doctor.

However the researcher observed that, most of participants (45.5%) never verified from a doctor before removal of restraints, although 0.9% responded that doctors always determine when to remove restraint.
Table 4.6 also shows the result of respondents on the question whether they allow restrained patients bathroom privileges, the researcher observed that most of the participants (44.4%) always allowed bathroom privileges however few of the respondents (13.9%) never allowed did.

Table 7

*Duration Of Restraints Use (N=108)*

<table>
<thead>
<tr>
<th>Hours a Client can be restraint</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-6 Hours</td>
<td>77</td>
<td>71.3</td>
</tr>
<tr>
<td>7-12 Hours</td>
<td>8</td>
<td>7.4</td>
</tr>
<tr>
<td>13-18 Hours</td>
<td>1</td>
<td>0.9</td>
</tr>
<tr>
<td>19-24 Hours</td>
<td>8</td>
<td>7.4</td>
</tr>
<tr>
<td>More than 24 Hours</td>
<td>6</td>
<td>5.6</td>
</tr>
<tr>
<td>Others(as long as patient is aggressive no time limit)</td>
<td>8</td>
<td>7.4</td>
</tr>
</tbody>
</table>

Table 4.7 showed that, majority of the participants (71.3%) restrained patients between 1-6 hours however 5.6% of the respondents restrained patients more than 24hours. Others (7.4%) specified that as long as patient is aggressive there is no time limit.
Table 8

Frequency of Restraint Use (N=108)

<table>
<thead>
<tr>
<th>How often a patient can be restrained</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Once</td>
<td>8</td>
<td>7.4</td>
</tr>
<tr>
<td>Twice</td>
<td>4</td>
<td>3.7</td>
</tr>
<tr>
<td>As many times as needed</td>
<td>95</td>
<td>88.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Others specified</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>As and when needed</td>
<td>1</td>
<td>25.0</td>
</tr>
<tr>
<td>Three times</td>
<td>1</td>
<td>25.0</td>
</tr>
<tr>
<td>When necessary</td>
<td>2</td>
<td>50.0</td>
</tr>
</tbody>
</table>

Findings revealed that, majority of respondents (88%) stated that patients can be restrained as many times as needed with minority stating that patient should be restrained twice. However others specified that 7.4% of participants chose once, 3.7% twice and 88.0% chose as many times as needed, others 25% specified that patients can be restrained as and when needed whereas 50% stated that when necessary.
Table 9

Reasons for Restraints Use (N=108)

<table>
<thead>
<tr>
<th>Reasons for use of restraints?(tick all that apply)</th>
<th>Frequencies</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduce Restlessness</td>
<td>72</td>
<td>14.6</td>
</tr>
<tr>
<td>Therapy</td>
<td>32</td>
<td>6.5</td>
</tr>
<tr>
<td>Observation</td>
<td>42</td>
<td>8.5</td>
</tr>
<tr>
<td>Altered Mental State</td>
<td>19</td>
<td>3.8</td>
</tr>
<tr>
<td>Reduce Aggression</td>
<td>100</td>
<td>20.2</td>
</tr>
<tr>
<td>Prevent Suicide</td>
<td>43</td>
<td>8.7</td>
</tr>
<tr>
<td>Patient Safety</td>
<td>93</td>
<td>18.8</td>
</tr>
<tr>
<td>Staff safety</td>
<td>87</td>
<td>17.6</td>
</tr>
<tr>
<td>Punishment</td>
<td>6</td>
<td>1.2</td>
</tr>
</tbody>
</table>

Table 9 reveals the result that restraints are mostly used to reduce aggression for observation, as a therapy for patients and staff safety; it can also be used as a form of punishment.
Table 10

Timing of Restraints Use

<table>
<thead>
<tr>
<th>At What point in time are patients restrained (tick all that apply)</th>
<th>Frequencies</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Immediately when a patient is admitted</td>
<td>7</td>
<td>6.6</td>
</tr>
<tr>
<td>when a doctor prescribes it</td>
<td>40</td>
<td>37.7</td>
</tr>
<tr>
<td>A Week After Admission</td>
<td>4</td>
<td>3.8</td>
</tr>
<tr>
<td>Any time after admission</td>
<td>55</td>
<td>51.9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Other specify</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prn</td>
<td>1</td>
<td>3.2</td>
</tr>
<tr>
<td>when aggressive</td>
<td>7</td>
<td>22.6</td>
</tr>
<tr>
<td>when necessary</td>
<td>13</td>
<td>41.9</td>
</tr>
<tr>
<td>when the need arise</td>
<td>7</td>
<td>22.6</td>
</tr>
<tr>
<td>when they are aggressive</td>
<td>3</td>
<td>9.7</td>
</tr>
</tbody>
</table>

Respondents were asked when patients are restrained. Results from table 10 indicated, that majority (51.9%) stated that any time after admission with 37.7% indicating that when a doctor prescribes it. However 12.9% also specified that when patient is aggressive representing 22.6% when necessary and 41.9% stated when the need arises.
Participants Perception of Restraints

This section sought to analyze the perception of nurses on the use of restraint

Table 11

Opinion on Use of Restraint

<table>
<thead>
<tr>
<th>What is your opinion on the use of restraints?</th>
<th>Frequencies</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>The practice should be abolished</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Restraint use should be reduced</td>
<td>12</td>
<td>11</td>
</tr>
<tr>
<td>Restraints should be used more frequently to control unacceptable behaviors</td>
<td>60</td>
<td>56</td>
</tr>
<tr>
<td>Nurses and doctors need to develop new alternatives to restraint use</td>
<td>52</td>
<td>48</td>
</tr>
</tbody>
</table>

Others specified

<table>
<thead>
<tr>
<th>Others specified</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enhance the restraint forms</td>
<td>1</td>
<td>20.0</td>
</tr>
<tr>
<td>It should be used when necessary</td>
<td>1</td>
<td>20.0</td>
</tr>
<tr>
<td>Restraint should serve its purpose and not as punishment</td>
<td>1</td>
<td>20.0</td>
</tr>
<tr>
<td>Restraint should be done with care and documented.</td>
<td>1</td>
<td>20.0</td>
</tr>
<tr>
<td>Should be used only when the need arise</td>
<td>1</td>
<td>20.0</td>
</tr>
</tbody>
</table>
Respondents who participated were asked their opinion on restraints use, majority (56%) indicated that restraints should be used more frequently to control unacceptable behaviors; meanwhile 48% indicated that doctors and nurses need to develop new alternatives to restraints use. The researcher also realized that results revealed that none of the participants wanted restraints to be abolished. However others specified their opinion as there should be improvement in the usage of restraints, restraints should be used when necessary, others stated that restraints use should serve its purpose and not as punishment.

