Barriers and motivating factors associated with patient incident reporting among nurses at Kigali University Teaching Hospital

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by

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DECLARATION

I, Uwimana Lucie, declare that this dissertation titled: "**BARRIERS AND MOTIVATING FACTORS ASSOCIATED WITH PATIENT'S INCIDENT REPORTING AMONG NURSES AT KIGALI UNIVERSITY TEACHING HOSPITAL**" is my original work. It is submitted in partial fulfillment of the requirement for masters in Nursing Sciences, college of Medicine and Health Sciences. It has never been submitted for other purpose, or at any other University. Sources of information utilized in this work have been acknowledged in the reference list.

Uwimana Lucie

Signature…… Date…….

DEDICATION

I dedicate this work to my family, to my friends and to all my classmates for their support and encouragement. I strongly dedicate this work to my supervisors Banamwana Gilbert, Dr. Olivia Bahemuka and Prof Sheila Shaibu for their support.

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ABSTRACT

Background: Incident is an unintentional and often destructive event that interrupts the development and continuation of the work. Institute of Medicine´s record an annual death of about 44000 to 98000 individuals who die due to incidents. In addition, literature found that 5%-15% of hospital admission patients encounter incidents.

Aim: the aim of this study was to assess barriers and motivating factors associated with patient incident reporting among nurses at Kigali University Teaching Hospital (KUTH)

Research methods: This study used quantitative approach. A descriptive cross-sectional design was used to identify the motivating factors and barriers associated with patient incident report. A proportionate stratified random sampling was performed to select participants. The simple size comprised 182 nurses working at KUTH in hospitalizing department. SPSS software version 20 was used to describe data and inferential statistic was used to determine association between level of incident reporting and motivating factors and barriers associated with patient incident reporting.

Results: Patient falls and medication errors were found to be the common incidents for nurses at this facility. The results of this study found that 35% reports incident to minimize repetition of incident, and 54% of the respondent strongly agreed to report incident to develop a culture of learning from mistakes as motivating factors associated with patient incident reporting. The findings revealed that the barriers associated with patient-incident reporting among nurses includes 51% nurses do not want to appear as incompetent. The association between level of incident reporting and nurse knowledge was significant as p value was0.000.The results show that there is high association between level of incident reporting and not want to appear as incompetent (p value is 0.000).

Conclusion: this study revealed that common types of incidents encountered by nurse and shows a high association between level of incident and motivating factors and barriers associated with patient incident reporting.

Recommendations: It is recommended that the hospital needs to train nurses about the knowledge, and the benefits of incident reporting with regard to ensuring and promoting patient safety and to increase the level of incident reporting.

Key words: incident reporting, medical errors, injury.

LIST OF SYMBOLS AND ABBREVIATION

SYMBOLS

&: And

%: Percentage

>: Great than

<: Lesser than

ABBREVIATION

CMHS: College of Medicine and Health Sciences

ICPS: International Classification for Patient Safety

KUTH: Kigali University Teaching Hospital

NCNM: National Council of Nurses and Midwife

NHS: National Health Service

SPSS: Statistical Package for Social Sciences

UK: United of Kingdom

UR: University of Rwanda

WHO: World Health Organization,

CONTENTS

LIST OF TABLES

LIST OF ANNEXURES

CHAPTER I: INTRODUCTION

1.1 Background

Incident is an unintentional and often destructive event that interrupts the development and continuation of the work (LeRoy & Treanor, 2001:287). Incidents can happen at every level of the healthcare system (Hammami, Attalah, & Al-Qadir; 2010:2). Incidents such as injures or human errors that cause death in patients are a major problem that has prompted healthcare organizations to look for solutions in order to decrease errors and reduce their effect on individuals. Lauren & Katherin, (2016:287) drew on Institute of Medicine´s record an annual death of about 44000 to 98000 individuals who die due to incidents. In addition, World Health Organization ([WHO], 2008:3) found that 5%-15% of hospital admission patients encounter incidents. In the United of Kingdom (UK), Rooksby, Gerry and Smith (2007:205) show that hospital incident reporting is a part of individual hospital risk processes and is an obligation of National Health Service (NHS). Research conducted by Wilson, Miche, Olsen, Gibberd, Vincent, El-Assad, Rasslan, et al (2012:1) found that adverse events in Egypt, Jordan, Kenya, Morocco, Tunisia, Sudan, South Africa and Yemen is 8.2%,and 83% of those adverse events were preventable. In this study, the common type of incidents found was a therapeutic error (34.2%), error in diagnosis is (19.1%) and operative errors (18.4%). Furthermore, a study done in Uganda documented that 58% of medication error and 53% of diagnostic error are the common type of error certified by a nurse (Katongole, Robert, Miisa &Nakiwala, 2015: 295). The study surveyed by Istanbullu, Yildiz, and Zora, (2012) have indicated that 62% of healthcare professional did not report incidents they encountered in practice. In the same way, a study conducted in Nigeria, Ushie, Salami, Jegede and Oyetunde (2013:826) revealed that nurses did not disclose mistakes made; they did not provide sufficient information if they disclose a mistake, and they were not likely to accept they commit error especially if the end result was negative. Contrary to the study conducted in Uganda that confirmed nurses were apt to report the mistake made orally to the in charge officer and to a colleague (Katongole et al, 2015:296). Motivating factors associated with patient incident reporting were simplified incident form, lesser consuming time and unnamed incident form allows reporting incident (Kingston, et al. 2004:39).

The barriers that prevent nurses from reporting incidents are a major problem of patient's safety. Some barriers identified by Pfeiffer; Manser and Wehner (2010:6) were that reporting incidents are not part of nurse's job, nurses fear of lawsuits and disciplinary actions. The study conducted in Pakistan revealed that 84% of nurses reported that lack of feedback is a main barrier to report incident and development of

a system to minimize a repetition of incidents and self-reporting results in repercussions (Muhammad, Ali, Azum & Ghulam, 2010: 104). Contrary to the study done by Ecem (2015:652) found that the factors affecting nurses toward incident reporting were a lack of knowledge, an organizational structure that does not support learning from mistakes, elevated numbers of patients, overworking and level of educational of nurses.

In the same line of thought Evans et al (2006:42) revealed that 61.8% of nurses and 57.7% of doctors agreed that the barriers of nurses towards patient's incident report are that they never receive any feedback on action to be taken, they agreed that incident form takes much time to full and nurses are overloaded. They also found that if the incident is discussed with involved person nothing else is needed to be done, they worried about litigation and disciplinary action. 16.4% of nurses agreed that they are not responsible of reporting the mistakes of others.

Nurses play a great role in the promotion of patient's safety and they identify, prevent, and reduce incidents (Evans, Berry, Smith, and Esterman, 2004).

In order to improve the quality of care, it is necessary to prevent errors, to learn from mistakes and to disseminate constructive feedback and useful information from analysis of similar cases at other hospitals (Malik, Alam, Mir, Malik, and Abbas, 2010). Incident reporting system in most of the health care system is not well organized, thus causes risks to the patients and results in poor quality of care. Developing the understanding and the advantages of incident reporting in KUTH is inevitable to the nurses. This study will assess common type of incident encountered by nurses, motivating factors and barriers associated with patient's incident reporting among nurses at KUTH. To the best of my knowledge, similar studies have not been conducted in KUTH.

1.2 Problem statement

Incidents are a main community health issues in the United States. Lauren and Katherin, (2016:287) drew on Institute of Medicine´s record an annual death of about 44000 to 98000 individuals who die due to incidents. In United of Kingdom (UK), likely 90,000 undesirable clinical events involving some 13,500 peoples; occur in the UK each year (Towse & Danzon, 1999:95). Moreover in Taiwan probably 6,000 to 20,000 patients die from incidents each year, and 10% of medical lawsuits were due to medication errors (Chiang, Pepper, & Ginette, 2006:392). In the same view, Istanbullu et al (2012) revealed that 62% of nurses do not report the incidents they encountered and the incidents which have direct advice events are mostly reported rather than those with long term effects. In the similar vein, Kreckler, Catchpole, McCulloch and Handa (2009:120) maintained that if the incident and the results of the analysis are not reported, the lessons learned remained in the service, the assessment of the problem is lost and the chance to develop more powerful, sustainable solutions and preventive measures are missed. Likewise, Evans et al (2006:39) found that nurses complete incident reports for patient fall at 97% and 41.9% for pressure sores. Pfeiffer et al (2010:6) found that nurses fear of legal consequence and disciplinary actions when the incident occurred, also they are worried that own competence may be taken as they are incompetent. However, incidents reporting are good practice that helps to improve the quality of care delivery and to learn from mistakes (Malik, Alam, Mir, Malik, and Abbas, 2010). Health care organizations and individuals benefit from incident reporting once they receive constructive feedback and delivered without intimidation or blame (Kingston, et al, 2004:38). This study will reveal common type of patient incident, motivating factors and barriers associated with patient incident report.

In Rwanda, nurses report that there are incidents but they do not report them as they fear of being taken as incompetent. In 2014 at Gahini hospital a nurse forgets to remove a tourniquet on the baby arm that has lead to the amputation of the arm (NCNM, 2014). According to the researcher's experience during her clinical placement at one referral hospital, the researcher observed that nurses have the culture of reporting mistakes but they fear to report mistakes which may harm them at work or put them in the lawsuit.

1.3 Research objectives

1.3.1 Main objective

The main objective of this study is to assess motivating factors and barriers associated with patient incident report among nurses working at University Teaching Hospital Kigali (UTHK).

1.3.2 Specific objective

As specific objectives of the study are:

1. To identify the common type of patient incidents encountered by nurses working at KUTH.
2. To assess the level of incident reporting among nurses.
3. To identify the motivating factors associated with patient incident reporting among nurses working at KUTH.
4. To describe barriers associated with patient incident report among nurses working at KUTH.
5. To determine the association between level of incident reporting and motivating factors; barriers and demographic data associated with incident reporting and association between demographic data and motivating factors and barriers associated with incident reporting.

1.4 Research question

1. What are the common types of patient incidents encountered by nurses working at KUTH?
2. What is the level of incident reporting among nurses?
3. What are the motivating factors associated with patient incident reporting among nurses working at KUTH?
4. What are the barriers associated with patient incident reporting among nurses working at KUTH?
5. What are the association between motivating factors, barriers and demographic data and the level of incident reporting among nurses and association between demographic data and motivators and barriers associated with incident reporting?

