PATIENTS AND HEALTH WORKERS' ENGAGEMENT IN PATIENT SAFETY IN HEALTHCARE IN KITGUM GENERAL HOSPITAL

BY

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May God bless them all!

DEDICATION

I dedicate this research work to my wife Nyeta Storia Omona and my children; Omona Job Obama, Omona Simon Okwir, Omona Emmanuel and Omona Oscar who forewent a lot of necessary requirements, to have me finalize this work and also morally supported me to undertake this course.

May God reward them!

EXECUTIVE SUMMARY

Introduction:

The delivery of health care is known to involve potential safety risks for the patients who are supposed to benefit from medical treatment and care. Over the years, efforts have been put in place to reduce the occurrence of safety risks and improve on patient quality of care. Both the health care providers and patients have their respective roles to play. Bringing on board patients in efforts to minimise safety risks, also known as patient engagement, proved effective.

Objectives:

The objectives of the study were; to ascertain the level of awareness about patient safety in healthcare among patients and health workers, to determine the level of health workers engagement in patient safety in healthcare, assess the level of patient engagement in patient safety, as well as to determine the factors affecting patients and health workers engagement in patient safety in health care in Kitgum General Hospital.

Methods:

This was a descriptive, cross sectional study of patients and health workers' engagement in patient safety in healthcare in Kitgum General Hospital (KGH). The study took both qualitative and quantitative dimensions. A probability sample of 384 patients was interviewed using structured questionnaires and 103health workers were studied by observation and key informant interviews. Documentation review of previous patient files (50files) was carried out to assess the depth of patient identification, as a measure to minimize medical errors. Pre-testing of the questionnaires and training of research Assistants were done prior to the study to ensure quality of the research. Ethical considerations in research were strictly adhered to.

Results:

The level of awareness about patient safety among patients and health workers was found to be 46.5% and 51% respectively.

The level of health workers engagement in patient safety was found to be 51.4% while engagement of patients in patient safety was at 52.1%

The factors affecting patients and health workers engagement were mainly demographic factors such as age and level of education, among others.

Conclusion

In conclusion, health workers in KGH were 4.5% more aware about patient safety than the patients. However, patients in KGH are 0.7% more engaged in patient safety than the health workers.

Recommendation

The level of health workers' engagement in healthcare, level of patient engagement as well as awareness about patient safety is still low in KGH. A lot need to be done, including conducting similar research in other health facilities for comparison purpose.

TABLE OF CONTENT

ACKNOWLEDGEMENT i

DECLARATION ii

DEDICATION iii

EXECUTIVE SUMMARY iv

TABLE OF CONTENT v

LIST OF FIGURES xi

LIST OF TABLES xii

LIST OF ABBREVIATIONS AND ACRONYMS xiii

OPERATIONAL DEFINITIONS xiv

CHAPTER ONE 1

INTRODUCTION 1

1.1: Introduction to the study topic 1

1.2: Background to the study area 5

1.3: Statement of the problem 5

1.4: Research Questions 6

1.5: Conceptual Framework 7

1.6: Objectives of the study 8

1.6.1: General Objective 8

1.6.2: Specific Objectives 8

1.7: Justifications of the study 8

CHAPTER TWO 10

LITERATURE REVIEW 10

2.0: Introduction 10

2.1: Level of Health worker'engagement in patient safety 11

2.2: Level of Patients'engagement in patient safety 12

2.3: Factors affecting level of patient engagement 13

2.3.1: Patient demographics 14
2.3.2: Patient's level of awareness 14
2.3.3: Task related factors 15
2.3.4: Health facility setting 15
2.3.5: Healthcare provider modeling 17
2.3.6: Severity of the illness 18
2.3.7: Patient's willingness to participate 18
2.3.8: Patients' self-efficacy 19
2.3.9: The role of a caretaker or parent 19
2.3.10: Communication 19
2.4: The effects of patient engagement 21
2.5: Conclusion 22
CHAPTER THREE 26
RESEARCH METHODOLOGY 26
3.1: Introduction 26
3.2: The study area 26
3.3: The study type/design 26
3.4: Study Population 26
3.5: Study Units 26
3.5.1: Inclusion Criteria 26
3.5.2: Exclusion Criteria 27
3.6: Sample size estimation 27
3.6.1: Respondent patient sample size 27
3.6.2: Health workers sample size 28
3.7: Sampling Techniques 29
3.7.1: The Hospital 29
3.7.2: The Respondents 29
3.7.2.1: The Patient/client Respondents 29
3.7.2.2: The health worker 30

3.8: Variables and Indicators for the objectives....30
3.8.1: Variables and Indicators for objective I....30
3.8.1.1: Variables and indicator for awareness about patient safety among patients. 30
3.8.1.2: Variables and indicator for awareness about patient safety among health workers. ..31
3.8.2: Variables and indicators for objective II....32
3.8.3: Variables and Indicators for objective III....33
3.8.4: Variables and Indicators for objective IV....34
3.9: Data collection tools and techniques 34
3.9.1: Data collection tools 34
3.9.2: Data collection techniques....35
3.10: Data entry, analysis and presentation methods....35
3.10.1: Data Entry and Analysis 35
3.10.2: Data Presentation Methods....35
3.11: Quality controls....36
3.12: Ethical considerations....36
3.13: Limitations to the study 37
3.14: Plan for Dissemination of Results. 37
CHAPTER FOUR....38
RESULTS, ANALYSIS AND PRESENTATION....38
4.0: Introduction....38
4.1: Respondents....38
4.1.1: Respondent Clients/patients....38
4.1.2: Socio-demographic characteristics of the respondent clients/patients 38
4.1.3: Respondent health care providers....38
4.2: Health seeking behaviour of respondent clients/patients....39
4.3: Reasons for respondent patients visiting the hospital....39
4.4: Level of awareness about patient safety among respondent clients 39
4.4.1: Respondent client/patient hearing about patient safety 40
4.4.2: Has the respondent patient ever experienced a safety incident?....41

4.4.3: Reporting an adverse event 41
4.4.4: Clients ever been taught about error prevention 41
4.4.5: Danger signs to watch for while at home 42
4.4.6: When to resume normal activities after getting health care 43
4.5: Patient engagement in patient safety 43
4.5.1: Patient involvement in decision making 44
4.5.1.1: Factors influencing involvement in decision making 45
4.5.1.1.1: Age of the respondent 45
4.5.1.1.2: Sex of the respondent 46
4.5.1.1.3: Number of hospital visits per year 47
4.5.1.1.4: Level of education. 48
4.5.1.1.5: Disease condition 49
4.5.1.2: Factors influencing involvement in decision making from health workers perspective 50
4.5.2: How often the respondent patients ask questions to the health workers 51
4.5.2.1: Factors influencing the clients ability to ask questions during hospital visits. 51
4.5.2.1.1: Age of the respondents 51
4.5.2.1.2: Sex of the client and the willingness to ask questions 52
4.5.2.1.3: Respondent's level of education 53
4.5.2.1.4: Disease condition and willingness to ask questions 54
4.5.2.1.5: Number of hospital visits 55
4.5.2.2: Factors influencing the clients ability to ask questions during hospital visits from health workers perspective. 56
4.5.2.2.1: Clients asks doctor to explain the treatment plan to be followed at home 56
4.5.3: Respondent patient experiences of patient safety incidents 57
4.5.3.1: Which factors influence clients' likelihood to experiencing medical related incidents? 58
4.5.3.1.1: Number of hospital visits versus experiencing an incident 58
4.5.3.1.2: Type of disease condition 59
4.5.3.1.3: Level of education 60