Table 12

Does Restraints Provide Safety for Patients (N=108)

<table>
<thead>
<tr>
<th>Does Restraint Provide Safety for patients</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>1</td>
<td>.9</td>
</tr>
<tr>
<td>Sometimes</td>
<td>29</td>
<td>26.9</td>
</tr>
<tr>
<td>Often</td>
<td>36</td>
<td>33.3</td>
</tr>
<tr>
<td>Always</td>
<td>42</td>
<td>38.9</td>
</tr>
</tbody>
</table>

From table 4.12 it can be observed that, 42 participants represented as 38.9% indicated that restraints always provide safety for patients. However one participant indicated that restraints never provide safety for patients.
Table 13

Use Of Restraints on Patients (N=108)

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Seldom</th>
<th>Sometimes</th>
<th>Often</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does Restraints provide</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Safety for others</td>
<td>Frequency</td>
<td>1</td>
<td>0</td>
<td>14</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td>Percent</td>
<td>0.9</td>
<td>0</td>
<td>13</td>
<td>20.4</td>
</tr>
<tr>
<td>Are the procedures to</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>restraint patient followed</td>
<td>Frequency</td>
<td>4</td>
<td>10</td>
<td>49</td>
<td>26</td>
</tr>
<tr>
<td></td>
<td>Percent</td>
<td>3.7</td>
<td>9.3</td>
<td>45.4</td>
<td>24.1</td>
</tr>
<tr>
<td>Are seclusion, involuntary</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>medication and mechanical</td>
<td>Frequency</td>
<td>38</td>
<td>8</td>
<td>51</td>
<td>7</td>
</tr>
<tr>
<td>restraints used on the same</td>
<td>Percent</td>
<td>35.2</td>
<td>7.4</td>
<td>47.2</td>
<td>6.5</td>
</tr>
<tr>
<td>patient at the same time.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Frequency</td>
<td>17</td>
<td>17</td>
<td>59</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>Percent</td>
<td>15.7</td>
<td>15.7</td>
<td>54.6</td>
<td>10.2</td>
</tr>
<tr>
<td>Are seclusion, involuntary</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>medication and mechanical</td>
<td>Frequency</td>
<td>17</td>
<td>17</td>
<td>59</td>
<td>11</td>
</tr>
<tr>
<td>restraints used on the same</td>
<td>Percent</td>
<td>15.7</td>
<td>15.7</td>
<td>54.6</td>
<td>10.2</td>
</tr>
<tr>
<td>patients during their stay on</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>the ward.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Majority of the participants (65.7%) indicated that restraints always does provide safety for others, however, 0.9% of participants answered restraints never provide safety for others. Researcher observed that 17.6% indicated to always follow restraint procedures during the restraining process, however, 3.7% participants answered that they never followed procedures.

Results from the findings indicated that, 47.2% of the participants answered that seclusion, mechanical restraints and involuntary medications are
sometimes used on the same patient at the same time, whereas 35.2% indicated that all three restraints are never used on the same patient.

The researcher also observed that the result also revealed that, majority of the participants 53.6% stated that all three restraint methods are sometimes used on the same patient during their stay on the wards, however 15.7% indicated that they never apply the three methods on the patients during their stay on the ward.

*Table 14*

**Effects of Restraints Use**

<table>
<thead>
<tr>
<th>Effects of restraints use on patient (tick all that apply)</th>
<th>Frequencies</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychological Effects</td>
<td>90</td>
<td>44.8</td>
</tr>
<tr>
<td>Physical Effect</td>
<td>74</td>
<td>36.8</td>
</tr>
<tr>
<td>Spiritual Effect</td>
<td>1</td>
<td>.5</td>
</tr>
<tr>
<td>Psychosocial Effect</td>
<td>36</td>
<td>17.9</td>
</tr>
</tbody>
</table>

Finding revealed that respondents who participated in the study indicated that, effects of restraint on a patient could mostly be psychological others also indicated that the effects of restraints could be physical.
Statistical Analysis of Knowledge and Use of Restraints

Cross tabulation of data was used to answer the third research question which was to determine differences in knowledge and use of restraints among nurses on acute and chronic wards. The cross tabulation is to compare responses from question seven (7) to responses from question 11-23. This was to identify the knowledge, and use of restraints methods from the two type of wards. The analysis was grouped as use of restraint and knowledge on restraint methods. The data were analyzed descriptively and statistically.

Pearson Chi-square test is a statistical test commonly used to compare what one would expect to obtain according to a specific hypothesis between the observed and expected. One would also expect to see if there were deviations (differences between observed and expected) The test would be used to statistically to identify the difference in knowledge of nurses on restraint methods and use of restraints on the acute and chronic ward. The formula for calculating chi-square (2) is:

\[ \chi^2 = \frac{(o-e)^2}{e} \]

That is, chi-square is the sum of the squared difference between observed (o) and the expected (e) data (or the deviation, d), divided by the expected data in all possible categories.
Use of Restraints Methods

Table 15

Restraint Method Used and Type of Ward (N=108)

<table>
<thead>
<tr>
<th>Questions</th>
<th>Type of ward</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Acute</td>
<td>Chronic</td>
</tr>
<tr>
<td>Type of restraint used.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seclusion</td>
<td>53</td>
<td>35</td>
<td></td>
</tr>
<tr>
<td>Mechanical Restraint</td>
<td>20</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Physical Restraint</td>
<td>34</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>Involuntary Medication</td>
<td>31</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>Pearson Chi square test</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seclusion</td>
<td>4.551</td>
<td>2</td>
<td>.033</td>
</tr>
<tr>
<td>Mechanical restraints</td>
<td>2.522</td>
<td>2</td>
<td>.112</td>
</tr>
<tr>
<td>Involuntary medication</td>
<td>.015</td>
<td>2</td>
<td>.902</td>
</tr>
</tbody>
</table>

Note= $p \leq .05$

Table 4.15 reveals that out of the total number 88 who indicated to use seclusion as a restraint method most of the participants who chose seclusion as the type of restraint methods were found to be on the acute wards.

Findings from the Chi square test indicate that there is no significant difference among nurses on the acute wards and chronic with regards to which type of restraint method they use. From the test the asymptomatic significances are more than the p-value of 0.05 or 5%.
Table 16

*Commonly Used Restraint Methods And Type Of Ward (N=108)*

<table>
<thead>
<tr>
<th>Commonly used restraint method</th>
<th>Acute ward</th>
<th>Chronic ward</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seclusion</td>
<td>40</td>
<td>35</td>
</tr>
<tr>
<td>Mechanical Restraint</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Physical Restraint</td>
<td>11</td>
<td>3</td>
</tr>
<tr>
<td>involuntary Medication</td>
<td>15</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pearson Chi square</th>
<th>Value</th>
<th>Degree of freedom (df)</th>
<th>Asymptomatic significance(2-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>All three restraints methods</td>
<td>12.810</td>
<td>2</td>
<td>.005</td>
</tr>
</tbody>
</table>

Note= $p \leq .05$

Finding from the above results reveals that, 40 participants out of the total number of 75 indicated to use seclusion more frequently on the acute wards. They were followed by those who used involuntary medication more frequently.

Findings on the Chi square test sought to indicate that there was no significant difference on restraints use among nurses on the acute wards and chronic wards. This is because the chi square test value is 12.810 and an asymptomatic significance is .005 which is less than 0.05 or 5
Table 17

Restraints To Reduce Aggression and Type of Ward \( (N=108) \)

<table>
<thead>
<tr>
<th>Type of ward</th>
<th>Acute</th>
<th>Chronic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you rely on restraint methods to reduce aggression on ward</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seldom</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Sometimes</td>
<td>32</td>
<td>16</td>
</tr>
<tr>
<td>Often</td>
<td>21</td>
<td>16</td>
</tr>
<tr>
<td>Always</td>
<td>12</td>
<td>6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pearson Chi square Value</th>
<th>Degree of freedom (df)</th>
<th>Asymptomatic significance (2-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rely on restraints to reduce aggression</td>
<td>1.599</td>
<td>2</td>
</tr>
</tbody>
</table>

Note: \( p \leq 0.05 \)

Table 4.17 reveals that 12 respondents out of 18 making them the majority from the acute wards indicated that they always rely on restraint methods to reduce aggression on the ward. With 6 participants from the chronic wards indicating that restraints methods always reduces aggression on the wards.

Although the greater number of respondents who indicated that they always rely on the use of restraints methods was identified to be on the acute wards,
findings from the Chi square test indicated that there was no significant difference on the use of restraints among nurses on the acute and chronic wards.