1.5 Significance of the study

A study of this nature is the first to be conducted at KUTH in Rwanda. The findings of this study will be used in:

Nursing practice: as it will reveal the type of patients incident encountered by nurses, motivating factors and the barriers associated with patient's incident report. This will help nurses to prevent patient incident and improve the quality of care delivery.

Nursing administration: this study will be useful in the administration to find out the solution to barriers and to reinforce the motivating factors associated with patient incidents report. It is also useful to elaborate strategies, policies to prevent further patient incidents.

Nursing research: this study could be the database on which any researcher can build on while making further investigations in the same area.

Nursing education: this study will be used as an instrument in teaching and learning in nursing setting.

1.6 Conceptual definition

Incident: Any deviation from usual medical care that causes an injury to the patient or poses a risk of harm. It includes errors, preventable adverse events, and hazards (World Health Organization [WHO], 2005). In this study incident is defined as failure to complete a planned action as intended and results in injury or temporary or permanent disability or death of a patient.

Error: The failure to complete a planned action as intended or the use of a wrong plan to achieve an aim (WHO, 2005). In this study, error is defined as inability to accomplish designed activities and result in injury to patient.

Incident reporting: is a written, confidential record of the details of an unexpected occurrence (e.g., a patient fall or administration of the wrong medication) or a sentinel event (i.e., as an unexpected occurrence involving death or serious physical or psychological injury, involving a patient, employee, or other person (e.g., a visitor) who is present in the healthcare facility (Tanja S., Mary W., 2015:1). In context of this study Incident reporting is an instrument to capture appropriate information about undesired event on patient care.

A nurse is a person who encompasses autonomous and collaborative care of individuals of all ages, families, groups and communities, sick or well and in all settings. It includes the promotion of health, the prevention of illness, and the care of ill, disabled and dying people (WHO, 2005). In the context of this study a nurse is a person who has a license of practice and is having A2 diploma, advanced diploma and bachelor's degree and that individual provide a holistic care to the patient.

Motivators are internal and external factors that stimulate desire and energy in people to be continually interested and committed to a job, role or subject, or to make an effort to attain a goal and are the factors perceived to have a positive impact on patient safety (Ridelberg, Roback, and Nilsen, 2014). This study difine motivators as intrinsic and extrinsic factors that encourage or push nurses to report patient incident.

Barriers: Is anything which blocks someone to do something and are the factors perceived to have a negative influence on patient safety (Ridelberg, Roback, and Nilsen, 2014). In the context of this study, barriers are something that limit nurse from reporting incident that happen in their working place.

Incident reporting: is a form that is filled out in order to record details of an unusual event that occurs at the facility, such as an injury to a patient (WHO, 2005). In this study incident reporting refers to a form used by hospital authorities to record the facility's unusual occurrences on patients.

CHAPTER II: LITERATURE REVIEW

2.1 Introduction

The purpose of literature review in this study is to present the accumulated body of knowledge regarding incident report. This chapter starts by presenting common type of incident encountered by nurses. This chapter presents the factors associated with patient incident report including motivating factors and barriers of patient incident reporting.

2.2 Theoretical literature

Incident is unintentional deviation from usual medical care that causes an injury to the patient or poses a risk of harm and is generally the product of individual misconduct; health care systems failure and organizations that are created by an individual(WHO,2005). In addition Fatemeh, Alizera, and Fariba (2012:3) found that the errors are caused by individual, system or combination of the individual and the system. Literature documented the causes of incidents and pointed to unsafe tasks or working in unsafe conditions or a combination of the two (Hughes and Ortiz, 2005). In corroboration, Wilson et al (2015:5) found that incidents may be induced by inadequate training or supervision of clinical staff, lack of implementation of relevant protocol or policy, lack of appropriate communication or reporting, delay in delivering service, insufficient equipment, and staffs. Furthermore, Kangole et al, (2015:293) ascertained that incidents are due to poor infrastructure and equipment; poor quality of drugs and poor performance of personnel because of insufficient technical skills (Kangole et al, 2015:293).

Holman, and Wakefield (2005:4) describe 4 steps of reporting the incident: identification of error, evaluation of the need for incident reporting, preparation of error reporting and the feedback of the party who receive the incident report. About incident reporting process the nurse have to recognize the errors and document it in the file of the patients, assess if incident should be reported or not, prepare herself or himself to report incident as it is not easy to report her or his error or reporting friend's or coworker’s error and finally the person who receives the incident report should give a feedback, and this study found that non-punitive environment allows error reporting.

Advantages of incident report are to identify injuries that might lead to litigation and to reduce the number of patients being harmed. Incident reporting captures relative information about possible patient incidents and promotes detection of preventable adverse events in the clinical before they happen.

(Seckler, and Taylor, 2001). In addition to that, incident report helps to learn from mistakes and reduce occurrence of incidence (Malik, Alam, Mir, Malik, and Abbas, 2010). Incidents reporting help patients avoid health hazards and helps correct the error once it is performed. The approach of incident reporting allows that if in one part of the world, a patient has suffered from an adverse event it will be beneficial to other patients from many other countries and will help learn from mistakes (Pfeiffer et al 2010). Incident reporting reduces future errors diminishes personal suffering, decreases financial costs and it allows immediate interventions about errors and reduces the complications of errors (Rapala, 2005). According to WHO (2005: 4), there are many evidence-based strategies that could be implemented to improve quality of care in health systems and maintain patient safety including encouraging nurses to report incidents and mitigating their effects once occurred. Performance free from errors is a standard expectation from every healthcare providers and safety of the client's safety and quality health service is the first concern of present healthcare professionals (Ecem, 2015).

For prevention of further patient's incidents, Wilson et al (2012:6) found that putting emphasis on training and supervision of clinicians, to make sure that standardized protocols are available and implemented, and regular documentation prevents the repetition of incidents. Moreover, Alemdar, Dilek and Aktas (2013:74) reported that in order to prevent incidents they suggest that nurses should have a continuous education, nurses should be educated and warned on crucial points, and nurse's workload should be decreased. Moreover, 90% of consumers think that nurses should report incidents and increase the quality and safety organizations and they suggest the use of incident reporting which will allow the understanding of errors and their causative factors (Evans et al, 2004:39). In addition, the study done in Nigeria found that patients like to be informed on incidents made in their care and their adverse outcomes. This study again found out that self-reporting of the incident to patients does not minimize the intention of patients against the nurses but notification of error ease reactions of patients (Ushie et al, 2013:825). Nurses become worried, accountable, and unhappy after serious errors because they are concerned with patient's safety.

In conclusion, incident reporting systems are nearly universal in hospitals, and nurses and other hospital staff already use them routinely, making them natural tools for improving patient safety today by (i) ensuring that frontline providers learn when reporting has improved safety, because this motivates providers to report future events; (ii) encouraging providers to write detailed descriptions of events (narratives), because this gives the information needed to prevent similar events from recurring.

2.3 Common type of patient incident

Research conducted by Wilson, Miche, Olsen, Gibberd, Vincent, El-Assad, Rasslan, et al (2012:1) found that adverse events in Egypt, Jordan, Kenya, Morocco, Tunisia, Sudan, South Africa and Yemen is 8.2%, and 83% of those adverse events were preventable. In this study, the common type of incidents found was a therapeutic error (34.2%), error in diagnosis is (19.1%) and operative errors (18.4%). Similarly to the study conducted by Rudman, Bailey, Hope, Garrett, and Brown (2005) found that 47% of reported errors were associated with diagnostic tests, 35% with medications, and 14% with both diagnostic tests and medications. In addition to that one study found that the majority of error reports involved delays or omissions of medications, diagnostic tests, or necessary/planned procedures; medication errors, and malfunctioning equipment. 10% of the reported errors required life-sustaining interventions (61% of which resulted from delays/omissions of prescribed nonmedication treatments and necessary planned procedures), and 3% might have caused the patient's death (Osmon, Harris, Dunagan, Prentice, Fraser, and Kollef, 2004).

Furthermore, a study done in Uganda documented that 58% of medication error and 53% of diagnostic error are the common type of error certified by a nurse (Katongole, Robert, Miisa &Nakiwala, 2015: 295). In the same way, Nuckols, Bell, Liu, Paddock, and Hilborne,(2007) found medication incidents (29%), falls (14%), operative incidents (15%) were the most common type of incident reported. Lubberding, Zwaan, Timmermans, & Wagner, 2011) found that 42% of the 625 unexpected events reported by hospital staff members were related to medication, and 10% of events involved patient injury. An analysis of error reports found that the most serious reports involved rule violations, management practices, and nonstandardized nursing practices (Lata, Mainhardt, and Johnson, 2004).

In a study of surgical Intensive Care Units, the common type of errors found were related to medications, tests, treatments, or procedures (Schuerer, Nast, Harris, Krauss, Jones, Boyle, Buchman, Coopersmith, Dunagan, and Fraser, 2006). Wagner, Merten, Zwaan, Lubberding, Timmermans, and Smits (2016) found that 29% of incidents were related to medication. That included medication preparation, administration and registration. A high number of error reports in some hospitals were associated with maintenance of dialysis, endoscopy preparation and assistance, administration of preoperative treatments, and blood transfusions. There were more reported errors in the elderly, hemodialysis patients, and those with problematic types of behavior (Inoue, Koizumi, 2004). Another retrospective analysis of error reports in six Japanese hospitals found that reported error rates were high

for prevention of problematic behavior, patient suicide, patient falls, and subcutaneous injections of insulin. In yet another study, researchers found that the majority of reports involved medication errors, surgical errors, falls, and problems with procedures (Nuckols, Bell, Liu, Paddock, and Hilborne, 2007).

2.4 Motivating factors associated with nurses towards patient's incident reporting

Motivation is the capacity to encourage the interest of a person in an activity and is associated with positive consequences. Nurses and doctors agreed that effective and efficient incident reporting performed without intimidation or blame, and giving a constructive feedback motivate nurses and doctors to report the incident (Kingston, et al, 2004:38). In addition, Hashemi et al (2012:4) found that the factors that motivate nurse to report incident are the knowledge and skills in managing errors, the nurse's commitment, and their accountability allow reporting the incident. Factors associated with errors if the error is clear and their negative outcome is identified it motivate nurse to report incident and nurses report that the working environment that facilitates error reporting such as teamwork where once the error was made doctors and nurse work together to solve the problem. In the same line of thought, Malik, Alam, Mir, Malik, and Abbas (2010) found 24% of nurses are motivated to report incident in order to get immediate help for patients, 12.6% of nurses are motivated by learning from mistake reported and 84.4% of nurses are motivated to report incident in order to develop a system to minimize repetition of incident.