4.6: Factors affecting patient engagement in patient safety in KGH 60

4.7: Level of awareness about patient safety among health workers 61

4.7.1: Has the health care provider ever heard of patient safety concept in health care? 61

4.7.2: Level of completeness of patient particulars 61

4.7.3: Cadre of staff versus their awareness on patient safety 62

4.8: Level of health workers engagement in patient safety 63

4.8.1: Clients seeing the health care providers wash hands before offering a service. 64

4.8.2: Client asking if the health worker has washed his/her hands before offering a service. 65

4.8.2.1: Frequency of responses given about health workers washing hand before offering a service 66

4.8.2.2: Level of education 66

4.8.2.3: Cadre of staff versus hands washing before offering a medical service. 67

4.8.2.4: Why healthcare workers do not wash hands 68

4.8.3: Client told how much pain to expect during surgery/painful procedure 68

4.8.4: Did the health workers provide enough information concerning side effects of the medication dispensed to you? 69

4.8.5: Has the health care provider ever experienced/encountered a patient safety incident? 69

4.8.6: Health workers reporting patient safety incidents 70

4.9: Factors affecting health workers engagement 72

CHAPTER FIVE 73

DISCUSSION, CONCLUSION AND RECOMMENDATIONS 73

5.0: Introduction 73

5.1: Discussion of the findings 73

5.1.1: Level of awareness about patient safety among patients and health workers. 73

5.1.2: Level of health workers engagement in patients' safety and factors affecting the engagement 73

5.1.2.1: Ability to recognise an incident 74

5.1.2.2: Ability to report the incident 74

5.1.2.3: Hand washing culture 74

5.1.2.4: Health worker's ability to encourage the client to speak up in case of incident happening. 75

5.1.3: Level of patient engagement in patients' safety and the factors affecting the engagement 75

5.1.3.1: Decision making 75

5.1.3.2: Asking questions during care and treatment 76

5.1.3.3: Experiencing a medical incident 76

5.1.3.4: Education about error prevention 76

5.1.3.5: Watching a staff wash hands before offering a service 76

5.2: Conclusions 77

5.3: Recommendations 77

REFERENCES 78

APPENDICES 88

Appendix I: INTRODUCTION AND CONSENT 88

Appendix II: QUESTIONNAIRE FOR PATIENTS RESPONDENTS. 88

Appendix III: TOOLS FOR HEALTH WORKERS 92

APPENDIX IV: COPY OF INTRODUCTORY LETTER 96

APPENDIX V: MAP OF UGANDA SHOWING LOCATION OF KITGUM DISTRICT 97

LIST OF FIGURES

Figure 1: Conceptual Model 7

Figure 2: Number of hospital visit versus likelihood of being educated about error prevention 42

Figure 3: Age of respondents versus involvement in decision making 46

Figure 4: Sex of respondents versus involvement in decision making.....46

Figure 5: Number of hospital visits versus decision making involvement.....48

Figure 6: Level of education versus decision making involvement 49

Figure 7: Disease conditions versus decision making involvement 50

Figure 8: Age of the respondents versus willingness to ask questions.....52

Figure 9: sex of the respondent versus willingness to ask questions.....53

Figure 10: Respondent's level of education versus willingness to ask questions.....54

Figure 11: Disease conditions versus willingness to ask questions.....55

Figure 12: Number of hospital visits versus likelihood to ask questions 55

Figure 13: Number of hospital visits versus experiencing an incident.....58

Figure 14: Disease conditions versus likelihood to experience incident 59

Figure 15: Educational level versus likelihood to experience incident 60

Figure 16: Cadre of staff versus their awareness on patient safety.....62

Figure 17: Level of education versus ability to ask whether health care provider has washed hands before providing a service. 67

Figure 18: Cadre of staff versus hands washing before offering a medical service 68

Figure 19: cadre of staff versus experiencing a patient safety incident. 69

Figure 20: Duration of staff stay at KGH versus failure to report the experienced incidents .71

LIST OF TABLES

Table 1: variables and indicators for level of health workers engagement in patient safety ...33

Table 2: variables and indicators for level of patients' engagement in patients' safety 34

Table 3: Summary of findings on awareness about patient safety among patients in KGH ...40

Table 4: Summary findings on patient engagement in patient safety 44

Table 5: Summary of findings on involvement in decision making 45

Table 6: Summary findings on level of asking questions 51

Table 7: Age of the respondent versus the ability to ask the doctor about their treatment plan while at home 56

Table 8: Summary findings on respondent patients who experienced safety incident in KGH 57

Table 9: Summary findings on constructs used to approximate health workers engagement in patient safety. 64

Table 10: Frequency of facility visits versus clients seeing the health workers wash hands before providing a service 65

Table 11: How often the respondent asks the health worker if he/she has washed hands before offering a service 66

Table 12: Reporting patient safety incidents among health workers 70

Table 13: Why staffs who experienced the incident never reported them. 70

LIST OF ABBREVIATIONS AND ACRONYMS

CAO	:	Chief Administrative Officer
DHO	:	District Health Officer
FHS	:	Faculty of Health Sciences
GoU	:	Government of Uganda
H/W	:	Health Worker
HRO	:	High Reliability Organization
KGH	:	Kitgum General Hospital
MoH	:	Ministry of Health
NGOs	:	Non-Governmental Organizations
OPD	:	Out Patient Department
PNFP	:	Private-Not-For-Profit
SPSS	:	Statistical Package for Social Scientists
UBOS	:	Uganda Bureau of Statistics
UDHS	:	Uganda Demographic and Health Survey
UMU	:	Uganda Martyrs University
WHO	:	World Health Organization
WHR	:	World Health Report

OPERATIONAL DEFINITIONS

Health: Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity (WHO 1948)

Health Service Delivery: Defined as the way inputs are combined to allow the delivery of a series of interventions or health actions (WHO, 2001b)

Health Workers: Health workers are all people engaged in actions whose primary intent is to enhance health (WHO, 2006). This meaning extends from WHO's definition of the health system as comprising activities whose primary goal is to improve health.

Incidents: An incident is defined as "an event or circumstance which could have resulted, or did result, in harm to any person and/or a complaint, loss or damage" (WHO, 2007).