Knowledge of Nurses on Restraints Methods

Table 18

Presence of Agency Procedures and Type of Ward (N=108)

<table>
<thead>
<tr>
<th>Knowledge on agency Procedure in Applying Restraint Method</th>
<th>Type of ward</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Acute ward</td>
</tr>
<tr>
<td>No</td>
<td>15</td>
</tr>
<tr>
<td>Yes</td>
<td>39</td>
</tr>
<tr>
<td>No idea</td>
<td>15</td>
</tr>
</tbody>
</table>

Pearson Chi square Value | Degree of freedom (df) | Asymptomatic significance(2-sided) |
1.883                   | 2                | .390         |

Note= p≤ 0.05

Thirty- nine participants from the acute wards and 22 participants from the chronic wards indicated to be aware of the presence of the agency procedure. Greater numbers of nurses on both wards are aware of the agency procedure although some still had no idea of the presence of the procedure.

Findings from the chi test indicated that there was no significant difference on the knowledge of nurses on the agency procedure on both acute and chronic wards as the values are greater than the p-value of 0.05.
Table 19

Applying Agency’s Procedure and Type of Ward (N=108)

<table>
<thead>
<tr>
<th>Do you follow agency’s procedure in applying restraints</th>
<th>Type of ward</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Acute ward</td>
<td>Chronic ward</td>
<td></td>
</tr>
<tr>
<td>Seldom</td>
<td>1</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Sometimes</td>
<td>13</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Often</td>
<td>15</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Always</td>
<td>11</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

Pearson Chi square Value

<table>
<thead>
<tr>
<th>Do you follow agency procedure</th>
<th>Degree of freedom (df)</th>
<th>Asymptomatic significance(2-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.172</td>
<td>2</td>
<td>.243</td>
</tr>
</tbody>
</table>

Note= $p \leq 0.05$

Out of the total number of respondents (63) who indicated that they knew of the agency’s procedure, 11 participants from the acute wards indicated that they always followed the agency’s procedure in applying restraints, from the chronic wards, 2 participants indicated to following the agency procedure.

Chi square test revealed that the asymptomatic significance is greater than the p value of 0.05 and hence there is no significant difference among nurses on the as to whether the participants followed the agencies procedure.
Table 20

Prescription Of Restraints And Type Of Ward (N=108)

<table>
<thead>
<tr>
<th></th>
<th>Type of ward</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Acute ward</td>
</tr>
<tr>
<td>Do you determine if the use of restraint is prescribed by doctor</td>
<td></td>
</tr>
<tr>
<td>Never</td>
<td>19</td>
</tr>
<tr>
<td>Seldom</td>
<td>8</td>
</tr>
<tr>
<td>Sometimes</td>
<td>27</td>
</tr>
<tr>
<td>Often</td>
<td>7</td>
</tr>
<tr>
<td>Always</td>
<td>8</td>
</tr>
</tbody>
</table>

Pearson Chi square Value

<table>
<thead>
<tr>
<th>Do you determine use of restraints by prescription of doctor</th>
<th>Value</th>
<th>Degree of freedom (df)</th>
<th>Asymptomatic significance(2-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1.381</td>
<td>4</td>
<td>.848</td>
</tr>
</tbody>
</table>

Note= $p \leq 0.05$

Findings from table 4.20 revealed that out of 14 participant who indicated to always apply restraints as prescribed by a doctor, 8 were from the acute wards and 6 on the chronic wards.

Chi square test indicated that there was no significant difference on the knowledge of nurses on both acute and chronic wards on whether they depend on the doctor’s prescription before apply restraints.
Table 21

Removal Of Restraints And Type Of Ward(108)

<table>
<thead>
<tr>
<th></th>
<th>Type of ward</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Acute ward</td>
<td>Chronic ward</td>
<td></td>
</tr>
<tr>
<td>Is the removal of restraint prescribed by Doctors</td>
<td>31</td>
<td>18</td>
<td>49</td>
</tr>
<tr>
<td>Never</td>
<td>12</td>
<td>6</td>
<td>18</td>
</tr>
<tr>
<td>Seldom</td>
<td>24</td>
<td>10</td>
<td>34</td>
</tr>
<tr>
<td>Sometimes</td>
<td>2</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>Always</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Pearson Chi square Value</td>
<td>4.927</td>
<td>4</td>
<td>.295</td>
</tr>
<tr>
<td>Degree of freedom (df)</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asymptomatic significance(2-sided)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The results to the question is the removal of restraints prescribed by a doctor. 31 participants from the acute ward indicated that they never remove restraints with a prescription from a doctor whereas from the chronic wards 18 participant also indicated to never relying on a doctor’s prescription to remove restraints. The results also revealed that there was no one who relied on doctor prescription to always remove restraints. However findings from the statistical test indicated there was no significant difference on the knowledge of nurses on the acute and chronic wards on whether they relied the on the doctor’s prescription to remove restraints.
Data collected from the acute wards showed that 50 participants indicated to have restrained patients between 1-6 hours, whereas on the chronic wards 27 indicated to have restrained patients between 1-6 hours. However findings from the Chi Square test determined that there was no significant difference on the knowledge of nurses on the hours a patient can be restrained as the asymptomatic significance is more than the p-value of 0.05.
Table 23

Frequency Of Restraints Use And Type Of The Ward (N=108)

<table>
<thead>
<tr>
<th>How Often Can A Patient Be Retrained in the Course of Their Stay on the Ward</th>
<th>Type of ward</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Acute ward</td>
<td>Chronic ward</td>
</tr>
<tr>
<td>Once</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Twice</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>As many times as needed</td>
<td>61</td>
<td>34</td>
</tr>
</tbody>
</table>

Pearson Chi square Value Degree of freedom (df) Asymptomatic significance (2-sided)

| How often can a patient be restrained on the stay on the ward | .339 | 2 | .844s |

Note: $p \leq 0.05$

Respondents were asked how often patients can be restrained on the ward, out of 95 who indicated as many times as needed 61 participants were on the acute wards and 34 participants were on the chronic wards.

The Chi Square test identified that there was no significance difference on the knowledge of nurses on the acute and chronic wards, with regards to how often a patient can be restrained in the course of their stay on the ward.
Findings to the question reasons for restraints reveals that more than half of the total participant’s population (100) indicated that restraints use reduce aggression on the wards with 63 participants on the acute wards and 37 on the chronic wards. However some of the participants indicated to have used restraints as a form of punishment.
From the chi test table it can be seen that there is no significant difference on the knowledge of nurses on the acute and chronic wards with regards to the reasons for restraints use as the asymptomatic difference was greater than the p-value of 0.05.

Table 25

*Bathroom Privileges And Type Of Ward (N=108)*

<table>
<thead>
<tr>
<th>Type of ward</th>
<th>Acute ward</th>
<th>Chronic ward</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do restraint patient</td>
<td></td>
<td></td>
</tr>
<tr>
<td>have room</td>
<td></td>
<td></td>
</tr>
<tr>
<td>bathroom privileges</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Never</td>
<td>9</td>
<td>6</td>
</tr>
<tr>
<td>Seldom</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Sometimes</td>
<td>12</td>
<td>9</td>
</tr>
<tr>
<td>Often</td>
<td>15</td>
<td>7</td>
</tr>
<tr>
<td>Always</td>
<td>32</td>
<td>16</td>
</tr>
</tbody>
</table>

Pearson Chi square Value: 1.016
Degree of freedom (df): 4
Asymptomatic significance (2-sided): .907

Note: \( p \leq 0.05 \)

Findings indicate that, from the acute wards, 9 participants they never allowed bathroom privileges, whereas on the chronic wards 16 participants indicated to have never allowed bathroom privileges however 32 participants on acute wards indicated to always allow bathroom privileges and 16 participants on the chronic wards also do.