Evans et al (2006) found that nurses has a greater knowledge and usages of incident report as they know how to get incident form, they recognize what to do with it and they know how to complete incident report form. Similar to the study done in Public Hospital in Turkey by Ecem, (2015) found that nurse attitudes toward incidents are considered positive, as the number of reported errors decreased. Furthermore, Kingston, Evans, Brian, and Jesia, (2004:36) revealed that incident-reporting culture differs among medical and nursing professional, they showed that nurses report more than doctors. Moreover, Kingston et al. (2004:37) found that nurses regularly report the incident and it depends on type and location of the incident. Nurses have the intention to complete an incident report in order to cover them and to make it official. Reporting incident is not easy and it requires courage to disclosure mistakes and it is embarrassing.

Yung, Yu, Chu, Hou, and Tang, (2016:4) found 67.8% of nurses agree to report the incident if it caused harm to patient and they don't report it if it doesn't cause any problem. This study revealed that 70% of

nurses are not worried if their colleagues report their medication errors and again 70% will motivate their coworker to report medication error performed.

Another study conducted by Gifford and Anderson,(2010) revealed that nurse motivating factors to report incidents are legal obligation to report for example forensic investigation, hospital accountability when there is a need to justify and explain actions when there is incident, the perception that reporting will improve patient and staff safety and awareness of the policies. In order to achieve effective incident report system, it is reasonable that the data input must be encouraged with a no punitive culture; the data themselves are best gathered by free text to allow much detail; data must be analyzed and expertise in appropriate time in order to turn the report into a lesson and feedback which is essential not only to change practice but also to encourage further reporting (Yung, Yu, Hou, and Tang, 2016).

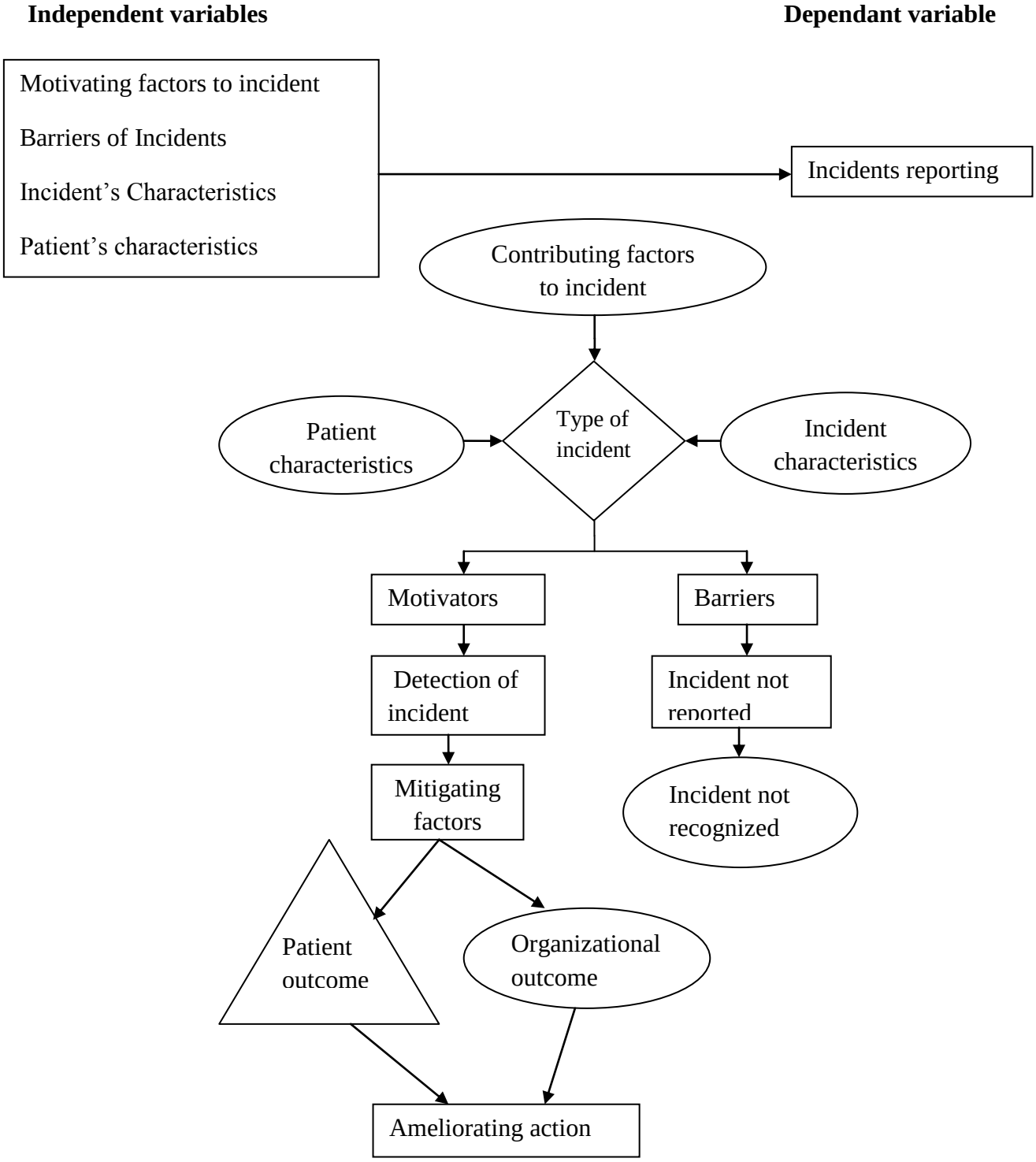
2.5 Barriers associated with nurses towards patient's incident reporting

Structure for patient incident reporting in most healthcare systems are limited and there is varied views on the issue among the health care workers as well such that most patient-incidents are not reported (Ecem , 2015). Pfeiffer et al, (2009) explored barriers limiting nurses from reporting incidents and they found that nurses believe that reporting incident is not part of their job, increases the workload and is time-consuming, they believe that incident report system is not appropriate to promote patient safety, they fear of legal consequence and blame disciplinary actions when incident occurred, they fear that own competence may be questioned thinking that someone is incompetent. Researchers found that nurses worried about affecting colleagues when reporting the incident and they think once the mistake discussed with the person involved they do not report the incident. They also found that nurses don't receive appropriate feedback on reported incidents and they do not understand well what to report. A similar study conducted by Evans et al, (2006) revealed barriers of nurse towards patient's incident report as nurses never get any feedback on action to be taken, incident report form takes too long to complete, and nurses are overloaded. The above authors also found that any incident discussed with involved person nothing else is needed to be done, they worried about litigation and disciplinary action as barriers of the incident report. In addition to the barriers of nurses towards incident report, they revealed that nurses believe that they are not responsible for reporting somebody else's mistakes. In addition Kingston, et al (2004:6) show that nurses do not report the incident as they fear to lose a job and they fear of lack of trust of patients, families, and colleagues, they fear also to be blamed as incompetent. This study revealed that 90% of nurses like oral reporting of medications errors rather that

writing an incident report because their supervisors may use those reports against them. Moreover, this study found that 45% of nurses do not report medication error if they are only the one who discovered the errors.

In the same way, a study conducted by Koohestani, and Baghcheghi (2009:68) on barriers to reporting medication administration errors among nursing students found that they are not aware of errors and incident report form is more detailed and took the time to complete them and they lack feedback. In contrast, Yung, et al. (2016:7) found 63.4% of nurses feel agitated when they do not report an incident whereas 8.5% feel reassured. Regarding this information, it is comprehensible that nurses feel culpable, worried and anxious about the error and if the error results to life lasting harm or is mortal the nurses cannot forget it and are disturbed. It is essential to counsel nurses in order to recover confidences and to decrease psychological distress. In the same line of thought Pfeiffer et al (2010:6) reported nurses think that reporting incident is not their job, increase the workload and is time-consuming, they believe that incident report system is not appropriate to promote patient safety, they fear of legal consequence and blame disciplinary actions when incident occurred, they fear that own competence may be questioned thinking that someone is incompetent. In the same way, researchers revealed that nurses worried about affecting colleagues when reporting the incident and they think once the mistake discussed with the person involved they certain they would not report the incident. The above authors also found that nurses do not receive appropriate feedback on reported incidents and they do not understand well what to report. In a study by Leape (1994) reported that the reason precluding any health care professionals or health care organizations to who were willing to advocate for others after occurrence of an incident for fear of retaliation.

2.6 Conceptual framework



Source: Framework adapted from International Classification for Patient Safety (World Health Organization [WHO], 2009).

In this study, patient characteristics categorize patient demographics, level of education of a patients, the original reason for seeking care and the primary diagnosis [International Classification for Patient Safety (WHO, 2009)].

In the context of this study incident characteristic is the information about the circumstances surrounding the incident such as where and when, in the patient's journey through the healthcare system, the incident occurred, who was involved, and who reported (WHO, 2009).

In the context of this study, perceived factors are the circumstances, actions or influences which are thought to have played a part from reporting the incident (WHO, 2009).

In this study incident is any deviation from usual medical care that causes an injury to the patient or poses a risk of harm. It includes errors, preventable adverse events, and hazards (WHO, 2005).

In this study, mitigating factors are circumstances, information and precautions taken to lessen the severity of the incident.

To conclude incident reporting is widely used and promoted as an effective tool to make an organization safe and free from accidents. Patient safety is a main concern in the health care sector. When there is an emphasis on patient safety patient incidents are minimized and the quality of health care is heightened (Malik, et al., 2010).

Chapter III: RESEARCH METHODOLOGY

3.1 Introduction

Research methodology refers to how a research study is done scientifically and how to answer the research problem. This introduction outlines research approach, sampling methods, study setting, study population, data collection procedure, data analysis and data management, and ethical consideration.

3.2 Research approach

A quantitative approach was applied in this study to explore the barriers and motivating factors associated with patient incident report, which is a process of testing relationships /differences and cause and effect interactions among and between variables (Suzan, 2011). Quantitative research involves collecting and converting data into numerical form so that statistical calculations can be made and conclusions are drawn (Patil, and Mankar, 2016:5).

3.3 Research design

A research design is an action plan of getting an answer to an initial question (Yin, 2003:19). A descriptive cross-sectional design was used to describe the motivating factors and barriers associated with patient incident reporting.