Incident Reporting: Is defined as written and verbal reporting of any event in the process of patient care that is inconsistent with desired patient outcomes or routine operations of the health care facility. (Mosby's Medical Dictionary, 2009)

Adverse events: It is "an incident which results in harm to a patient" (WHO, 2007).

Event: 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).

Harm: Is considered an outcome that negatively affects a patient's health and/or quality of life, including illness, injury, suffering, disability and death. Harm may thus be physical, social or psychological (WHO, 2007).

Medical Error: Is the failure of a planned action to be completed as intended (error of execution) or the use of a wrong plan to achieve an aim (error of planning). Errors can include problems in practice, products, procedures, and systems (WHO, 2007)

Near misses: (also known as a close call) is an incident that occurs that has the potential to result in harm but fails to do so either by chance or by timely intervention (WHO, 2007).

Patient's Safety: Is the reduction and mitigation of unsafe acts within the health-care system, as well as through the use of best practices shown to lead to optimal patient outcomes. Essentially, patient safety is about constantly working to avoid, manage and treat unsafe acts within the health care system (Vigar, 2009)

Safety: Freedom from accidental injuries (WHO, 2005)

General Hospitals: These are health facilities that provide preventive, outpatient curative, maternity, inpatient health services, emergency surgery, blood transfusion, laboratory and other general services. They also provide in-service training, consultation and research in support of community-based health care programmes (UBOS, 2012)

CHAPTER ONE

INTRODUCTION

The introduction to the study topic and background of the study area have discussed under this section. The problem statement, research questions, research objectives and justification for this study have also been discussed in this section.

1.1: Introduction to the study topic

The delivery of health care is known to involve potential safety risks for the patients who are supposed to benefit from medical treatment and care (Helle and Larsen., 2012). Over the years, efforts have been put in place to reduce the occurrence of safety risks. Both the health care providers and patients have their respective roles to play. Bringing on board patients in efforts to minimise safety risks, also known as patient engagement, has proven effective.

Therefore, patient engagement means engagement in one's own health, care and Treatment (Parsons et al., 2010). It is used to describe patients' involvement in primary care consultations regarding their own health, care and treatment. According to Gruman et al. (2010, p.66), patient engagement refers to actions patients must take to obtain the greatest benefit from the health care services available to them. It encompasses a number of potential strategies for patient involvement in patient safety that entails "speaking up" in the case of safety concerns, awareness and knowledge of safety risks, close observation of medication and treatment, coordination of care, contributing to hygienic practices, and self-management and compliance. Efforts to engage patients in safety efforts have focused on three areas: enlisting patients in detecting adverse events, empowering patients to ensure safe care, and emphasizing patient involvement as a means of improving the culture of safety (PSNet, 2007, p.61). Patient engagement also means fostering an effective collaboration in which patients and clinicians work together to help the patient progress towards mutually agreed-upon health goals (Helle and Larsen., 2012).

Patient safety according to WHO (2004) refers to the prevention of errors and adverse effects to patients associated with health care. Similarly, the National Patient Safety Foundation (NPSF, 2010 p.36), defines patient safety as the avoidance, prevention and amelioration of adverse outcomes or injuries stemming from the processes of health care. Vigar (2009, p.58) also defines patient safety as the reduction and mitigation of unsafe acts within the health-care system through the use of best practices shown to lead to optimal patient outcomes. He argues that patient safety is all about working persistently to avoid, manage and reduce unsafe acts within the health care system. Again, Helle and Larsen. (2012, p.59) define patient safety as freedom for a patient from unnecessary harm or potential harm associated with healthcare.

Adverse events are poor patient outcomes that are due to medical error. They are unexpected and unwanted events that can take place in any setting where health care is delivered (primary, secondary and tertiary care, community care, social and private care, acute and chronic care) (Forster et al., 2004). The Harvard study of 1991 found that 4% of patients suffer some kind of harm in hospital; 70% of the adverse events result in short-lived disability, but 14% of the incidents lead to death (WHO, 2004). Errors that occur either do or do not harm patients and reflect numerous problems in the health care system, such as a culture not driven toward safety and the presence of unfavourable working conditions for nurses(Wolf and Hughes, 2008).

Beckett et al. (2012, p.11) reported that an estimated 1-10% of medication errors can lead to patient harm. All patients are vulnerable to the detrimental effects of these errors. A study done by Forster et al. (2004) indicates that of the 12.7% patients with an adverse event 4.8% had a preventable event and 0.6%, died because of an adverse event. Most adverse events were due to drug treatment, operative complications or nosocomial infections. The study also

report that 61% of adverse events happen before patient hospitalization. Valentin et al. (2006) reported that 20% of adult patients experience at least one medical event among hospitalised patients, with the highest (7.1%) being medication related events. In their study,Valentin et al. (2013) also reported that among 795 observed patients, a total of 641 errors affecting 269 patients were reported i.e. a rate of 49.8 errors per 100 patient days related to the administration of medication, loss of artificial airways, and unplanned dislodgement of lines, catheters and drains. Weingart et al. (2005) demonstrated that about 8% experienced adverse events and 4% experienced near misses of which 5 were serious or life threatening.

The National Patient Safety Foundation (NPSF) categorizes medical errors as either diagnostic; (errors such as wrong diagnoses, delayed diagnoses, omitted diagnoses, inappropriate investigation or failure to use results), dose related which include; wrong doses, polypharmacy, wrong route and wrong patient among others, Surgical errors which include no consent, omitted pre-operative investigations, wrong site of surgery, forgotten matateriał in patient's body and omitted post-operative care (NPSF, 2010). Studies show that medication errors are the most prevalent category of medical errors that considerably endanger the patient safety (Bahadori et al., 2013).

Medication errors are costly from human, economic, and societal perspectives (Dennison, 2005). Similarly, Friedman et al. (2009) argue that adverse safety events in the hospital can impose extra costs not only due to longer stays and corrective treatments, but also due to deaths and re-admissions. The authors suggest that the 3-month re-admission rate was about 17% for those with no safety event compared to 25% for those where a safety event was recorded. The corresponding rates for re-admission within one month were 11% and 16% respectively. The in-hospital death rate was 1.3% with no safety event and 9.2% with a safety event. These findings were consistent with those of Yu et al. (2012), who found out that Multiple patients safety events (MPSEs) occurred in approximately 1 in every 1,000

hospitalizations, and compared with all admissions, the average length of stay for MPSE admissions was 4 times longer, and the average charge for MPSE admissions was 8 times greater.