Chi square test identified that there was no significant difference on the knowledge of nurses on both acute and chronic wards as whether they allowed bathroom privileges.
### Table 26

**Timing of Restraints And Type Of Ward (108)**

<table>
<thead>
<tr>
<th>At what point in time are patient restrained</th>
<th>Type of ward</th>
<th></th>
<th></th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Acute ward</td>
<td>Chronic ward</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Immediately when a patient is admitted</td>
<td>6</td>
<td>1</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>when a doctor prescribes it</td>
<td>20</td>
<td>20</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>A Week After Admission</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Any time after admission</td>
<td>37</td>
<td>18</td>
<td>55</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pearson chi square Value</th>
<th>Degree of freedom (df)</th>
<th>Asymptomatic significance (2-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Immediately when a patient is admitted</td>
<td>1.545</td>
<td>1</td>
</tr>
<tr>
<td>When a doctor prescribes it</td>
<td>5.312</td>
<td>1</td>
</tr>
<tr>
<td>A week after admission</td>
<td>.347</td>
<td>1</td>
</tr>
<tr>
<td>Any time after admission</td>
<td>.556</td>
<td>1</td>
</tr>
</tbody>
</table>

**Note:** $p \leq 0.05$

Respondents were asked at what time of the admission are patients restrained findings revealed that 55 indicated that any time after admission of which 37 were on the acute wards and 18 were on the chronic wards.

The Chi test conducted identified that there also no significant difference on the knowledge of nurse’s on the acute and chronic wards with regards to the when a patient can be restrained.
Discussion

The present study, sought to gain insight into those knowledge of nurses which influences nurses’ behavior towards patients aggression within a mental health setting. The inter-personal relationship theory would be used to guide the discussion. The theory focuses on the relationship that develops between the nurse and patients. The discussion will be organized based on the specific research questions which were:

1. What is the knowledge of nurses on the use of restraint methods?
2. What is the perception of nurses on the use of restraint methods?
3. Is there a difference in the knowledge and use of restraints among nurses on the acute wards and chronic wards?

Socio-Demographic Characteristics of Participants

A majority of participants (74.1%) in the study were between the ages of 20-29 years, As young adults they may have less experience with the use of restraint methods. The majority of the participants (74.1%) were females. According to some studies, gender of members of staff on duty influenced the number of restraints episodes occurring (Convertino, Fiester & Pinto 1980; Kirkpactrick, 1989; Morrison & Lehane 1995 & Janssen, 2007). In United Kingdom, a review of official records indicated as the number of females were increased on duty the number of restraints used especially seclusion decreased dramatically (Morrison & Lehane 1995). Two other studies in Netherlands indicated that when females nurses were on duty the use of restraints methods were very minimal (Janssen & Noorthoone, Linge, 2007; Lendemeijer, 2007). In the
present study, results demonstrated that although majority of respondent were females almost all of the participants (71.3%) indicated to have used restraints either often (31), sometimes (34) or always (12) to reduce aggression. Findings showed that, out of the 28 males 17 of them always used restraint methods to reduce aggression on the wards. Hence there were equal incidence of restraint use among the males and the females. Majority of participants (53.7%) were single. This data can be related to the age 21-29 years which in Ghana can be said to be the premarital years. Participants in the study had children, and some participants had at least between 1-3 children. One can see that the findings indicated that more nurses (63.9%) were found on the acute wards than on the chronic wards this can be attributed to the fact that, patients in the acute phases of their illnesses need more hands than those of them on the chronic wards who have been given medications for some period of time and therefore are under some form of control.

The number of years the nurses work as part of the socio demographic data is important to this study. This is because, participant’s included in the study will have had to work for at least six months. This number of months or time period is important because the researcher believe that six months is a long enough for one to have worked and gained some work experience in the Psychiatry Hospital and would have been a witness of some sought to the process of any of the types of restraints use. The researcher also believed that the number of years as a nurse on the psychiatry ward environment may determine your level of experience in the usage of restraint methods. According, to two retrospective analyses of official records by Jassen, Noorthoorne, Linge and Lendemeijer, (2007) revealed that
restraints especially seclusion was used more by less experienced nurses on duty on the psychiatry wards. These practices were noticed on the long stay wards and admission wards which in Ghana included both the chronic and acute wards. Findings revealed that out of 28 participants 16 representing (57.1%) of respondents who were within the ages of 30-59 years indicated to have often or always used restraints methods to reduce aggression on the ward. Out of 80 participants 45 representing (56.3%) indicated to have used restraints methods to reduce aggression. Results revealed that both the young and old nurses used the restraints as an intervention in order to control unacceptable behavior or aggression which rendered the environment unsafe. Although the requirement to participate in the study was one who have worked the psychiatry for a least six months and above. Other participants had worked between 7 months and 35 years. Some criteria for participating the study range between the positions of staff nurses to principal nursing officers. These groups of persons were chosen because the researcher seeks to identify the knowledge level of all the levels of nursing staffs in the hospital. Finding indicated that principal nursing officers did not partake in the study. Therefore the result of the study cannot be said to cover the entire nursing body.

Continuing staff education is a very important aspect of development in one’s skills and career and therefore improves one’s practice and competence. Every staff in a hospital should be allowed and required to take part in some form of training on a regular basis of the procedures carried out on the ward environment. This is because the practice of restraint use has change. According to
first phase of the interpersonal relationship which is the orientation phase states that the nurse helps the individual patient to recognize his or problems and determine the need for help. There is the need for nurses to be train in order to help identify patients felt need during the orientation phase. Some authors and many anti restraint advocates are calling for the abolishment or removal of restraint use in hospitals. The reasons given are that the use of restraints infringes on the patients right and violate the ethically right of the patient.

Restraints use cannot be removed or abolished from mental health nursing practice. The primary reason is psychiatry hospitals in Ghana are not well equipped to handle patients’ violence and aggression according to the worlds’ standard. The application of these interventions can only be modified and carried out in a more dignified way which would not be seen as an infringement on the patient’s right and violating patient dignity and autonomy. The researcher also believes that, all nurses are to be regularly trained in the best ways to apply these interventions (seclusion, mechanical restraints and involuntary medications) and new alternatives developed for the benefit of the patient. Findings from this study, revealed that respondents (48%) indicated that new alternatives needed to be developed. Findings of this study showed that majority of nurses (82.4%) who had had some form of continuing education were from the acute wards. This could be due to the fact that they may be assumed to use restraints methods more frequently than their counterparts on the chronic wards hence when the opportunity to train staff occurs those in the acute wards are favored. A study conducted by Noorthoorne and Linge (2007) showed that staff education influenced restraints
incidences. The findings indicated that higher educated staff on duty led to lower levels of restraints use especially mechanical restraints and seclusion. Findings in the present study revealed that, majority of the participants (61.1%) who had indicated to have had continuing education applied restraints as those who had not had continuing education.

**Knowledge of Nurses on Use of Restraints**

Most mental health hospitals around the world today have some form of policy or procedure manual of which roles of nurses are stated and their practices and procedures are guided by. In Ghana, it was identified at the time of this study that the Mental Health Policy was still under-going review. Therefore nurses were using the procedure manual which was prepared by the Nurses and Midwifes Council. The investigation of the knowledge of nurses on the presence of an agencies procedure indicated that majority of the participants (56.5%) were aware of the presence of the procedure manual (guidelines). These guidelines were to ensure that procedures carried out on the ward environment were in conformity with the standards, for ethical dilemmas to be eliminated and interventions carried out for the benefits of patients. With this understanding it was assumed that majority of nurses could be said to be performing procedures based on the acceptable standards. 22.2% of participants who knew of the existence of a procedure manual often followed the stated process in performing their duties. Although some (56.5%) of the participants indicated that they were of the procedure manual but (3%) did seldom follow the process when applying restraints. However, some of the participants indicated they had no idea of the
existence of the guidelines which also demonstrated that nurses did not follow the standard practice.