3.4 Research setting

The research was conducted at Kigali University Teaching Hospital (KUTH). The KUTH is located in Nyarugenge District in Kigali City. It was built in 1918 by Belgian. In 1928, it began to work as a health center and as the population served the increase in 1985 it started to work as a hospital. In 1994 in genocide the hospital lost human and financial resource and close but in July 1994 the hospital begins to work and increases its capacity and the hospital serves 1,000,000 people from a largely urban area. Nowadays it is a referral that serves 29 district hospital and a teaching hospital. It has a capacity of receiving 509 in patients in 15 clinical and par clinical services. KUTH teaches nurses, medical and allied students in clinical practice and it serves as a center of research. KUTH is governed by the Ministry of Health.

3.5 Populations

A research population is a large collection of individuals or objects with the main focus of a scientific query, have similar characteristics and the whole set of cases researcher will make a generalization (Polit and Beck 2008). The entire population was 509 nurses working at KUTH, and the target population in this study was 335 nurses working in hospitalization departments: medical ward, emergency, surgical ward, intensive care unit, maternity, pediatric, and neonatology. The accessible population was 182 nurses that were working in above department.

Table 1: Target population from each department

Department	Number of nurses
Medical ward	65
Emergency	40
Surgical ward	75
Intensive Care Unit	32
Maternity ward	65
Pediatric ward	45
Neonatology ward	13
Total	335

3.6 Sampling

Sampling is a process of selecting the portion or subset of the designated population to represent the entire population. It is a process in which representative units of a population are selected for study in a research investigation in order to increase the efficiency of the research study.

3.6.1 Sample size

To obtain the representative sample size, Yamane (1967) provides a simplified formula to calculate sample size for proportion. In this project, the researcher wants a sample size with 95% confidence level and she assumes that the maximum variability (p=0.5). Therefore, the sample size was given by the following formula:

$$n = \frac{N}{1 + N * (e)^2}$$

Where n is the sample size, N is the population size, and e is the level of precision and is assumed to 0.05. Using this formula the sample size obtained is 182.

3.6.2 Sampling strategy

The study sample was comprised of nurses working at KUTH in hospitalization departments. A proportional stratified random sampling strategy was used to select participants in this study. The sample size of each stratum in this technique is proportionate to the population size of the stratum when viewed against the target population.

The researcher had selected the respondent from seven departments: Medical, Emergency, Surgical, Intensive care, Maternity, Pediatric, and Neonatology wards. These departments were considered as the stratum and to obtain the sample size in each stratum, the researcher had used the proportional probability. Therefore the sample size for each stratum was given by the below formula:

$$n_i = n_k * \frac{n}{N}, \text{k} = 1, 2, \ldots, 7 \text{ and i} = 1, 2, \ldots, 7.$$

Where n_k is the total number of nurses in each department, n sample size from population, N population sample size, and n_i, the sample size corresponding to k department or stratum. For example, suppose that researcher wants to determine the sample size for department Neonatology (stratum number 7):

$$n_7 = 13 * \frac{182}{335} = 7 .$$

Therefore, the sample size for the neonatology stratum (department) is equal to 7 nurses. The process is the same for the remaining departments and the sample size for each department is presented in table below:

Table 2: Sample size of nurses from each department (n=182)

Department	Total number of nurses (n_k)	Sample size (n_i)
Medical ward	65	35
Emergency	40	22
Surgical ward	75	41
Intensive Care Unit	32	17
Maternity ward	65	35
Pediatric ward	45	25
Neonatology ward	13	7
Total	335	182

Finally, the remaining task is to select the individuals in each department (stratum). To do so, the researcher had used the technique of simple random sampling. In this method, each item (individual) in the department (stratum) had the same probability of being selected as part of sample as any other item (individual).

Inclusion criteria

This study includes all nurses who work in hospitalization departments at Kigali University Teaching Hospital.

Exclusion criteria

This study excludes nurses who were on annual leave or on sick leave.

3.7 Data Collection

Data collection is the systematic approach of gathering and measuring information from a variety of sources to get a complete and accurate picture of an area of interest and data collection enables a person or organization to answer relevant questions, evaluate outcomes and make predictions about future probabilities and trends.

3.7.1. Data Collection instruments

A questionnaire was used to collect data. The instrument was initially developed by Dr. Anastasius Moumtzoglou, (2010) in the article of factors impeding nurses from reporting adverse events. The permission to use and adapt questionnaire was given (annexure 5, p.80).The researcher modified the questionnaire to suit the context of the current study and to the research objectives. The questionnaire is made of 5 parts; the 1st part is made of demographic data, and it has 5 items. Demographic data covers working department, age, gender, working experiences, and level of education. The 2nd part was made by 1 item that asks on common type of incidents encompassed by a nurse working at KUTH. The 3rd party asked information on incident reporting and is made of 4 items of yes or no questions. The 4th party asks on motivating factors associated with patient incident reporting and knowledge about incident report. A 5 points Likert scale was used to rate the views (strongly Agree, Agree, Neutral, Disagree, Strongly disagree), and it has 10 items of 5 point Likert scale. The motivating factors were to receive constructive feedback after reporting an incident, Nurse commitment and accountability, Nurse knowledge, Clear or visible incident and does not have any side effect to patient, To get immediate help to the patient, To develop a culture of learning from mistakes, To minimize repetition of incident, obligation or hospital policies to report an incident as soon as it happens, The culture of incident reporting executed without any intimidation and blame, and Team work to help each other if an incident occurred. The last part of the questionnaire was asking on barriers associated with patient's incident, A 5 points Likert scale was also used to rate the views, and it has 12 items. The barriers were no tradition in department for bringing up an incident, When I am busy I forget to bring up an incident, I never get any feedback on what action was taken, I don't know who is responsible for bringing up an incident, I might be accused or criticized, Incident form takes too long to complete and I don't have time, If I discuss the case with the person involved nothing else needs to be done, I am worried about litigation, I am worried about disciplinary action, It is too difficult to bring up an incident, I do not wish to appear as an incompetent nurse, Bringing up an incident will not lead to any improvement in our service.

3.7.2 Content Validity

Within this study, content validity was ensured by checking items in the data collection tools against the study objectives and concepts in the conceptual framework to ascertain whether they measure all the elements to be investigated (Kimberlin & Winterstein 2008, p2276-83). The data collection tool was also reviewed by a panel of experts in research and in nursing education. To ensure external validity, the sample taken for this study included all the members of the study population.

Table 3: Validity table

Research objective	Component in conceptual framework	Question in interview
1. To identify the common type of patient incidents encountered by nurses working at KUTH.	Type of incident	Question number 6
2. To assess the level of incident reporting among nurses.	Detection of incident	Question number 10
3. To identify the motivating factors associated with patient incident reporting among nurses working at KUTH.	Motivators of incident report	Question number 11
4. To describe barriers associated with patient incident report among nurses working at KUTH.	Barriers to incident report	Question number 12
5. To determine the association between level of incident reporting and motivating factors; barriers and demographic data associated with incident reporting and association between demographic data and motivating factors and barriers associated with incident reporting.	Incident characteristics and contributing factors	Question number 7, 8,9, 10, 11,12.

3.7.3 Reliability

Reliability is an extent to which a data collection tool can produce a repeatable and consistency results (Romero Morales et al. 2017, p. 2). To ensure reliability, researcher conducted a pilot study before starting collect data; 18 nurses (10% of the sample size) who did not participate in the study responded the questionnaires, and were asked to give ideas or suggestion regarding the questionnaire so that it can be corrected to facilitate easy understanding of the respondents. The researcher corrects the questionnaire where necessary to simplify it and make it more understandable. Cronbanch's alpha test was used to calculate the reliability. It was found to be 0.72, and it is found to be reliable as reliability coefficient (Cronbach's Alpha) ranged between 0.63 and 0.83 indicating a sufficient reliability(Romero Morales et al. 2017, p2-14).

3.7.4 Data collection procedure

The process of data collection begins by the researcher who approaches the ethical committee of KUTH by asking permission to conduct a study in the hospital. Once the permission was secured the researcher approaches the head nurse in order to access to the nurses. After meeting head nurse, the researcher meets with matrons of departments who helped to reach the nurses. The researcher meets the participant's nurses to explain the nature and purpose of the study and the rights of participants. The researcher requested the consent from participants before they complete the questionnaires voluntarily. The questionnaires were collected from nurses after two days. The questionnaire was anonymous to keep the confidentiality of the participants.

3.8. Data analysis

After data collection, a Statistical Package for Social Sciences (SPSS) software version 20 was used to organize and analyze data. Data was analyzed using descriptive statistics. Frequencies, and percentages were used on demographic data such as working department, age, gender, working experience, and level of education. Frequencies, and percentages were also used on motivating and barriers associated with patient incident report. The chi-square test was used for dichotomous measures and to test the associations between motivating factors and working department, age, gender, working experience, and level of education. The chi-square test was used also to test the association between barriers and working department, age, gender, working experience, and level of education associated with incident reporting.

3.9 Data management

Data from the study was only used to complete this study. Crude data was secured confidentially in a locked in a cabinet and will be destroyed after a period of five years. Analyzed data are saved in computer files, secured by a security code that is only known by the researcher.

3.10 Ethical considerations

Burns and Grove (1997) report that nursing research must not only have the potential to generate and improve knowledge, but it must be ethically developed and implemented. This study has respected ethical principles. Before conducting the study, research proposal was presented to the University of Rwanda (UR) / College of Medicine and Health Sciences (CMHS) research committee for approval. The ethical clearance was obtained from Institutional Review Board (Annexure 3, p.78). Permission was sought from the KUTH scientific and research committee (Annexure 4, p.79). After obtaining permission from KUTH to conduct the study, the consent form was then distributed to the participants after an explanation of the aim and the purpose of the study was given to them. Participation in the study was voluntary and participants understood that they were free to withdraw at any time from the study. No identification details were required as a measure to ensure anonymity. Participants' individual responses were not identifiable and all given information were kept anonymous; the researcher used a code for each department.

3.11 Data Dissemination

The data will be disseminated to the nurses working at Kigali University Teaching Hospital, to the authority of KUTH, and other researchers who will be interested in the similar study.

3.12 Limitations

The following was the limitation of this study:

The study findings are limited to Kigali University Teaching Hospital. Due to the limited nature of the sample size, the findings cannot be generalized to another referral hospital.