Medical errors may be less obvious to the care providers but more apparent to patients but little is known about how well patients, especially the hospitalized one, can identify errors or injuries in their care (Weingart et al., 2005). A number of factors affect the willingness of patients to report medical errors. For example the research conducted in Boston teaching hospital by Greenwald et al. (2010) shows that patients with 3 or more drug allergies are more likely to report medical errors compared to those without drug allergies and that only 86% of hospitalized patients were willing to participate in medical events related study. Yves et al. (2010) reported a number of factors that affect the patients' willingness to report medical errors. The barriers include; lack of patients' awareness of the healthcare risks, unwillingness to challenge healthcare provider knowledge and authority, lack of awareness of patients' role in preventing errors (self-efficacy) and fear of legal/technical implication that might arise. The facilitators included healthcare provider modelling, provider perception of risks involved if patients are engaged and lastly, healthcare provider willingness to participate in ensuring patients safety. According to WHO, Patients and family members who are alert to the risk of errors can be more vigilant in monitoring what happens to them while in the hospital. By being informed and alert to their medication regimens, by ensuring medication accuracy on all orders, and by providing all pertinent information to staff, patients can be part of the team effort to reduce errors (WHO, 2013).

Therefore medical errors can be reduced through active engagement of patients and family caregivers with the care team, the use of patient safety checklists, and increased awareness of publicly reported hospital safety records (NEHI, 2011). Similarly, EvidenceScan (2013) suggests efforts to help patients take an active role in their own safety that includes

educational leaflets, videos or posters to help patients feel more confident questioning professionals about issues such as hand hygiene, comment cards to help identify individual safety issues and encouragement to tell staff if the patient has any concerns.

1.2: Background to the study area

The research was done in Kitgum district in Northern Uganda. The town centre (Kitgum town) is located approximately 452 kilometres (281 miles), by road, north of Uganda's capital, Kampala. The district is bordered by South Sudan to the north, Kaabong District to the East, Kotido District to the Southeast, Agago District to the South, Pader District to the Southwest and Lamwo District to the Northwest. The district is composed of one county, that is, Chua County. It is a constituent part of Acholiland, home to an estimated 1.1 million Acholi, according the 2002 national census. The annual population growth rate of the district was estimated at 3.5% in the year 2010, with the estimated population of approximately 220,000. The main economic activity is agriculture, practiced on subsistence scale. Raring animal, such as cattle is not common.

Kitgum General Hospital (KGH) is located in the heart of the town, adjacent to Kitgum District Administration Headquarters (Southwest to the hospital), in Kitgum town council. The hospital was built in 1938 by the British government. It is a 200 bed capacity public hospital, currently administered by the Uganda Ministry of Health (MoH).

1.3: Statement of the problem

Despite the evidence that there are significant levels of medical errors in Ugandan health facilities, little has been done to analyze the impact of both patient and health worker engagement in patient safety. In Ugandan healthcare settings, the involvement of both the health workers and patients in patient safety strategies is poorly documented. Even if the health care workers seem to be engaged, their level of engagement is less often checked by the patients as majority of patients are not aware that they have roles to play in their own

safety issues in healthcare settings. As a result, there has been presumed increase in adverse events, jeopardizing patients' safety.

The gap in reporting medical errors ultimaltely results in a rampant increase in medico-legal issues, and the associated direct and indirect costs. Secondly as the patients are less involved in the mitigation of patient safety issues, they tend to hold health workers more responsible for any error(s) that might occur, a factor that greatly affects subsequent health seeking behaviours. If this problem is not handled with the seriousness it deserves, and its increase curbed, more preventable harm will keep coming up. This may result into more loss of lives and medico-legal issues are also likely to increase exponentially in future and health facilities will continue to incurr unnecessary resultant associated costs. This in the long run will make health facilities less desirable to the clients and financially impossible to run, a serious blow to the priciple of Primary Health care. Directly or indirectly the quality of health care delivery may be compromised if this problem is not handled seriously.

Just like any other health facility in Uganda, Kitgum General Hospital (KGH) is presumed to be having similar challenges in term engagement in patient safety issues. This called for the need to do this research and ascertain the actual fact on ground.

1.4: Research Questions

This study sought answers to the following questions;

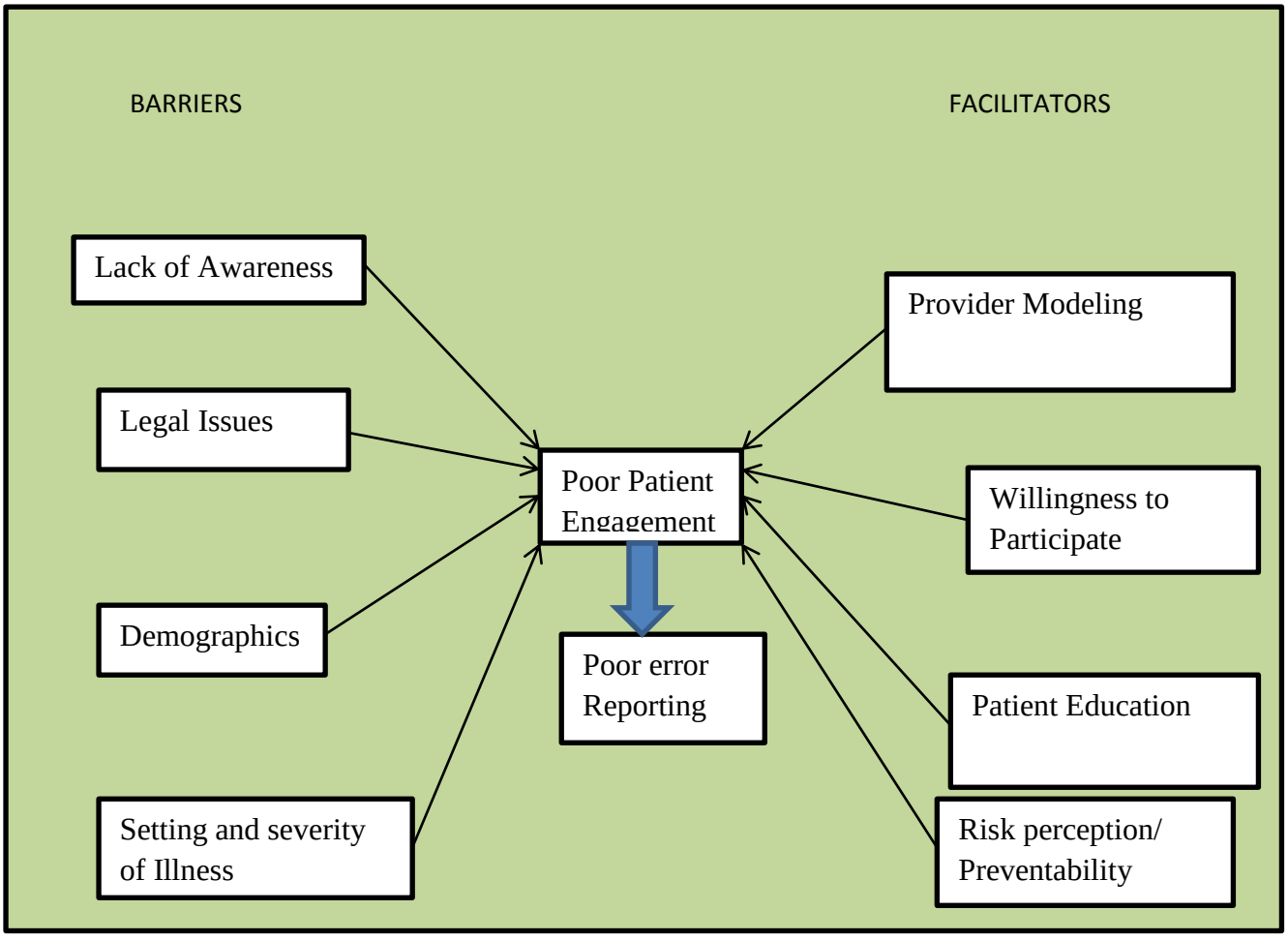
I. What was the level of awareness about patient safety in healthcare among patients and health workers in Kitgum general hospital?
II. To what level were health workers engaged in patient safety in healthcare in Kitgum general hospital?
III. To what level were patients engaged in patient safety in healthcare in Kitgum general hospital?