The strongest justification for the use of restraints in hospitals is the protection of the patient, others or both. Karlsson, Bucht, Eriksson, and Sandman, (2001) indicated that aggression which could be verbal or physical, constitutes one of the major reasons why restraint methods are applied. These aggressive behaviors may be directed to other patients, staff or even to themselves (self- harm). They also added that psychological disorder may account for the patient becoming delusional, disorientated and confused (Karlsson, Bucht, Eriksson, & Sandman, 2001). Curtis and Capp, (2003) also stated that behaviors of patient that disrupted the therapeutic environment which may include tearing down of curtains and smearing body fluids on themselves and on the walls. They also stated that restraints especially seclusion was utilized as treatment measure or therapy (Curtis & Capp, 2003). Often medication and verbal therapies are insufficient to control potentially dangerous and aggressive patients (Chakrabarti, 2010). Findings from this study revealed some reasons why participants in this study applied restraint, major reason were to reduce aggression on the ward, which is consistent with literature findings also the second most reason was for the patient safety. The researcher believes that, restraining of violent or aggressive patients allows the staff in psychiatric hospitals to feel safe enough to perform basic psychotherapeutic tasks that often serve to prevent or avoid further violence. However results of this study indicated that nurses not only use restraints as a last resort but as a measure to reduce aggression and violence of patients, as majority
of the participant (34.3%) indicated to often using restraints methods to reduce aggression on the wards. Therefore restraints were not only used as a therapy but also were used to prevent further aggression or violence on the ward.

According to the Mental Health Act 2012, Ghana, restraints are to be initiated by the head of the hospital, in his absence a senior nurse or a ward in-charge would have to initiate the use of restraint. According to some literature, the use of restraints should be viewed as an extraordinary event and should be limited to recommended indications (Curtis, & Diamond, 1997). Restraints should be prescribed by a doctor who is responsible for the patients’ case; in his absence another doctor on duty could initiate restraint use on the patient, but will immediately hand over if the patient’s doctor becomes available. Nurses should also be trained in the timely and comprehensive assessment processes of patients to determine persons at risk of restraint interventions since nurses are found to be with the patient all the time. In Ghana although ward in-charges are next in line to initiate restraints use after the head of hospital according to the mental health act (2012). The ward in-charges are usually not on duty during the weekend and night shifts. Hence there is the need to train all nurses on the ward in that on every shift there is a competent nurse knowledgeable in the process of restraint initiation, application and removal.

Findings in this study on whether nurses follow doctor’s prescription in order to initiate and remove restraints in this present study indicated that 40.7% sometimes follow the doctor’s prescription before initiating restraints and (45.4%) removed restraints without following the standard procedure of receiving an order
or prescription from the doctor. One can understand that to apply restraint method requires a written order by the physician. According to literature restraints should immediately be discontinued when less restrictive alternatives are feasible (Emde & Merkle, 2002). The removal can also come about after assessing the patient and identifying that he is no longer a threat to self and others and the situation is safe for the smooth running of the ward. The restraints are removed to allow the restrained patient back into the general population. When patients’ restraints are removed there should be the provision of counselling, reassurance and support for the patient and explanation for the purpose for the use of the restraint method that was applied. Patients should then be reintegrated into the program milieu. Nurses core competencies in the field of restraints should be continuously monitored and evaluated to ensure the right procedure of mental health care nursing are followed. To restrain a patient the health team must assess the patient, determine the number of hours a patient is to be restrained, secluded, mechanically restrained or involuntarily medicated. With this information patients are not unnecessary restrained for unwarranted hours. The present study does not support findings from literature, this is because to restrain and remove restraint there are processes to be followed but from the study majority of participants (86.3%) did not verify restraints application and removal from a doctor.

Findings from the study revealed that majority of the participant (71.3%) indicated to have restrained patient less than twenty four hours. Some literature indicated that patients cannot be restrained (seclusion) for more than twenty-four hours whiles others stated that patients can be restrained more than twenty four
hours based on the assessment report of the patient restrained (McPhillips & Sesky, 1998). Although some authors stated that patients should not be kept under restraint for more than twenty four hours (Veltkamp, Nijman, Stolker, Frigge, Dries & Bowers, 2008). Others stated that patients could be restrained for more than twenty for hours especially during the use of seclusion (Vartiainen, Vuorio, Halonen, & Hakola, 1995). Some authors stated that in the case of mechanical restraints, patient’s older than eighteen years should not be mechanically restrained for more than four hours and for individuals younger than eighteen should not be restrained more than two hours (Carpenter, Hannon, McCleery, & Wanderling, 1988). To restrain a patient it solely depends on the patient condition especially when patient is extremely aggressive and should be kept away from others in order not cause further aggression on the wards, this will end up disrupting the therapeutic nature of the ward environ (Chien, 1999). Seclusion will be appropriate based on the continuous assessment of the patient and situation assessed as not safe (Chien, 1999). Patient can be secluded for more than twenty four hours with constant monitoring an assessment (Glover, 2005). Results from the present study sought to support findings from literature with regards to the restraining of patients less than 24 hours.

One can see from the finding that 44.4% participants always allowed bathroom privileges although some participants indicated they did not allow bathroom privileges for fear of patient becoming aggressive and violent and not wanting to continue the therapy. When a patient is restrained he or she is to be allowed bathroom breaks when the patient restrained asks for it (Allen, 2000).
Bathroom privileges may be a problem in situations where there were no toilet facilities in the seclusion rooms. Currently in Accra Psychiatry Hospital where the study was conducted, the seclusion rooms do not have a toilet facility. Therefore, patients would have to be allowed out of their seclusion rooms to visit the washroom. Some staff also stated that some patients use the going to the bathroom as a ploy to be released from the restraints especially during seclusion. The basic dignity of patients who have been restrained should be protected, e.g. they should be provided with regular personal hygiene, bathroom breaks, exercise, nutritional and fluid breaks (Fassler, & Cotton, 1992). Patients who are restrained should be provided with a comfortable environment that supports and maintains human dignity, is safe, clean and attractive, has suitable lighting and ensures both auditory and visual privacy; natural light and exterior views should be used to enhance the environment and reinforce orientation; and ventilation should allow for acceptable levels of temperature and humidity and elimination of odours (Soloff, Gutheil, & Wexler, 1985). The present study therefore does not support the findings from literatures with regards to the processes of restraints uses.