CHAPTER 4: PRESENTATION OF RESULTS AND THEIR INTERPRETATIONS

4.1 Introduction

This chapter presents the results of the study, starting with demographic data followed by data obtained on common type of incident encountered by nurses, data obtained on level of incident reporting, data on motivating factors and barriers associated with patient's incident report. This chapter presents association between level of incident reporting and demographic data, motivating and barriers associated with patient incident report. Data were analyzed using Statistical Package for Social Science (SPSS) version 20.00. Frequency distributions were done and chi-square test was used to determine the association between level of incident reporting and demographic data, motivators and barriers associated with patient incident report; and association between demographic data with motivating factors and barriers associated with patient incident report. A chi-square value obtained at a p value less or equal to 0.05 was considered to denote a significant difference between variables under investigation. Sample size were 182 nurses but nurses who returned the questionnaire were 180, the response rate was 180/182*100=99%.

4.2 Demographic data

In the table 4 below shows the result of demographic data where 38 respondents were from surgical department, 34 from maternity, 33 from medical ward,26 from pediatrics, 23 from emergency, 19 from intensive care unit and 7 from neonatology department. In this study 73% of the respondents were Female and 27% were Male. The respondents in this study 23.3% were aged between 25and 30 years, 26% were aged between 31 and 36 and 13 were aged above 45 years. The observations from the results show that 24% of the respondents has experience less than 5years, 26% between 5 and 10 years and 51% has experience of 11 years and above. The results in table 4 show that 61% of the respondents had A1 level and 20% had bachelor's degree (A0).

Table 4: Demographic data of respondents (n=180)

Demographic data	Frequencies	Percentage (%)
Working department		
Surgical	38	21.1
Maternity	34	18.9
Medical	33	18.3
Pediatric	26	14.4
Emergency	23	12.8
Intensive care unit	19	10.6
Neonatology	7	3.9
Gender		
Male	48	26.7
Female	132	73.3
Age		
25-30 years	42	23.3
31-35 years	47	26.1
36-40 years	40	22.2
41-45 years	28	15.6
Above 45 years	23	12.8
Level of education		
A_2 nurses	37	18.9
A_1 nurses	109	60.6
A_0 nurses	37	20.6
Experience		
Lesser than 5 years	43	23.9
5-10 years	46	25.6
11-15 years	42	23.3
More than 15 years	49	27.2

4.3 Common type of incident encountered by nurse

Table 5 below shows common type of incidents encountered by nurses who are working at Kigali university teaching hospital. The results show that the most common type of incident encountered in their service are patients to falls down (43%), medication errors (39%), and diagnostic errors (17%). These incidents are serious and something should be done on behalf of the hospital to reduce them as they affect directly the patient.

Table 5: Common type of incident encountered by nurses (n=180)

Incident	Frequency	Percent
Patients falls	78	43.3
Medication errors	71	39.4
Diagnostic errors	31	17.2

4.4 Level of incident reporting among nurses

Table 6 shows results on level of incident reporting among nurses, it shows that 82% of respondents knew what an incident is and only 18% nurse selected did not have any idea about what an incident is. All sampled nurses (180) confirmed the availability of incident form. This study found that 74% had committed incident in their practice and 26% did not commit incident. The results show that 96% of the respondent confirmed that they report once an incident happened while only 4% agreed that they do not.

Table 6: Information on incident reporting (n=180)

Information on incident reporting	Frequencies	Percentage
Knowledge on incident		
Yes	148	82.2
No	32	17.8
Availability of incident form		
Yes	180	100
No	0	0
Having committed an incident		
Yes	134	74.4
No	46	25.6
Reporting an incident once it happens		
Yes	173	96.1
No	7	3.9

Table 7 illustrate that 18.9% participants have a high level of incident reporting as the scale explain that the participants who score 80-100% have high level of incident reporting and those who score below 80% have low level of incident reporting.

Table 7: Level of incident reporting

Score out 4	%incident reporting	Frequencies	% frequencies
2	50	28	15.6
3	75	118	65.6
4	100	34	18.9

4.5 Motivating factors associated with incident report

The results below in Table 8 show the motivating factors associated with patient incident reporting in Kigali university teaching hospital. 44% of the respondent strongly disagree that they did not received a feedback after reporting an incident while only 17% strongly agreed to receive a feedback. The observation from the results in table 8 shows 53% of the nurse sampled agreed to be committed and

accountable to report an incident. The figures in table 8 indicated that 46% of the respondent strongly agreed to have knowledge on incident and 3% said that they don't have any idea on incident.

The results show that 47% of nurses strongly agreed that clear or visible incident is a motivating factor to report incident and 11% strongly disagree with the assertion. 52% strongly agreed to report incident to get immediate help to patient while 3% strongly disagree. This study found that 54% of the respondent strongly reports incidents develop a culture of learning from mistake and only 2% of participants disagree.

The results in table 8 show that 54% of the nurses sampled strongly agree that reporting minimize repetition of incident and 3.9% of the are not agree with the assertion. Table 8 shows that 64% of the respondent strongly agreed that it is in hospital policies to report an incident as soon as it happens and 2% said that it is not an obligation. The results in table 8 below show that 48% of the respondent strongly agreed that the culture of incident reporting executed without any intimidation and blame is a motivator to report incident while 7% disagreed. This study revealed that 47% of the respondent agreed that they work as a team to help each other if an incident occurred in their service.

Table 8: Motivating factors associated with patient incident report among nurses (n=180)

Motivating factors	Frequency	Percentages
I receive constructive feedback		
Strongly disagree	79	43.9
Disagree	30	16.7
Neutral	21	11.7
Agree	19	10.6
Strongly agree	3 1	17.2
Nurse commitment and accountability		
Strongly disagree	3	1.7
Disagree	7	3.9
Neutral	9	5.0
Agree	96	53.3
Strongly agree	65	36.1
Nurse knowledge		
Strongly disagree	3	1.7
Disagree	8	4.4
Neutral	12	6.7
Agree	75	41.7
Strongly agree	82	45.6
Clear or visible and does not have any side effect to patient		
Strongly disagree	20	11.1
Disagree	20	11.1
Neutral	4	2.2
Agree	51	28.3
Strongly agree	85	47.2

To get immediate help to the patient		
Strongly disagree	5	2.8
Disagree	16	8.9
Neutral	15	8.3
Agree	51	28.3
Strongly agree	93	51.7
To develop a culture of learning from mistake		
Strongly disagree	5	2.8
Disagree	4	2.2
Neutral	8	4.4
Agree	66	36.7
Strongly agree	97	53.9
To minimize repetition of incident		
Strongly disagree	0	0
Disagree	7	3.9
Neutral	12	6.7
Agree	63	35
Strongly agree	98	54

It is an obligation or it is in hospital policies to report an incident as soon as it happens		
Strongly disagree	4	2.2
Disagree	0	0
Neutral	4	2.2
Agree	57	31.7
Strongly agree	117	63.9
The culture of incident reporting executed without any intimidation and blame		
Strongly disagree	0	0
Disagree	12	6.7
Neutral	10	5.6
Agree	72	40.0
Strongly agree	86	47.8
Team work to help each other if an incident occurred.		
Strongly disagree	0	0
Disagree	7	3.9
Neutral	4	2.2
Agree	85	47.2
Strongly agree	84	46.7

4.6 Barriers associated with patient incident report among nurses

The results shown below in Table 9 are the barriers associated with patient incident reporting among nurses at Kigali university teaching hospital. The result in table 9 indicates that 59% strongly disagree that they do not have tradition to report incident while 6% strongly agreed they have no tradition to report incident in their department. 16% of participants agreed that when they are busy they forget to bring up incident while 53% strongly disagreed. The results in table 9 show that 20% agreed to never get any feedback after reporting incident and 49% nurses strongly disagreed that never get any feedback is a barriers of incident reporting. This study found that 52% knew who is responsible for bringing up an incident while 9% did not the responsible of incident report.

Table 9 shows that 28% strongly disagreed to be accused as a barrier to report incident and 15% strongly agreed that they might be criticized or accused. The results of this study found that 53% of respondents strongly disagreed that incident form takes too long to complete while 2% strongly agreed that it is time consuming. Based on the results in the table 9 below, 10% of the respondent agreed that once they have discuss the case with the person involved nothing else needs to be done while 40% disagreed. The observation from table 9 is that 32% of nurses agreed that they are worried about litigation once they have reported an incident while 31% strongly disagreed that they are worried about that. This study found that 44% agreed they are worried disciplinary action while 10% did not agreed that. This means that some incident cannot be reported due to fear of disciplinary action. Continuous training and in service education on incident report are required. Figures from table 9 indicate that 45% of participants agreed that it is too difficult to them to bring up an incident and 27% strongly disagreed that. The level of understanding of staff on incident report seems to be at low level. This is confirmed by the results in table 9 where 25.6% of the respondent strongly agreed and 25.6% agreed that they will appear as incompetent staff once they appear in incident. Finally, results from table 9 show that 53% strongly agreed that bringing up an incident will lead to an improvement in their corresponding services.