IV. What were the factors affecting health workers and patient engagement in health care in Kitgum general hospital?

1.5: Conceptual Framework

The main problem is poor engagement in patient safety, shown in the Centre of the conceptual model. The problem results in poor error reporting and probably documentation by health workers. Factors such as lack of awareness, fear of legal issues, demographic (for example age difference) and settings as well as severity of illness are some of the common factors known to bar patient engagement. On the other hand, provider modeling, willingness to participate patient education about their roles and risk perceptions are known to facilitate the engagement

Figure 1: Conceptual Model



1.6: Objectives of the study

Both the general and specific objectives of the study were developed. They are laid down below, in that order.

1.6.1: General Objective

The general objective of the study was to generate information about health workers and patient involvement in patient safety and hoped to contribute to the best practices of engaging patients in order to improve patient safety in Kitgum general hospital.

1.6.2: Specific Objectives

The specific objectives of the study were;

I. To ascertain the level of awareness about patient safety in healthcare among patients and health workers in Kitgum General Hospital.
II. To determine the level of health workers engagement in patient safety in healthcare in Kitgum General Hospital (KGH).
III. To assess the level of patient engagement in patient safety in healthcare in Kitgum General Hospital (KGH).
IV. To determine the factors affecting patients and health workers engagement in patient safety in healthcare in Kitgum General Hospital.

1.7: Justifications of the study

The study was conducted as a basic requirement for the fulfillment for the award of my Master of Science degree in Health services management.

However the study findings, if utilized, could also enable the hospital management, Ministry of Health (MoH) and other stakeholders redress the need for prioritizing patients' engagement in patient safety issues in healthcare facilities. This may call for increase in health education during healthcare service delivery with the view to improving Patient safety

at healthcare facility level. At national level, policies that encourage health education and the accompanying financial aspect might be formulated.

Similarly, if utilizes, it would help the government/stakeholders appreciate the existing level of engagement of health workers and patients in patient safety issues in healthcare settings. Improved/adequate level of engagement of both patients and health workers will help to create harmony and build trust among healthcare providers, healthcare institutions and the patients. It is viewed that this would reduce the level of medico-legal issues and unnecessary costs incurred by healthcare institutions and providers in meeting these legal issues and adverse events. This might, also, improve on the willingness of both patients and health workers to engage in patient safety.

The study results and recommendations will, if utilized, add to the existing body of knowledge as a future reference material. They are meant to help other researchers due to the fact that very few researches have been conducted in Uganda in the line with patients and health workers' engagement in patients' safety in healthcare. The healthcare institutions, hospital managers and the general hospital might use the results to identify gaps in the healthcare system that needs to be addressed by regular or further health workers' training. In this way, if such results are implemented, healthcare would be made much safer and therefore reliable to the users.

CHAPTER TWO

LITERATURE REVIEW

2.0: Introduction

Medication errors are costly from human, economic, and societal perspectives and all patients are vulnerable to the detrimental effects of these errors (Dennison, 2005). One in 10 patients admitted to hospital will suffer an adverse event as a result of their medical treatment. A reduction in adverse events could happen if patients could be engaged successfully in monitoring their care (Davis et al., 2008). However several studies point out that little is known about patients‟ willingness and ability to adopt patient safety promoting behaviors (Longtin et al., 2010). Furthermore, considering that information about concrete methods in primary care is scarce, providing a definite answer to the question 'what are the potentials and weaknesses of these methods in relation to patient involvement?' is not possible. These concerns are equally shared by Davis et al. (2011) who argues that despite growing recognition internationally that patients can help to promote their own safety, little evidence exists on how willing patients are to take on an active role. However, a number of factors that are assumed to determine the extent and character of patient involvement in patient safety have been identified.

Davis et al. (2007) and Longtin et al. (2010) argue that patient involvement relies on factors related to the following; patient demographics, type of illness and co-morbidity, health care professionals' approach and abilities, health care setting and the nature of involvement/health care task. Similarly, Dennison (2005) acknowledges that any interventions to prevent medical errors can be described by the patient safe taxonomy, which includes; patient participation, education regarding medication safety, non-punitive approach to reporting of errors and near misses, teamwork, communication, collaboration and administration support.

This chapter critically examines and compares the various research findings alongside theories put forward by various authors regarding the extent and factors affecting patient

engagement and its effects in patient safety. Factors will be put into five categories and these are: patient demographics, illness-related, health-care professional-related, health care setting-related and task-related.

2.1: Level of Health worker'engagement in patient safety

Health worker's engagements/involvements in patient safety are the set of actions or attitude or behaviour of health care providers toward reduction of medical associated risks to patients (Vigar, 2009). According to Kammerlind, et al (2004), employee engagement forms the basis of patient-centered care. Well engaged employees were found to lead to shortened lengths of stay for patients and lower variable costs (Harmon, et al., 2003) Furthermore, in their study, they found the effects of higher engagement on patients were improved quality of care, increased patient satisfaction and increased patient loyalty, among others.

According to Ministry of health (MOH), under the patient charter, when health workers engage and respect patients' rights, they themselves also get engaged (MOH, 2009).

There are variations among the levels of health worker engagement in patient safety strategies and this ultimately has a toll on the level of patient engagement. In support to this claim, Albolino et al. (2010) whose study looked at patient safety and incident reporting among Italian healthcare workers, reported that only 70% of respondents confirmed involvement in a patient safety initiatives.

Some studies report health practitioners' involvement as playing an important role in enhancing patient safety. For instance a study done by Davis et al. (2007) found that by health workers involving themselves in encouraging questions, patient willingness to ask questions was significantly increased. Thus, physician instruction and education surrounding the reasons why patients should ask questions may have a significant impact on patient error prevention behaviors.

In an evaluative study of a program to increase medication safety by providing patients drug safety information, Chwappach and Wernli (2010) found that good health workers' (nurses) relationships with patients play a vital role in patients' safety.