A majority of the respondents (51.9%) indicated to use restraints any time after admission. According to Marangos-Frost and Wells (2000), upon admission to the ward, both the patient and the parent, guardian, temporary caregiver, or legal custodian, as appropriate, must be informed and provided a copy of the facility’s policy regarding the use of seclusion, mechanical restraints, and involuntary medication during an emergency safety situation. This policy must be communicated in a way that is understood by the patients and his or her parent,
guardian, temporary caregiver, legal custodian (Marangos-Frost & Wells, 2000).
When necessary, the facility must provide interpreters or translators (Donovan, Siegel, & Zera, 2003). Donavan, Seigel and Zera also recommended that an acknowledgement, in writing, from the patient and the parent, guardian, temporary caregiver, or legal custodian, as appropriate, that he or she has been informed of the facility’s policy on the use seclusion, mechanical restraints, and involuntary medication in an emergency safety situation. The acknowledgement must be placed in the patients’ record. Findings from the study showed that majority of the participants (51.9%) indicated that restraint methods can be applied any time after admission which is consistent with literature findings

**Perception on Restraint Methods**

The result of the study demonstrated participants indicating to have used more than one of the restraint methods on the same patient at the same time. Majority of the participants (54.6%) findings also indicated to have used more than one restraint methods on the same patient during their long stay on the wards. Weiss, (1998) stated that it has become imperative to use more than one restraints method in the management of an aggressive patient. According to Weiss the use of one restraint may depend on the other to reduce the level of aggression in a patient. Weiss also went on to reveal that giving time out in forms of seclusion does not influence the psychotic disorder hence there is the need to use drugs which would control the psychotic disorders (Weiss, 1998). Findings in this present study revealed that more than one restraint methods can be used on the same patients at the same time or during the patients stay on the ward. This
situation may occur because; some patients usually do not only present with psychiatric problems but can be physically and verbally aggressive as well. In this situation more than one restraint methods can be used on the patient. Involuntary medication and seclusion are usually used together and more frequently. This is because some patients when administered the medication can still be very drowsy and aggressive and therefore in order to prevent them from harming themselves and others they are put in seclusion rooms this is consistent with literature findings. The use of mechanical restraints with other forms of restraints is rarely used (Dorfman & Kastner, 2004). Also a patient can experience all three of the restraints methods at one points of their admission on the wards. The use of more than one restraint methods can be attributed to the fact that some patients respond poorly to some of the restraint methods especially when a patient is placed in a seclusion room and no medication is administered the patient can still be very noisy and can disrupt the therapeutic nature of the ward hence most of the time patients are medicated before they are sent to seclusion rooms in order to calm them down. The present study support literature with the use of more than one restraints method on the same patient.

Some people view restraint of psychiatric patients as a violation of basic human rights, others as a necessity for the control of violence, and yet others as a therapeutic modality. With regards to the use of seclusion as a restraint method a majority of the participants (69.4%) indicated they used seclusion and it was the most common method used. Although seclusion serves as a safe place for therapy of the patient it can be a place where patients can carry out their suicidal thought.
Therefore it is necessary for every patient to be properly assessed and ensured that they a good candidate for seclusion. If it becomes very necessary to use seclusion then a one to one care is required (Glover, 2005).

To ensure that safety of the patient, seclusion should not be used as a form of punishment for the convenience of staffs. Some nurses find the use of restraint methods especially seclusion as a very convenient restraint method when a patient shows the least signs of aggression or violence. Restraint methods can be said to be a safe haven for agitated patient when applied properly (Evans, 2002). It can also be a source of anxiety and feeling of neglect, isolation and loneliness when not applied properly (Evans, 2002). Mechanical restraints can be said to be the binding of a patients extremities with some form of materials to limit body movements. Although not seen to be often used as seclusion, it is said to be equally effective in calming an aggressive or agitated patient (Duxbury, & Whittington, 2005). This method is said to be used on patients who are physically aggressive and can cause harm to self and others. Mechanical restraints although used in the hospital setting can be said to be used especially among patient who are experiencing alcohol withdrawal symptoms where their extremities are tied to the bed post with gauze during the process of withdrawal seizures (Duxbury, & Whittington, 2005). This intervention prevents the patient from falling of the bed. Mechanical restraints are restraint methods witnessed when most patients are being brought to the hospital by relatives. They are tied up with metal chains, dry lines, belts, pieces of clothes and in handcuffs. Mechanical restraint is seen as one of the interventions used in calming patients. It can be very stressful for the patient because the patient is tied
down in a particular position which can cause detrimental body injuries and impair blood flow.

**Differences in the Knowledge and Use of Restraints**

Chi-square is a statistical test commonly used to compare observed data with data we would expect to obtain according to a specific hypothesis or research question. The chi square test is always testing what scientist call the null hypothesis, which states that there is no significant difference between the expected and the observed result.

It could be observed that, findings after the Chi test indicated there were no significant difference in use and knowledge and use of restraints among nurses on the acute wards and chronic wards. With the Chi square test value (\(p-value\)) less or equal to ≤0.05. any figure less or equal to the p-value of 0.05 indicates that there is significant difference in the result. But if the result from the chi test is greater than the p-value of ≥ 0.05 then there is no significant difference in the results. Results from chi test table reveled that result were greater than the p-value of 0.05 which explain that there were no significant difference in the knowledge and use of restraints among nurses on both the acute wards and chronic wards. These findings could be attributed the fact that nurses at the Accra Psychiatry Hospital were yearly rotated on the various wards hence nurses gained same experience.
CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

The purpose of this chapter is to provide a summary of the research study, draw conclusions and make recommendations for future research, education and clinical practice.

Summary

Given the prevalence of restraint use across inpatient psychiatric services the lack of data on the knowledge and perception of nurses of this practice is striking. Mental health problems are an international and national concern. More than 27% of adult Europeans are estimated to experience at least one form of mental ill health during any one year (Wittchen & Jacob 2005).

The purpose of this study was to examine the knowledge and perception of mental health nurses on the use of restraint methods among mentally ill. Although there are different restraints used in other areas of health, the primary focus was on the use of seclusion, mechanical restraints, and involuntary medication. In Ghana the use of seclusion, mechanical restraints and involuntary medication can only be applied in cases of emergency and only the head of facility or senior nursing staff in-charge of the ward can initiate the use of restraints. The research questions around which the study was conducted were what was the knowledge and perception of the nurses on the use of restraints, and was there a difference in knowledge and use of restraints among nurses on the use on the acute and chronic wards.
A non-experimental descriptive cross-sectional research methodology was used for the study. This involved the collection of data in order to answer questions concerning the knowledge and perception of nurses on the use of restraints among mentally ill. In this present research topic the cause or independent variable was restraint methods and the effects or dependents variables were the knowledge and perceptions of nurses. A multi-sampling method was used in this study, stratified random sampling and simple random sampling method (lottery method) because the wards to be used were grouped into strata and a specific quota was allocated to each ward. After the quotas were allocated a simple random sampling (lottery method) was used to derive the total number needed for the study. These methods of sampling were used to enhance representativeness, a total sample size of 108 were used. An introductory letter from the Institutional Review Board and Department of Nursing, of the University of Cape Coast were sent to the Medical Superintendent for ethical clearance before the commencement of the study.

Data were analyzed using the statistical product and service solution (SPSS) version 22. Data were presented using descriptive statistics. A cross tabulation and a chi test were used to analyze the data in order to answer the third research question. Findings from the study were:

1. A majority of the participants were between the ages of 20-29 years with female making up the majority, also one can see that participants had worked on the ward for at least six months and is anticipated to have experience some form of restraint method. Most of the nurses with majority (63.9%) from the acute wards had had some form of education on the use
of restraint method. The data collected also revealed majority of the participant (56.5%) knew that agency or hospital had a procedure with which to carry out restraints method but only a few of them follow the step in the procedure guidelines.

2. A majority of the participants (44.4%) relied on the use of restraint methods to reduce aggression on the wards. Additionally a majority of the nurses did not rely on the doctor’s prescription before applying restraints. Patients are restrained between 1-6 hours although some (5.6%) indicated to have restrained for more than 24 hours.

3. Some reasons for the application of restraint methods indicated that some reasons for using restraints were to reduce restlessness, aggression and for the safety of the patient and staffs. A few of the participant indicated that it could be used as a form of punishment.

4. Most participants (44.4%) indicated that patients restrained especially ones in seclusion are allowed bathroom privileges.