Table 9: Barriers associated with patient incident report (n=180)

Barriers associated with patient incident report	Frequencies	Percentages
We have no tradition in my department for bringing up an incident		
Strongly disagree	107	59.4
Disagree	25	13..9
Neutral	7	3.9
Agree	25	13.9
Strongly agree	12	6.7
When I am busy I forget to bring up an incident		
Strongly disagree	96	53.3
Disagree	27	15.0
Neutral	8	4.4
Agree	28	15.6
Strongly agree	21	11.7
I never get any feedback on what action was taken		
Strongly disagree	88	48.9
Disagree	27	15.0
Neutral	8	4.4
Agree	36	20.0
Strongly agree	21	11.7
I don’t know who is responsible for bringing up an incident		
Strongly disagree		

Disagree	94	52.2
Neutral	44	24.4
Agree	8	4.4
Strongly agree	16	8.9
	18	10
I might be accused or criticized		
Strongly disagree	50	27.8
Disagree	35	19.4
Neutral	15	8.3
Agree	49	27.2
Strongly agree	27	15.0
Incident form takes too long to complete and I don't have time		
Strongly disagree	96	53.3
Disagree	52	28.9
Neutral	20	11.1
Agree	8	4.4
Strongly agree	4	2.2
If I discuss the case with the person involved nothing else needs to be done		
Strongly disagree	74	41.1
Disagree	72	40.0
Neutral	8	10.0
Agree	18	4.4
Strongly agree	8	4.4
I am worried about litigation		
Strongly disagree	56	31.1
Disagree	36	20.0
Neutral	4	2.2
Agree	58	32.2
Strongly agree	26	14.4
I am worried about disciplinary action		
Strongly disagree	48	26.7
Disagree	19	10.6
Neutral	9	5.0
Agree	80	44.4
Strongly agree	24	13.3
It is too difficult to bring up an incident		
Strongly disagree	48	26.7
Disagree	17	9.4
Neutral	3	1.7
Agree	81	45.0
Strongly agree	31	17.2
I do not wish to appear as an incompetent		

Strongly disagree	44	24.4
Disagree	24	13.3
Neutral	20	11.1
Agree	46	25.6
Strongly agree	46	25.6
Bringing up an incident will not lead to any improvement in our service		
Strongly disagree	95	52.8
Disagree	24	13.3
Neutral	24	13.3
Agree	17	9.4
Strongly agree	20	11.1

4.7 Association between level of incident reporting among nurses and demographic data using Chi-Square test

The chi-square is a statistical test that tests for the existence of a relationship between two variables. This test can be used with nominal, ordinal, or scale variables, so it is a very versatile test but it is sensitive to sample sizes too. It is important to have at least a few cases in each of the values of both of the variables involved in this test or the results will be skewed. The researcher is interested to see if there is any association between level of incident reporting and the demographic data, motivating factors, and barriers associated with patient incident report. The researcher had also test the association between demographic data and motivators factors and barriers associated with patient incident report. The results show that there is association between working experience and level of incident reporting among nurses as p value is 0.003.

Table 10 : Association between level of incident reporting and demographic data

Demographic data	Chi-square test	Degree of freedom	p-value
Department	21.671	12	0.041
Gender	4.531	2	0.104
Age	14.570	8	0.068
Level of education	13.670	4	0.009
Experience	19.549	6	0.003

4.8 Association between level of incident reporting among nurses and motivating factors using Chi-Square test

The association between level of incident reporting and motivating factors is high. There is association between received constructive feedback (p value is 0.000) and level of incident reporting. Nurse commitment and accountability has association with level of incident report as p value is 0.00. There is association between nurse knowledge and level of incident reporting among nurse as p value found is 0.000. Clear or visible and does not have any side effect to patient was found to be significant (p value=0.000). This study shows that there is association between development a culture of learning from mistake and level of incident report p value 0.000. The results in table 11 indicate that there is association between obligation or hospital policies to report an incident as soon as it happens and level of incident report among nurses as p value is 0.000. The association between level of incident among nurses and team work to help each other if an incident occurred is significant as p value is 0.000.

Table 11: Association between level of incident report and motivating factors

Motivators	Chi-square test	Degree of freedom	p-value
I receive constructive feedback	36.680	8	0.000
Nurse commitment and accountability	27.190	8	0.001
Nurse knowledge	32.213	8	0.000
Clear or visible and does not have any side effect to patient	43.214	8	0.000
To get immediate help to the patient	17.492	8	0.25
To develop a culture of learning from mistake	36.288	8	0.000
To minimize repetition of incident	9.445	6	0.150
It is an obligation or it is in hospital policies to report an incident as soon as it happens	29.130	6	0.000
The culture of incident reporting executed without any intimidation and blame	6.565	6	0.363
Team work to help each other if an incident occurred.	29.030	6	0.000

4.9 Level of incident reporting among nurses and barriers associated with patient incident report using chi-square

Table 12 below illustrates the association between level of incident report among nurses and barriers associated with patient incident report among nurses at Kigali university teaching hospital. This study found that association between level of incident report and no tradition for bringing up an incident p value found is 0.000. Figures in table 12 show that there association between levels of incident report and never get any feedback

(p value=0.003). The results show that there is high association between levels of incident and worried about litigation as p value is 0.000. This study shows that there is high association between level of incident reporting and do not wish to appear as an incompetent as p value is 0.000.

Table 12 : Association between level of incident and barriers associated with incident report

Barriers	Chi-square test	Degree of freedom	p- value
We have no tradition in my department for bringing up an inci	48.579	8	0.000
When I am busy I forget to bring up an incident	24.565	8	0.002
I never get any feedback on what action was taken	23.112	8	0.003
I don't know who is responsible for bringing up an incident	49.091	8	0.000
I might be accused or criticized	14.156	8	0.078
Incident form takes too long to complete and I don't have time	49.417	8	0.000
If I discuss the case with the person involved nothing else ne be done	27.264	8	0.001
I am worried about litigation	44.455	8	0.000
I am worried about disciplinary action	59.436	8	0.000
It is too difficult to bring up an incident	35.247	8	0.000
I do not wish to appear as an incompetent	50.920	8	0.000
Bringing up an incident will not lead to any improvement service	32.071	8	0.000

4.10 Association between demographic data and common type of incident

The findings of this study revealed that the association between level of education and common type of incident encountered by nurses is highly significant as p value is equal to 0.000 and it found that there is association between experience and common type of incident encountered by nurses as p value is 0.001.

Table 13: Association between demographic data and common type of incident

Demographic data	Chi-square test	Degree of freedom	p-value
Department	13.733	12	0.318
Gender	2.683	2	0.261
Age	5.861	8	0.663
Level of education	22.405	4	0.000
Expirience	22.725	6	0.001

4.11 Association between demographic data and total score of motivating factors to incident report

The association between demographic data and total score of motivating factors has found that department, gender, level of education and experience is highly associated with motivating factors as their p values is 0.000.

Table 14: Association between demographic data and total score of motivating factors to incident report

Demographic data	Chi-square test	Degree of freedom	p-value
Department	220.127	108	0.000
Gender	66.626	18	0.000
Age	65.732	72	0.685
Level of education	154.715	36	0.000
Expirience	274.968	54	0.000

4.12 Demographic data and total scare of barriers associated with patient incident report

Table 15 shows association between demographic data and total score of barriers associated with patient incident report. The association between demographic data and total score of barriers associated with patients incident report has found that department, gender, level of education and experience is highly associated with motivating factors as their p values is 0.000.

Table 15: Demographic data and total score of barriers to incident report

Demographic data	Chi-square test	Degree of freedom	p-value
Department	314.433	156	0.000
Gender	77.807	26	0.000
Age	111.011	104	0.301
Level of education	141.394	52	0.000
Expirience	256.629	78	0.000

As conclusion this study had revealed patients fall and medication errors as common type of incident reporting. The level of incident reporting was found to be low as the majority of respondents (81.1%) scored below 80%. The main motivating factors found were to receive constructive feedback after reporting an incident, nurse commitment and accountability, nurse knowledge, clear and visible incident that does not have any side effect to patient, to develop a culture of learning from mistakes, obligation and hospital policies to report incident as soon as it happens, and team work to help each other once incident happen. The barriers associated with incident report among nurses revealed by this study were no tradition for bringing up an incident, do not know who is responsible for bringing up an incident, incident form take too long to complete and I do not have time, worried about litigation, worried about disciplinary action, do not want to appear as incompetent nurse, and bringing up an incident will not lead to any improvement, when I am busy I forget to bring up an incident, never get any feedback, and if I discuss the case with the person involved nothing else needs to be done. When health institutions are able to establish a successful incident reporting system, patient safety could be improved and the system would allow nurses and other clinicians to have easy access to reporting an incident with an understanding that their report could be handled in a nonpunitive manner (Jafree, Zakar, and Fischer, 2015). Moreover, the reported incidents would be used in a positive way in that health professionals could learn from their mistakes and improve healthcare system and service without fear of litigation and disciplinary action (Pham, Girard, and Pronovost, 2013).

CHAPTER V: DISCUSSION

5.1 Introduction

This chapter presents a discussion of findings and interpretation of findings in relation to reviewed literature and research conducted in this area. This chapter also presents recommendations and conclusion. To re-iterate this study was aimed to assess barriers and motivating factors associated with patient's incident report among nurses at Kigali University teaching hospital.

5.2 Common type of incident reporting

The findings in this study shows that the most common type of incident encountered in their service are patients to falls down (43%), medication errors (39%), and diagnostic errors (17%). These incidents are serious and something should be done on behalf of the hospital to reduce them as they affect directly the patient. Contrary to the study done by Wilson, Miche, Olsen, Gibberd, Vincent, El-Assad, Rasslan, et al (2012:1) found that common type of incidents was a therapeutic error (34.2%), error in diagnosis is (19.1%) and operative errors (18.4%). In addition to that, the study done in Uganda documented that 58% of medication error and 53% of diagnostic error are the common type of error certified by a nurse (Katongole, Robert, Miisa &Nakiwala, 2015: 295).

5.3 Level of incident reporting among nurses

This study found that 82% of respondents knew what an incident is and only 18% nurse selected did not have any idea about what an incident is. All sampled nurses (100%) confirmed the availability of incident form. Similarly to the study done by Evans,et al 2006 found that 99.8% of nurses were aware of hospital incident reporting system. This study found that 74% had committed incident in their practice and 26% did not commit incident. The results show that 96% of the respondent confirmed that they report once an incident happened while only 4% agreed that they do not. In same line of thought, Evans et al 2006 found that 89.2% had ever completed an incident report. In additional to that Eshetu, (2016:3) found that the proportion of nurses who reported incidents was 25.4%. The findings from this study show that 18.9% of respondent has high level of incident reporting. The highest total attend score was 4 and the lowest total score was 0. Scale was 80-100%: high level of incident reporting and below 80%: low level of incident reporting. The results show that 80.1% had low level of incident reporting which is

a big problem. There is need to increase the level of incident reporting by emphasizing on training and continuous education of nurses.

5.4 Motivating factors associated with patient's incident report

The results in this study show that motivating factors associated with patient's incident report is to get immediate help to the patient (52%). In the same way, Malik,et al (2010) found 24% of nurses are motivated to report incident in order to get immediate help for patients. This shows that even if the errors are performed they can be corrected as soon as possible which decrease the patient's side effects and reduces the complications of errors..

This study revealed that 54% of the respondent report incident to develop a culture of learning from mistake. Similarly to the study conducted by Malik, et al (2010) indicated that12.6% of nurses is motivated by learning from mistake. This means that the findings, mitigating and preventing factors of incidents will be communicated to all staff so that the patient's safety will be emphasized. It will also help to fixe incentives and improve the quality of care delivery.