2.2: Level of Patients'engagement in patient safety

According to Gruman et al. (2010, p.66), patient engagement refers to actions patients must take to obtain the greatest benefit from the health care services available to them. It encompasses a number of potential strategies for patient involvement in patient safety that entails "speaking up" in the case of safety concerns, awareness and knowledge of safety risks, close observation of medication and treatment, coordination of care, contributing to hygienic practices, and self-management and compliance. Efforts to engage patients in safety efforts have focused on three areas: enlisting patients in detecting adverse events, empowering patients to ensure safe care, and emphasizing patient involvement as a means of improving the culture of safety (PSNet, 2007, p.61). Patient engagement also means fostering an effective collaboration in which patients and clinicians work together to help the patient progress towards mutually agreed-upon health goals (Helle and Larsen., 2012).

Just as Longtin et al. (2010) note, patient engagement in health care has gained momentum over recent years. According to their study, momentum is driven primarily from the logical argument that delivery of any service must take into account the user's needs and perceptions. The study reports that patient engagement has been effective in areas of patient care such as decision-making particularly in the management of chronic diseases. Though in agreement with these assertions and further acknowledgement of the fact that patients are safety buffers for their care, Davis et al. (2007) stresses that the ultimate responsibility for their safety must remain in the hands of health care professionals. Literature reviews have shown that no measures of the extent to which healthcare professionals involve patients in

decisions within clinical consultations exist, despite the increasing interest in the benefits or otherwise of patient participation in these decisions (Elwyn et al., 2003).

A number of studies have explored the extent to which patients and professionals feel comfortable with involving patients in safety. A key finding is that patients may feel more comfortable when they do not need to speak directly to a health professional about their concerns because they do not want to appear to be challenging professionals or to be seen as difficult. The attitudes and support of professionals can go a long way to make patients more confident. Strategies to involve patients further may therefore need to concentrate on: ensuring that professionals have positive attitudes, are supportive and ask for feedback; that the infrastructure is in place to do something about patients' comments and that patients feel able and encouraged to take part. In short, greater patient involvement may require changing the culture of healthcare so that patients and professionals are working as partners in a joint team. (EvidenceScan, 2013)

Hibbard et al. (2005) found that the majority of respondents had moderate self-efficacy and that this was related to the presence of family members in the hospital and having previously read about medical errors. The authors also established that moderate to high perceived health efficacy was strongly related to the likelihood of getting involved in patient safety.

2.3: Factors affecting level of patient engagement

A number of factors have been discussed about patient engagement in patient safety. These include, among others; patient demographics, patient's level of awareness, task related factors, health facility setting, provider modeling and severity of the illness. Others factors are patient's willingness to participate, patients' self-efficacy, Communication and the role of a caretaker or parent

2.3.1: Patient demographics

Demographic factors have been suggested as key in influencing the willingness of patients in engaging in patient safety initiatives. This theory is supported by Lu and Roughead (2011) whose study shows that age especially old age, cross-country heterogeneity, household income, level of education are factors influencing patients' willingness to engage in patient safety. A study by Kommune (2010) which focused exclusively on elderly patients confirms this argument. In contrast to these findings, however, Waterman et al. (2006) found that older patients were less likely to ask the purpose of a medication when compared to other groups. These assertions are supported by Davis et al. (2007) whose study findings demonstrate that younger patients are more likely than older patients to get involved in patients safety initiatives. Davis study also demonstrates that women were more involved than males and highly educated patients opted for a more active role in patients' safety initiatives than the less educated. Davis et al. (2011) also acknowledged that patients who are less educated or unemployed are less willing to challenge healthcare staff regarding their care than to ask healthcare staff factual questions. Age is also mentioned in the study by Longtin et al. (2010) and Howe (2006) along with personality, low health literacy, little education, lack of assertiveness in consultation as factors influencing patient involvement in patient safety activities.

2.3.2: Patient's level of awareness

As Hibbard et al. (2007) observed, low patient awareness is a key barrier to patient engagement in patient safety practices. This is because lack of awareness and understanding of what patient safety is, presents a major obstacle to patients' involvement in patients' safety initiatives. According to Peters et al. (2006), patient safety awareness can be best achieved through an increased perception of risk and preventability by both patients and health care providers. The authors also argue that if patients are not aware that medical errors constitute a

risk for them while receiving treatment, then patient engagement is unlikely to occur. In terms of perception about risk, patients do not feel like their actions can prevent errors from occurring and are, therefore unlikely to become active participants in error prevention strategies

2.3.3: Task related factors

A patient's level of engagement in medical error prevention strategies vary with the specific action a patient is required to take. This theory is supported by Waterman et al. (2006) whose study demonstrate that patients were very comfortable asking a medication's purpose, general medical questions, and confirming their identity, but were uncomfortable asking medical providers whether they had washed their hands. This study also revealed that patients who felt very comfortable with error prevention were significantly more likely to take 6 of the 7 error-prevention actions compared with uncomfortable patients. These findings were consistent with those of Delbanco et al. (2005) whose study shows that most patients preferred to be informed about important aspects of their care, but their preferences for involvement in care varied widely.

2.3.4: Health facility setting

The health facility climate plays a key role in influencing patient engagement in medical error prevention strategies. In support of this theory Schwappach (2011), assert that hospitals should educate patients on how to prevent errors. The patients' intentions to engage in safety are significantly predicted by behavioral control, subjective norms, attitudes, safety behaviors during hospitalization and experiences with taking action by the health facility staff. Similarly, Bahadori et al. (2013) argue that managerial factors have the greatest role in the refusal to reporting medication errors by both health care providers and patients. Their study further stresses that managerial factors in question include factors related to the process of reporting and fear of the consequences of reporting. This study also reports a significant

relationship between employment status and fear of the consequences of reporting on medication errors in the case of hospital staff. These assertions are consistent with the findings by Chiang et al. (2012), whose study among Taiwan hospitals, found out that the reporting culture, willingness to report, tenure of work, and reporting rate, significantly contribute positively to behavioural involvement in patient safety (BIPS).

It has also been argued by Clarke (2006) that an ideal health system setting facilitates capture of adverse events, when care harms patients, and near misses and when errors occur without any harm. This study also reported that near misses signal system weaknesses and that medical error can be linked to patient and team characteristics. It further postulates that analysis and feedback are critical and that reporting systems need to be linked to organizational leaders who can act on the conclusions of reports. Similarly, in a study by Lu and Roughead, (2011) about determinants of patient reported medical errors among seven countries of Australia, Canada, New Zealand, UK, US, Germany and Netherlands, it was found out that poor coordination of care was a shared concern of all seven countries. Cost-related barriers to medical services were also a predictor in six of the above countries.