5. Restraint methods should be used to control unacceptable behavior. Others also indicated that doctors and nurses should develop new alternatives to restraints use. Some of the participants also indicated that restraint methods should only be used when necessary and not for the convenience of the staff.

6. All three methods of restraints indicated in the study can be used on the patient at the same time or one point in time of their long stay on the ward.

7. Seclusion as compared to other forms of restraint methods and it was used more commonly than others.
8. Findings indicated that there were no significant difference in knowledge and use of restraints among nurses on the acute wards and chronic ward.

**Conclusions**

It is the goal of nursing to give care and treatment without the infliction of pain, but pain unfortunately accompanies some treatments. Hippocrates stated ‘primum, non nocere’, (‘first, do no harm’). Stabilising patients with dangerous behaviour requires the flexible use of restraint methods, with the safety of the patient always first and foremost. It becomes more difficult to provide a safe therapeutic environment for aggressive and violent patients without the use of these methods.

To maintain patients’ dignity and autonomy restraints should only be considered a last resort and safety of the patient should be highly considered during application. If restraint method should be used at all, its use should be guided by the mental health act or policy and the mental health ethical code of practice. This would help ensure the improvement of patient’s mental status rather than causing deterioration. Overall, the nurses in this study demonstrated a modest level of knowledge of restraint use. Statistical analysis also revealed that there was no significant difference in the knowledge levels among nurses on the use of restraints methods on acute and chronic wards.

Guidelines should be developed in psychiatric hospitals in Ghana, dealing with when to act, whether to use restraint, and the duration of restraint. Legal and regulatory controls need to be implemented to monitor the use or misuse of these restraint methods. This must be tempered by acknowledgement of the need for added resources that ensure adequate staffing and training in the appropriate use of
these procedures to prevent violence. It is to be hoped that the use of mechanical restraints and seclusion will be rendered obsolete by advances in the field of psychiatry such as the use of psychopharmacology and the therapeutic milieu.

**Recommendations**

The findings of the study have implications and recommendations for research, education and practice.

**Future research**

1. From the review of literature, majority of studies were conducted internationally, so more studies are needed to improve our understanding of restraints practices in the Ghana and other parts of the West African coastline. The majority of studies were conducted in acute ward settings. None of the studies investigated the basis for differences between the use of restraints methods in the acute and chronic wards.

2. There was no consistent definition of restraints, restraint methods or practices, so comparisons between different studies were difficult. There should be a uniform way of reporting seclusion rates to make comparisons easier. A universal event-based rate and incident-based rate system could be the solution. There is a need for national studies on seclusion, mechanical restraints, and involuntary medication rates.

3. There were only a few papers reporting that staff used some sort of intervention before initiating a restraint method especially seclusion. From the study there was very little evidence that staff tried to calm patients
down or that they used less restrictive containment measures, so perhaps a qualitative study focusing on this would be helpful.

Education

1. There is the need for the introduction of restraints methods as course in the curriculum at the basic level such as in the nursing training colleges.

2. There should be regular training of staffs especially registered nurses in the mental health field on the use of restraint methods especially on the use of seclusions, mechanical restraints and involuntary medication. The training should be directed towards the purpose and importance of the restraint methods.

3. Mental health nurses especially should be educated in appropriate communication and dialogue skills. This use of these skills may be effective in reducing conflict and reducing aggression. This training should be in the forms of workshops, in-service training among others.

4. There were many reasons for restraining patients, but definitions restraint methods varied across studies and countries. Some of the reasons for restraining a patient were vague, e.g. if patients were restrained because they became assaultive, does that mean they were physically aggressive or verbally aggressive? If a patient was restrained because of disruptive behavior, does that mean the patient ignored ward rules, was shouting and screaming or refused to listen to staff? Defining the exact patient behavior leading to restraint use is very important to draw sensible conclusions.
Clinical Practice

1. Results revealed that most nurses knew of the existence of the agency’s procedure but did not use or follow the guidelines. It is therefore recommended that with development of the new mental health procedure manual each wards in the hospital should be given one, so as to serve as a reference point for practice.

2. The results also revealed that some nurses do not allow bathroom privileges, this can be said to be violating the patients right to dignity and privacy. Therefore, facilities or arrangements for toileting should be required once the decision to restraint especially seclude is made.
REFERENCES


doi:10.1192/apt.11.5.362


and emergency department guidelines. London. *Journal of Mental Health And Psychiatry Services* 7, 23-27


doi:10.1177/0020764011431543


Wykes, N. Tarrier, K., & Lewis, S. (Eds.), *Outcome and innovation in psychological treatment of schizophrenia*. Chichester, NY: John Wiley & Sons.


APPENDIX (A)

DATA COLLECTION INSTRUMENT

This study seeks to explore the knowledge and perception of nurses on the use of restraints among the mentally ill. Responses should reflect your personal knowledge and perception about the use of restraints. There are no wrong or right answers. This will be an anonymous process. Please do not write your name, or other identifying information on the questionnaire. This questionnaire contains 30 items and will take 10 to 15 minutes to complete. Read each question carefully and make a selection by checking the box. For example

Never [ √ ]  Seldom [ ]  Sometimes [ ]  Often [ ]  Always [ ]

If you need to change your selection, check the other box and darken in your previous selection. Never [ ]  Seldom [ ]  Sometimes [ ]  Often [ ]  Always [ ]

Please select the response that most closely represents you or your opinion.
Socio-Demographic data of participants

1. Age
   20 -29 [ ]  30 – 39 [ ]  40 – 49 [ ]  50 – 59 [ ]  60 and above [ ]

2. Sex
   Male [ ]   Female [ ]

3. Religion
   Christian [ ]  Muslim [ ]  Traditionalist [ ]
   other ………………………………………………..

4. Marital status
   Married [ ]  Single [ ]  Divorced [ ]  Separated [ ]

5. Number of children
   1 – 3 [ ]  4 – 6 [ ]  7 and above [ ]  N/A [ ]

6. What is your total length of employment as a nurse in the mental health hospital?
   Specify ………………………………………………..

7. Type of ward
Acute ward [ ]  Chronic ward [ ]

8. What is your total length of stay on this type of ward?
Specify………………………………………………

9. What is your position
Staff nurse [ ]  Senior Staff nurse [ ] Nursing officer [ ]  Senior nursing officer [ ]
Principal nursing officer [ ]

10. Have you had any continuing education on the use of restraint methods?
Yes [ ]  No [ ]
Specify length of program or offering
………………………………………………………………

Knowledge on restraint methods

11. Which of the following restraint methods do you use? ( √ ) tick all that apply
Seclusion [ ]
Mechanical restraint [ ]
12. Which of the restraint method do you use most commonly?

- Seclusion [ ]
- Mechanical restraint [ ]
- Physical restraint [ ]
- Involuntary medication [ ]
- Other specify ………………………………….. [ ]

13. Does the agency have procedures controlling application and use of each restraint method?

- Yes [ ]
- No [ ]
- No idea [ ]

If Yes answer question 13; if No or No idea move on to question 15.

14. Do you follow the agency procedure in applying each of the restraint methods?

- Never [ ]
- Seldom [ ]
- Sometimes [ ]
- Often [ ]
- Always [ ]
15. Do you rely on the use of a restraint method to reduce aggression on the ward?