This study indicates that 35% of the participants agreed that reporting minimize repetition of incident similarly to Malik, et al (2010) 84.4% of nurses are motivated to report incident in order to develop a system to minimize repetition of incident. Once there is decreased of repetition of incident which lead to performance free from errors and improve the client's safety and quality health service.

The other motivating factors revealed by this study is that 47% of nurses agreed that they work as a team to help each other if an incident occurred in their service. It means that a good working environment and teamwork enhence errors reporting. Futhermore,this study finds that 64% of the respondent strongly agreed that it is an obligation and it is in hospital policies to report an incident as soon as it happens. This is similar to the research conducted by Gifford and Anderson,(2010) that discover nurse motivating factors to report incidents are legal obligation to report for example forensic investigation, hospital accountability when there is a need to justify and explain actions when there is incident, the perception that reporting will improve patient and staff safety and awareness of the policies.

5.5 Barriers associated with patient's incident report among nurses

In this study, the barriers associated with patient's incident report revealed was that nurses are worried about disciplinary action where by 44% of the respondent agreed that the disciplinary action is one of the barriers associated with patient incident report. Similarly to the study conducted by Pfeiffer et al, (2009) that found nurses fear of disciplinary action which limit them from reporting patient's incident.

Also this study found that 45% of nurses declared that it is too difficult to them to bring up an incident. This study shows that 25.6% of the respondent says that they strongly agreed that they will appear as incompetent staff once they report their incidents. In the same line of thought, Pfeiffer et al, (2009) revealed that nurses fear that own competence may be questioned thinking that someone is incompetent when they report incidents. In addition to that Kingston, et al (2004:6) show that nurses do not report the incident as they fear also to be blamed as incompetent.

This study showed that other remaining factors are not the barriers from reporting incident as 49% strongly agreed to have a feedback when they report incident. Contrary to the study done in Pakistan by Muhammad, Ali, Azum & Ghulam, (2010: 104) revealed that 84% of nurses reported that lack of feedback is a main barrier to report incident. In the same line of thought, Evans et al (2006:42) revealed that 61.8% of nurses agreed that the barriers of nurses towards patient's incident report are that they never receive any feedback on action to be taken about patient's incident.

The results of this study found that 53% of the respondent strongly disagree that incident form takes too long to complete which is different from the study performed Evans et al, (2006) that showed incident report form takes too long to complete. In the same way Koohestani, and Baghcheghi, (2009:68) revealed also that incident report form is more detailed and took the time to complete them.

5.6 Association between level of incident reporting and demographic data associated with patients incident reporting.

The results of this study found that there an association between level of education and experience of nurses as p value was 0.003. It means that experience has a greater influence on incident reporting among nurse. Other demographic data such a working department, age, gender, and level of education was not significant as their p value was great than 0.005.

5.7 Association between level of incident reporting and motivating factors associated with patients incident reporting.

The association between level of incident reporting and motivating factors is high as 7 motivators among 10 are significant. The findings show that there is association between received constructive feedback (p value is 0.000) and level of incident reporting. Nurse commitment and accountability has association with level of incident report as p value is 0.00. There is association between nurse knowledge and level of incident reporting among nurse as p value found is 0.000. Clear or visible and

does not have any side effect to patient was found to be significant (p value=0.000). This study shows that there is association between development a culture of learning from mistake and level of incident report p value 0.000. The results indicate that there is association between obligation or hospital policies to report an incident as soon as it happens and level of incident report among nurses as p value is 0.000. The association between level of incident among nurses and team work to help each other if an incident occurred is significant as p value is 0.000.In brief, to receive constructive feedback after reporting an incident, nurse commitment and accountability, nurse knowledge, clear and visible incident that does not have any side effect to patient, to develop a culture of learning from mistakes, obligation and hospital policies to report incident as soon as it happens, and team work to help each other once incident happen were the motivating factors significantly associated with the incident reporting among nurses as their p value is lesser to 0.05.

5.8 Association between level of incident reporting and barriers associated with patient incident report.

The results from this study revealed that level of incident reporting had a high association with barriers associated with incident reporting. This study found the barriers of incident reporting are no tradition for bringing up an incident, do not know who is responsible for bringing up an incident, incident form take too long to complete and I do not have time, worried about litigation, worried about disciplinary action, do not want to appear as incompetent nurse, and bringing up an incident will not lead to any improvement, when I am busy I forget to bring up an incident, never get any feedback, and if I discuss the case with the person involved nothing else needs to be done. Similarly conducted by Hashemi, and Asghari (2012) revealed the following barriers of incident reporting: fear of legal action and job threats, fear of economic losses, and fear of honor and dignity. In addition, the study done in Korea by Hwang, and Park (2012) found that low rates of reporting, poorly designed incident reporting systems, and lack of adequate patient safety leadership were barriers associated with incident report. This study found that association between level of incident report and no tradition for bringing up an incident, do not know who is responsible for bringing up an incident, incident form take too long to complete and I do not have time, worried about litigation, worried about disciplinary action, do not want to appear as incompetent nurse, and bringing up an incident will not lead to any improvement was found to be highly significant as their p value were 0.000. Also the association between level of incident reporting and when I am busy I forget to bring up an incident and I never get any feedback was significant at respective p value of

0.002 and 0.003. The association between level of incident reporting among nurses and if I discuss the case with the person involved nothing else needs to be done was also found to be significant as p value is 0.001. In the same way Eshatu (2016) found fear of administrative sanctions, fear of legal penalty, and fear of loss of prestige among colleagues were yielded as significantly associated factors with incident reporting behavior of nurses.

5.9 Association between demographic data and common type of incident report

The association between demographic data and common type of incident among nurses was significant to level of education and working experience as p value is respective 0.000 and 0.001. It means that more nurses high experience the more they commit errors. Other remaining demographic data such as age, working department and gender did not have any association with common type of incident encountered by nurses. Contrary to Buckeley, Short and Rowbottom (1997) study that found the most common incidents reported concerned airway management and invasive line, tube, drain. There were 62 accidental tracheal extubation reported during this study. The most common incidents reported concerned airway management and invasive lines, tubes and drains.

5.10 Association between demographic data and motivating factors associated with patients incident reporting.

The association between demographic data and total score of motivating factors has found that department, gender, level of education and experience is highly associated with motivating factors as their p values is 0.000.It means that working in one department motivate nurses to report incident. Belonging in medical ward is highly motivated to report incidents happened. In addition to that nurses who are lesser experienced are more motivated to report than nurses who are more experienced. Similarly to the study done by Eshatu (2016) that found nurses who were lesser experienced report more than nurses who are more experienced. The association between age and total score of motivators was found to be not significant as p value is 0.685 that is above 0.05, meaning that reporting incidents did not dependent on the age of nurses.

5.11 Association between demographic data and barriers associated with patients incident reporting.

This study found that the association between total score of barriers and demographic data was highly significant to working department, gender, level of education and experience as their p value is 0.000. This means that working department, gender, level of education and experience of nurses are barriers that limit incident reporting. The association between age and total score of barrier was not significant as p value is 0.301 that is above 0.05, meaning that having different age will not limit incident reporting.

5.12 Conclusion and recommendation

5.12.1 Conclusion

This study revealed that 45.6% strongly agreed that they know what an incident is. The results of this particular study show that 69% the target group agreed that they have committed an incident it means that they are many errors that are made and they need to be prevented and worked on them. A positive view in that is that 96.1% of the respondent confirmed that they report once an incident happened. As they report incident happened it will help nurses to learn from those incidents and prevent their repetition. The level of incident reporting was found to be low as 80.1% of respondents had low level of incident reporting.

The results showed that the common types of incidents encountered by nurse are crucial incidents that have direct impact on patient and it must be work on it. The study revealed patient's falls (43%) and medication errors (39%) as common incidents they face. The main motivating factors found were to receive constructive feedback after reporting an incident, nurse commitment and accountability, nurse knowledge, clear and visible incident that does not have any side effect to patient, to develop a culture of learning from mistakes, obligation and hospital policies to report incident as soon as it happens, and team work to help each other once incident happen. The barriers associated with incident report among nurses revealed by this study were no tradition for bringing up an incident, do not know who is responsible for bringing up an incident, incident form take too long to complete and I do not have time, worried about litigation, worried about disciplinary action, do not want to appear as incompetent nurse, and bringing up an incident will not lead to any improvement, when I am busy I forget to bring up an incident, never get any feedback, and if I discuss the case with the person involved nothing else needs to be done.

5.12.2 Recommendation

The recommendations go to:

Future research

Future research should focus on outcomes of incident reporting, motivating factors to report incidents as they are known once they are reported, this will help to emphasis on a culture of learning from mistake which will improve the quality of care delivered and patient safety. Future research should also focus on preventive measures of barriers associated with incident report in order to ensure patient safety is the first concern of every nurse.

Nursing practice

The staff of KUTH has to develop critical thinking in order to minimize the errors by improving the quality of care delivery and to make sure that the safety of the patient's is at the highest priority. Nurses have to regularly use standardized protocols, document and report all incidents happened. It is recommended that nurses have disseminated report from incidents in all departments in order to develop the culture of learning from mistakes which will decrease and prevent the repetition of incidents.

KUTH administration

It is recommended that the hospital needs to train nurses about the knowledge, and the benefits of incident reporting with regard to ensuring and promoting patient safety and to increase the level of incident reporting. Moreover, it is strongly advisable to work on establishing a system which encourages nurses to report incidents in a way that they are protected from administrative sanctions and legal penalties.

Nursing education

It is recommended that nurses should be educated on incident reporting while they are at school that will increase their awareness on incident reporting.

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ANNEXES

Annexure 1: Informed consent form

INFORMED CONSENT FORM

Informed Consent form for nurses who are working at Kigali University Teaching Hospital (KUTH) and who are invited to participate in research on barriers and motivating factors associated with patient's incident reporting among nurses.

Name of Principal Investigator: Uwimana Lucie

Name of Organization: University of Rwanda

Name of Sponsor: Ministry of Health

What you should know about this research study: The researcher give you this informed consent document so that you may read about the purpose of this research study. You have the right to refuse to take part, or agree to take part now and change your mind later. Please review this consent form carefully. Ask any questions before you make a decision. Your participation is voluntary.