The traditional patient-provider relationship has also been identified as an impediment to greater patient participation in patient safety. Three major patient safety studies in the United States (Marella et al., 2007; Waterman et al., 2005; Davis et al., 2008) identified that patients feel less comfortable asking direct and confrontational questions of their providers, such as, “Did you wash your hands?” or asking if the physician could mark their surgical site. Davis et al. (2008) also found that patients are less willing to adhere to patient safety practices that they view as challenging to the healthcare staff’s clinical abilities. This was somewhat mitigated by the healthcare professional’s designation, with more individuals willing to ask challenging questions of nurses than of physicians (Marella et al., 2007). Waterman et al. (2005) reported similar results with only 45.5% of the respondents indicating that they would

feel comfortable asking medical personnel whether they had washed their hands. Even more shocking was the fact that only 4.5% of respondents actually did ask their care provider if they had washed their hands, indicating a large discrepancy between feeling comfortable to perform an error prevention action and actually performing that action. The traditional patient-physician relationship, in which the physician is perceived to have more knowledge about individual health concerns, is an impediment to patients asking questions of their physician, even if they feel that that their safety might be compromised and that they could play a role in preventing an error. This disconnect might point to broader organizational and cultural issues.

2.3.5: Healthcare provider modeling

One of the key facilitators of patient engagement in patient safety is provider behavior or physician modeling. Patients are less likely to engage in behavior that they perceive to be confrontational or challenging. Davis et al. (2007) found that when patients were instructed by a doctor to ask challenging questions of themselves and nurses, patient willingness to ask was significantly increased. Thus, physician instruction and education surrounding the reasons why patients should ask questions may have a significant impact on patient error prevention behaviors. Waterman et al. (2006) report similar results with their survey and suggest physician modeling as an integral part of patient education of patient safety practices. The authors propose that patient safety programs should target patient fears about challenging and insulting their healthcare provider by posting education material in hospital and waiting rooms encouraging patients to ask questions or having providers wear reminder buttons that encourage patients to ask them if they've washed their hands. Fundamentally, provider modeling and education surrounding the acceptability of asking healthcare providers questions should ultimately lead to greater patient comfort in engaging in these behaviors. Likewise Hibbard et al. (2005) also suggest that training patients to be more assertive in their

encounters with healthcare providers may lead to greater involvement in error prevention behaviors, as it has previously been shown to enhance patient involvement in their own care and improve care outcomes.

2.3.6: Severity of the illness

The severity of illness has been suggested to play an important role in influencing the patients' involvement in patient safety. As Marella et al. (2007) note, patients are more eager to engage in patient safety practices, particularly when it involved gaining additional information about their health and treatment, certain sub-populations of patients, such as those with chronic diseases and those who were terminally ill, were more inclined to engage in error prevention strategies than their counterparts. However in contrast, Waterman et al. (2006) note that even if the patients had the will, those who are critically ill lack the capacity to fully participate in patient safety. Waterman et al. (2006) further note that inpatients are more likely to report medical errors compared to the patients in the outpatient clinics.

2.3.7: Patient's willingness to participate

It has been believed that patients are generally interested in engaging in error prevention strategies, but as noted by Waterman et al. (2006) most patients' willingness is affected by the health care providers. This study found out that the majority of respondents agreed that hospitals should educate patients about error prevention in order to boost patient engagement. However, other studies have found out that patients' perceived willingness to participate is affected by the task required by the patient and whether the patient was engaging in the specific action with a doctor or nurse (Davis et al., 2011). The authors found that patients were less willing to participate in challenging behaviours. Doctors' and nurses' encouragement appeared to increase patient-reported willingness to ask challenging questions. Surgical patients, particularly the men, less educated or unemployed are less willing to challenge healthcare staff regarding their care than to ask healthcare staff factual

questions. In another study Davis et al. (2012) argue that control beliefs, normative beliefs and perceived severity of errors were the strongest predictors of patients' intentions to participate in both behaviours. Their study reports a smaller percentage of the variance in patients' intentions to ask doctors/nurses if they have washed their hands than notifying staff if they were not wearing an identification bracelet.

2.3.8: Patients' self-efficacy

A study by Hibbard et al. (2005) found that the majority of respondents had moderate self-efficacy and that this was related to the presence of family members in the hospital and having previously read about medical errors. The authors also established that moderate to high perceived health efficacy was strongly related to the likelihood of getting involved in patient safety.

2.3.9: The role of a caretaker or parent

Parents or other care givers may become involved in critical incidents as contributors or detectors of critical incidents or they may be affected by critical incidents (Forster et al., 2004). This argument is supported by (Frey et al., 2009) who demonstrate that the most vulnerable categories regarding contribution and detection by parents were drugs, line/drain disconnection, trauma and hygiene. Though their study observed that while it is not the parents' duty to guarantee the safety for their children, it acknowledges that parents should be encouraged to report anything that worries them. This researcher also emphasizes the fact that only an established safety culture allows parents to articulate their concerns.

2.3.10: Communication

Just as Helle and Larsen. (2012) demonstrate, communication is considered to be a potential source of misunderstandings, misinformation, and conflict, as well as key to patient involvement in patient safety. Sandars (2007) says that patients need to be enrolled into the 'please ask initiative', which highlights the active role of patients in safe care and encourages

patients to offer information on side effects, to question treatment and to report on safety concerns. Entwistle et al. (2010) also points out that one of the most common ways of encouraging patients to play an active role in patient safety is asking them to speak up if they have concerns about their own safety. In contrast however, two studies looking at patients' perspectives on voicing safety concerns to health providers (Entwistle et al., 2010, Ocloo, 2010), found out that speaking up was generally considered difficult by the patients included in the study and influenced by how professionals behave and relate to the patients. In consistence with Entwistle et al., (2010) findings, Ocloo (2010) demonstrate that a number of factors influence the patients' willingness to speak up or not. These factors are; patient's situational assessment, personal ability to assess problems, personal judgment about responsibilities and the patient's judgment of consequences of speaking up. These authors further acknowledge the fact that it cannot be assumed that an encouragement to speak up will produce the desired sharing of information and dialogue on errors in all cases. Contextual factors such as health condition, knowledge, and the patient-provider relationship also determine patients' communication practices.

In another study by (Ocloo, 2010) an action research conducted among medically harmed patients, most patients reported experiences of professional resentment when they addressed their concern, by both individual doctors and health care organizations. The participants had the impression that professionals routinely covered up medical harm and treated the patient as the problem. The patients did not feel included in patient safety reforms, were met with a culture of denial when tackling safety issues and that the regulatory bodies failed them after the adverse event. Ocloo concludes that the patient-professional relationship and health professionals' attitudes shape patients' confidence in speaking up and raising concerns and thus whether some patient safety issues are ignored or go undetected. '*Concurrently with speaking up campaigns, listening up campaigns for health care workers is suggested'.*

However, according to the authors little is known about patients' experiences of this recommended behavior.

2.4: The effects of patient engagement

It is a general observation in several studies (Coulter and Ellins, 2006, Hall et al., 2010, Longtin et al., 2010), that there exists a weak evidence on the effectiveness of patient involvement in patient safety although a few exceptions are mentioned (Helle and Larsen., 2012). For example Hall et al. (2010) noted that the only evidence of effectiveness regarding patient participation in patient safety was found in self-management of medication. Similarly Coulter and Ellins (2006) revealed that patient involvement in infection campaigns proved effective. The authors however warn that of other strategies, the most effective is simplifying dosing regimens and demonstrate that educational interventions alone are unlikely to be effective. Similarly, Longtin et al. (2010) study reported patients' participation benefits of up to 10 years later by educating health care workers in patient involvement.