Never [ ]  Seldom [ ]  Sometimes [ ]  Often [ ]  Always [ ]

16. Do you determine if the use of restraints is prescribed by a doctor before using?

Never [ ]  Seldom [ ]  Sometimes [ ]  Often [ ]  Always [ ]

17. Is the removal of restraint prescribed by a doctor?

Never [ ]  Seldom [ ]  Sometimes [ ]  Often [ ]  Always [ ]

18. How many hours can a client be restrained on any occasion?

1 – 6 Hours [ ]

7 – 12 Hours [ ]

13 – 18 Hours [ ]

19 - 24 Hours [ ]

More than 24 hours [ ]

Other specify ........................................

19. How often can a patient be restrained in the course of his/her stay on the ward?

Once [ ]
Twice [ ]

As many times as needed [ ]

Other specify………………………………………

20. What are the reasons for use of restraints? (√) tick all that apply

Reduce restlessness [ ]

Therapy [ ]

Observation [ ]

Altered mental state [ ]

Reduce aggression [ ]

Prevent suicide [ ]

Patient safety [ ]

Staff safety [ ]

Punishment [ ]

Other Specify…………………………………………..

21. Do restrained patients have bathroom privileges?

Never [ ] Seldom [ ] Sometimes [ ] Often [ ] Always [ ]
22. At what point in time are patients restrained? (✓) tick all that apply

Immediately when patient is admitted [    ]

When a doctor prescribes it [    ]

A week after admission [    ]

Any time after admission [    ]

Other please specify ………………………………………..

Perception of restraint methods

23. What is your opinion on the use of restraints? (✓) Tick all that apply.

The practice should be abolished [    ]

Restraint use should be reduced [    ]

Restraints should be used more frequently to control unacceptable behaviors[    ]

Nurses and doctors need to develop new alternatives to restraint use [    ]

Other specify……………………………………..

24. Does restraint use provide safety for the client?

Never [    ] Seldom [    ] Sometimes [    ] Often [    ] Always [    ]

25. Does restraint use provide safety for others?

Never [    ] Seldom [    ] Sometimes [    ] Often [    ] Always [    ]
26. What are the effects of restraint use on patients? Tick all that apply.

Psychological effect [ ]

Physical effect [ ]

Spiritual effect [ ]

Psychosocial effect [ ]

Other please specify [ ]

27. Are the procedures to restrain patients followed?

Never [ ] Seldom [ ] Sometimes [ ] Often [ ] Always [ ]

28. Are seclusion, involuntary medication and mechanical restraints used on the same patient at the same time?

Never [ ] Seldom [ ] Sometimes [ ] Often [ ] Always [ ]

29. Are seclusion, involuntary medication and mechanical restraints used on the same patient during their stay on the ward?

Never [ ] Seldom [ ] Sometimes [ ] Often [ ] Always [ ]

30. Please provide any additional comments you would like me to know.
APPENDIX B

CRONBACH'S ALPHA RELIABILITY COEFFICIENT TEST

To interpret the output, you can follow the rule of George and Mallery (2003):

> .9 (Excellent), > .8 (Good), > .7 (Acceptable), > .6 (Questionable), > .5 (Poor),
and < .5 (Unacceptable)

- Cronbach's alpha reliability coefficient normally ranges between 0 and 1.

- The closer the coefficient is to 1.0, the greater is the internal consistency of
  the items (variables) in the scale.

- Cronbach's alpha coefficient increases either as the number of items
  (variables) increases, or as the average inter-item correlations increase (i.e., when
  the number of items is held constant).
### Item Statistics

<table>
<thead>
<tr>
<th>Item</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td>1.5714</td>
<td>.78680</td>
<td>7</td>
</tr>
<tr>
<td><strong>Sex</strong></td>
<td>1.2857</td>
<td>.48795</td>
<td>7</td>
</tr>
<tr>
<td><strong>Marital Status</strong></td>
<td>1.5714</td>
<td>.53452</td>
<td>7</td>
</tr>
<tr>
<td><strong>Number of Children</strong></td>
<td>2.7143</td>
<td>1.60357</td>
<td>7</td>
</tr>
<tr>
<td><strong>Total of Employment Years</strong></td>
<td>8.4286</td>
<td>12.10519</td>
<td>7</td>
</tr>
<tr>
<td><strong>Type of ward</strong></td>
<td>1.2857</td>
<td>.48795</td>
<td>7</td>
</tr>
<tr>
<td><strong>Total Length of Stay Years</strong></td>
<td>1.8586</td>
<td>1.43411</td>
<td>7</td>
</tr>
<tr>
<td><strong>Your Position</strong></td>
<td>1.8571</td>
<td>.89974</td>
<td>7</td>
</tr>
<tr>
<td><strong>Seclusion</strong></td>
<td>.7143</td>
<td>.48795</td>
<td>7</td>
</tr>
<tr>
<td><strong>Mechanical Restraint</strong></td>
<td>.4286</td>
<td>.53452</td>
<td>7</td>
</tr>
<tr>
<td><strong>Physical Restraint</strong></td>
<td>.5714</td>
<td>.53452</td>
<td>7</td>
</tr>
<tr>
<td><strong>Involuntary Medication</strong></td>
<td>.5714</td>
<td>.53452</td>
<td>7</td>
</tr>
<tr>
<td><strong>Commonly Use Restraint Method</strong></td>
<td>1.8571</td>
<td>1.46385</td>
<td>7</td>
</tr>
<tr>
<td>Category</td>
<td>Mean</td>
<td>Standard Deviation</td>
<td>n</td>
</tr>
<tr>
<td>-----------------------------------------------</td>
<td>------</td>
<td>--------------------</td>
<td>---</td>
</tr>
<tr>
<td>Continuing Education Specify Months</td>
<td>.4457</td>
<td>.77601</td>
<td>7</td>
</tr>
<tr>
<td>Do You Follow Procedure in Applying</td>
<td>3.5714</td>
<td>1.13389</td>
<td>7</td>
</tr>
<tr>
<td>Do You Rely On Restraint Methods to Reduce Aggression on Ward</td>
<td>3.7143</td>
<td>1.11270</td>
<td>7</td>
</tr>
<tr>
<td>Do You Determine if the use of Restraint is Prescribed by Doc</td>
<td>3.2857</td>
<td>1.25357</td>
<td>7</td>
</tr>
<tr>
<td>Is the removal of restraint prescribed by Doctors</td>
<td>2.1429</td>
<td>1.06904</td>
<td>7</td>
</tr>
<tr>
<td>Hours a Client can be restraint on occasion</td>
<td>1.4286</td>
<td>1.13389</td>
<td>7</td>
</tr>
<tr>
<td>Reduce Restlessness</td>
<td>.8571</td>
<td>.37796</td>
<td>7</td>
</tr>
<tr>
<td>Observation</td>
<td>.2857</td>
<td>.48795</td>
<td>7</td>
</tr>
<tr>
<td>Altered Mental State</td>
<td>.2857</td>
<td>.48795</td>
<td>7</td>
</tr>
<tr>
<td>Prevent Suicide</td>
<td>.5714</td>
<td>.53452</td>
<td>7</td>
</tr>
<tr>
<td>Patient Safety</td>
<td>.8571</td>
<td>.37796</td>
<td>7</td>
</tr>
<tr>
<td>Staff safety</td>
<td>.8571</td>
<td>.37796</td>
<td>7</td>
</tr>
</tbody>
</table>
Do Restraint Patient have Room

Therapy when a doctor prescribes it

Any time after admission

Restraint Use should be reduced

Restraint use should be used more frequently to control unac

Nurses and Doctors needs to develop new alternatives to rest

Does Restraint Provide Safety for client

Does Restraints provide Safety for others

Psychological Effects

Physical Effect

Psychosocial Effect
Are the procedures to restraint followed  

Are Seclusion, involuntary medication and mechanical restraint 

Are Seclusion, involuntary medication and mechanical restraint