This Informed Consent Form has two parts:

Information Sheet (to share information about the research with participants)

Certificate of Consent (for signatures if participants agree to take part)

I Information Sheet

Introduction

My name is UWIMANA Lucie, a student in the postgraduate nursing program at University of Rwanda School of Nursing and Midwifery. I am proposing to conduct a study that explores the barriers and motivating factors associated with patient's incident reporting among nurses at Kigali University Teaching Hospital. I am going to give you information and invite you to be part of this research. You do not have to decide today whether or not you will participate in the research. You are welcome to talk to anyone you feel comfortable with about the research; ask me any questions you may have; and seek any clarification you need at any time.

There may be some words that you do not understand, please ask me to stop as we go through the information and I will take time to explain.

Purpose of the research

This research is aims to explore the barriers and motivating factors associated with patient's incident report among nurse because incidents reporting helps us to learn from the mistakes made, thus enabling us to prevent other possible incidents that could harm our patients. Incident reporting behavior among healthcare practitioners can play a significant role in improving the quality of healthcare service delivery to patients and as well as guide us to achieve positive outcomes for our patient. Incident reporting is part of hospital policy at KUTH, therefore the researcher seeks to explore the factors that motivate and limit nurse to report patient's incident.

Type of Research Intervention

This research will involve a questionnaire that needs to be completed by the participants in order to give information to the researcher about the barriers and motivating factors associated with patient's incident report among nurse at KUTH.

Voluntary Participation

Participation in this research is entirely voluntary with no fees to be paid by the researcher or anyone else. I'm freely choosing to participate in this study no one has coerced me, and I have been given all the necessary information needed to make an informed decision as to participate. I understand I can withdraw at any time without giving reasons and that I will not be penalised for withdrawing nor will I be questioned as to why I have withdrawn.

Procedure

The researcher will administer the questionnaire to the participants; the questionnaire is made of 35 items and it will take approximately 30 minute to complete it. The researcher will bring back the questionnaire after 2 days.

Confidentiality

The identity of all participants in this research will not be shared at any point. All information to be collected from this research project will be kept confidential. Data collected during the research will be put away and only personnel working on the project will have access to the data which will be password protected. Codes will be used instead of using participant's names.

Sharing the Results

The results from this research will be shared with you through meetings before it will be available to the public. Confidential information will not be shared. The results will be available to other researchers who may need to conduct similar study.

Who to Contact

If you have any questions you may ask them now or later, even after the study has started. If you ask questions later, you may contact Uwimana Lucie, on +250785661661/ uwimanalucy@gmail.com.

The proposal will be reviewed and approved by IRB committee, which is a committee whose task it is to make sure that research participants are protected from harm. If you wish to find about more about the IRB, contact Prof Gahutu Jean Bosco Director for research, innovation and postgraduate studies, +250783340040/ gahutu@hotmail.com. It will also be reviewed by the Ethics Review Committee of the World Health Organization (WHO), which is supporting the study.

PART II: Certificate of Consent

I have read the foregoing information. I have had the opportunity to ask questions about it and any questions that I have asked have been answered to my satisfaction. I consent voluntarily to participate as a participant in this research.

Print Name of Participant----------

Signature of Participant ----------

Date----------

Statement by the researcher

I have accurately read out the information sheet to the potential participant, and to the best of my ability made sure that the participant understands that the following will be done:

1. To administer a questionnaire
2. To keep participant's confidentiality
3. To communicate the results after the research

I confirm that the participant was given an opportunity to ask questions about the study, and all the questions asked by the participant have been answered correctly and to the best of my ability. I confirm that the individual has not been coerced into giving consent, and the consent has been given freely and voluntarily.

A copy of this informed consent form (ICF) has been provided to the participant.

Print Name of Researcher ----------

Signature of Researcher----------

Date----------

Annexure 2: Research questionnaire

Part I: Demographic data

1. Your working service: ……

Choose the best answer

2. Your Gender: Male: ☐ Female: ☐
3. Your age:
   a. 25-30 years ☐
   b. 31-35 years ☐
   c. 36-40 years ☐
   d. 41-45 years ☐
   e. Above 45 years ☐
4. What is your level of education?

a. A2 nurse ☐

b. advanced diploma (A1) ☐

c. Bachelor's degree (A0) ☐

5. How long do you work in this service?

a. Lesser than 5 year ☐

b. 5- 10 years ☐

c. 11-15 years ☐

d. More than 15 years ☐

Part II: Common type of incident encountered by nurse:

Encircle the best answer

6. What are the common incident reports you have encountered in your service:

   a. Medication error
   b. Diagnostic errors
   c. Patients fall

Part III: Information on incident reporting

7. An incident is any deviation from usual medical care that causes an injury to the patient or poses a risk of harm. Yes ☐ No ☐

8. Do you have an incident form in your working service? Yes ☐ No ☐

9. Have you ever commit an incident in nursing practice Yes ☐ No ☐

10. Do you report an incident once it happens in your working service? Yes ☐ No ☐

Part IV: Motivators factors associated with patient incident report

11. As a nurse, if you are reporting an incident in your service what motivates you to do so?

(Tick one item that applies below)

	Strongly Disagree	**disagree**	**neutral**	**Agree**	**Strongly agree**
a. I receive constructive feedback after reporting an incident	☐	☐	☐	☐	☐
b. Nurse commitment and accountability	☐	☐	☐	☐	☐
c. Nurse knowledge	☐	☐	☐	☐	☐
d. Clear or visible incident and does not have any side effect to patient	☐	☐	☐	☐	☐
e. To get immediate help to the patient	☐	☐	☐	☐	☐
f. To develop a culture of learning from mistakes	☐	☐	☐	☐	☐
g. To minimize repetition of incident	☐	☐	☐	☐	☐
h. It is an obligation or it is in hospital policies to report an incident as soon as it happens	☐	☐	☐	☐	☐
i. The culture of incident reporting executed without any intimidation and blame	☐	☐	☐	☐	☐
j. Team work to help each other if an incident occurred	☐	☐	☐	☐	☐

Part V: Barriers associated with patient incident report

10. As a nurse, what are the barriers associated with patient incident report in your working service: (Insert one tick for each item below)

	Disagree Strongly	**Disagree**	**Neutral**	**Agree**	**Agree Strongly**
1. We have no tradition in my department for bringing up an incident	☐	☐	☐	☐	☐
2. When I am busy I forget to bring up an incident	☐	☐	☐	☐	☐
3. I never get any feedback on what action was taken	☐	☐	☐	☐	☐
4. I don't know who is responsible for bringing up an incident	☐	☐	☐	☐	☐
5. I might be accused or criticized	☐	☐	☐	☐	☐
6. .Incident form takes too long to complete and I don't have time	☐	☐	☐	☐	☐
7. If I discuss the case with the person involved nothing else needs to be done	☐	☐	☐	☐	☐
8. I am worried about litigation	☐	☐	☐	☐	☐
9. I am worried about disciplinary action	☐	☐	☐	☐	☐
10. It is too difficult to bring up an incident	☐	☐	☐	☐	☐

11. I do not wish to appear as an incompetent nurse	☐	☐	☐	☐	☐
12. Bringing up an incident will not lead to any improvement in our service	☐	☐	☐	☐	☐

Annexure 3: Ethical Clearance from KUTH

CENTRE HOSPITALIER UNIVERSITAIRE
UNIVERSITY TEACHING HOSPITAL

Quality Health Care Training & Research

Ethics Committee / Comité d'éthique

February 10th, 2017 **Ref.: EC/CHUK/273/2017**

Review Approval Notice

Dear Uwimana Lucie,

Your research project: ***"Barriers and motivating factors associated with patient's incident reporting among nurses."***

During the meeting of the Ethics Committee of University Teaching Hospital of Kigali (CHUK) that was held on 10/02/2017 to evaluate your protocol of the above mentioned research project, we are pleased to inform you that the Ethics Committee/CHUK has approved your protocol.

You are required to present the results of your study to CHUK Ethics Committee before publication.

PS: Please note that the present approval is valid for 12 months.

Yours sincerely,

DR STEPHEN RULISA
HEAD DEPARTMENT OF CLINICAL

Dr Stephen Rulisa
The President, Ethics Committee,
University Teaching Hospital of Kigali

<<University teaching hospital of Kigali Ethics committee operates according to standard operating procedures (Sops) which are updated on an annual basis and in compliance with GCP and Ethics guidelines and regulations>>.

B.P. 655 Kigali- RWANDA www.chk.rw Tél. Fax : 00 (250) 576638 E-mail :chuk.hospital@chukigali.rw

Annexure 4: Ethical Clearances from University of Rwanda

UNIVERSITY OF RWANDA

COLLEGE OF MEDICINE AND HEALTH SCIENCES

CMHS INSTITUTIONAL REVIEW BOARD (IRB)

Kigali, 09/01/2017
Ref: CMHS/IRB/029/2017

Uwimana Lucie
School of Nursing and Midwifery , CMHS, UR

Dear Uwimana Lucie

RE: ETHICAL CLEARANCE

Reference is made to your application for ethical clearance for the study entitled ***"Barriers And Motivating Factors Associated With Patient's Incident Reporting Among Nurses At Kigali University Teaching Hospital."***

Having reviewed your protocol and found it satisfying the ethical requirements, your study is hereby granted ethical clearance. The ethical clearance is valid for one year starting from the date it is issued and shall be renewed on request. You will be required to submit the progress report and any major changes made in the proposal during the implementation stage. In addition, at the end, the IRB shall need to be given the final report of your study.

We wish you success in this important study.

Professor Kato J. NJUNWA
Chairperson Institutional Review Board,
College of Medicine and Health Sciences, UR

Cc:
- Principal College of Medicine and Health Sciences, UR
- University Director of Research and Postgraduate studies, UR

EMAIL: researchcenter@ur.ac.rw P.O. Box: 3286, Kigali, Rwanda WEBSITE: http://cmhs.ur.ac.rw/

Annexure 5: Permission letter to use and adapter questionnaire

December 15, 2016

To: **The Dean of School of Nursing**

And Midwifery at University of Rwanda

Permission to use and adapt my questionnaire

Dear Dean Dr. Mukamana Donatilla,

I am pleased to give Uwimana Lucie permission to use and adapt my questionnaire used in the article of 'Factors impeding nurses from reporting adverse events' (2010).

In fact Madam, the questionnaire will help in her dissertation to explore the barriers and motivating factors associated with patient's incident reporting among nurses at Kigali University Teaching Hospital.

Sincerely,

Dr. Anastasius Moumtzoglou MSc, MA, PhD

P. & A. Kyriakou Childrens Hospital

E-mail: anas1@hol.gr