Several studies mention patient involvement in the hand hygiene practices but the evidence of its effect on safety is unclear (Coulter and Ellins, 2007, Davis et al., 2007, Hall et al., 2010, Longtin et al., 2010).

The pilot project on home care by Kommune (2010) showed that medication errors were significantly reduced by the systematic account during home visits, but could not confirm that it motivated the patient to acquire knowledge about treatment and use of medication. Similarly, it could not be measured whether health care workers in other units acquired knowledge about the patient's health status, as a systematic review of this was not possible.
Pearson and Aromataris (2009) argue that the provision of leaflets encourages patients to raise queries concerning treatment, but despite a patient satisfaction outcome, no patient

safety improvement was measured. Likewise, little impact was found in encouraging patients to monitor treatment and report incidents, unless combined with a national scheme.

Howe (2006) asserts that one of the greatest benefits of patient involvement in safety is the potential to increase professionals' awareness that their actions have consequences. This can moderate professionals' risk taking behavior and may lead to error-prevention, development of a stronger organizational safety culture, professional behavior change, enhanced adherence to advice and improved self-management. Interventions would be most effective, the author believes, if they include patients and all professional disciplines and aim to change professional attitudes and behaviors.

Coulter and Ellins (2007) noted that patient safety can only be improved if patients' involvement in their care is valued and supported. Likewise Davis et al. (2007) conclude that patient involvement requires a positive safety culture.

In wrapping up the subject matter of factors affecting level of patient engagement, evidence on the effectiveness of patient involvement in patient safety in primary care is scarce and inconclusive. Therefore, there is need for more systematic research on how patient involvement methods work in practice. This study is intended to fill part of that gap.

2.5: Conclusion

Despite the lack of strong evidence and the acknowledgement of various barriers, the majority of the publications are generally positive about the overall idea of applying patient involvement to patient safety. The study from the Municipality of Copenhagen by Kommune (2010) is the one exception. Almost all of the literature point to the need for more research, particularly on the effectiveness of interventions and patients ability and willingness, before a full overview of strengths and weaknesses of patient involvement in patient safety is better understood.

In an analysis of the patient role in safety work, Schwappach (2010) points out that while patients who are sick and under treatment will always be concerned about the risks related to treatment and care, it is not naturally given that such concerns for safety translate into willingness to engage for safety. The author also argues that we must not take for granted that the ability to identify errors enables patients to act in a timely and effective way to intercept these errors. The author further points out that although patient involvement in patient safety seems a logical and promising next step there is so far no enough scientific knowledge that have explored systematically and in detail to what extent and with what means patients may contribute to improving patient safety and how this will change the patient role.

The study from the King's Fund by Parsons et al. (2010) makes two central points. At first, both the patient and the general practitioner may feel uncertain about what precisely is expected and demanded of them when patients are supposed to play a more active part in the consultation. This is certainly an issue to take into account when applying patient involvement methods not only in general practice, but in other primary care sites where the encounter between patient and health provider may be less clearly defined. Secondly, both doctor and patient may feel that patient involvement is a potential threat to the doctor-patient relationship.

Indeed, studies by Coulter and Ellins, (2006), Entwistle et al., (2010), Howe, (2006), Kingston-Riechers et al., (2009) and Longtin et al., (2010) mentioned the importance of the doctor-patient relationship. They did not provide any details about how patient involvement in patient safety may have an impact on it. The attitude of health care providers is mentioned as having an impact on the way the patients experience involvement or view the potential for involvement as two studies in this review have shown (Entwistle et al., 2010, Ocloo, 2010). However, several other studies have discussed the impact on the trust between patient and health care provider if safety issues are openly voiced and patient vigilance encouraged.

Some of these studies point out that both patients and health care providers may see patient involvement in safety work as a threat to the professional authority and identity of the provider. On the same note, Schwappach (2010) argues that patient involvement methods could erode trust. On the other hand, Entwistle and Quick (2006) state that patients are well aware that health care also implies risk and that openness about this is trustworthy in itself. Certainly, the lack of insights into the implications of patient involvement in patient safety for the patient-provider relationship needs calls for further studies because this may have an impact on the effectiveness of involvement methods.

This is even more pertinent when the diversity of primary care patients is taken into account. Several vulnerable groups have already been mentioned; the elderly, women and people with poor communication skills. The study by Kommune (2010) made the point that the elderly patients who were visited by a home nurse were neither able nor willing to become involved in their own care and treatment. Thus, given the diversity of the patients and health care sites in primary care we may assume that this creates both limitations and opportunities for patient involvement in safety. It might be fruitful to consider the possibilities of a more individualized approach to the concretization of involvement strategies and the testing and implementation of involvement methods.

Another big concern is that of the patient safety culture, which is mentioned in several of the reviewed literature as crucial to patient involvement and patient safety (Davis et al., 2007, Howe, 2006, Ocloo, 2010, Sandars, 2007, Woodward, 2005). Patient safety culture is promoted by influential institutions such as the Institute for Health Care Improvement (IHI). Only the reference guide from Australia provides information about what this implies in practice and defines it as a culture where individuals in organizations and teams have a constant and active awareness of the potential for things to go wrong (Woodward, 2005). In organizations with a safety culture, it is assumed that health staff would not display negative

attitudes to patients voicing their concern, but would rather be supportive and encouraging (Howe, 2006). If we once more consider the character of primary care and diversity of sites that are part of it, it becomes obvious that creating a culture of safety across these sites and the health professions represented in them presents a significant challenge. For instance primary care facilities are often different in terms of size, location and organization. There is a dire need to determine to what extent the range of institutions in primary care are prepared to adequately respond to patients' activities in relation to patient safety, and the kinds of institutional adaption that are necessary for patient involvement to work (Schwappach, 2010).

Finally, if patient involvement is to play its part in patient safety in primary health care, there is a need for interventions and research to test and evaluate the potentials, weaknesses and general viability of involvement, to assess the perspective of professionals and patients on the implications of patient involvement in practice, and to assess the basic organizational requirements in the various primary care sites.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1: Introduction

This chapter illustrates the procedures used to carry out data collection. It comprises of; study area, study design, study population, study unit, sample size estimation, sampling techniques, the variables for the objectives and their indicators. It further demonstrates how data collection was carried out and study instruments used. How data was analysed and how it was presented are further discussed herein. The quality controls used, ethical considerations undertaken, limitations faced during data collection, plans for dissemination of results are indicated.

3.2: The study area

The research was carried out in Kitgum General Hospital (KGH), Kitgum district found in Northern Uganda.

3.3: The study type/design

This was a descriptive, cross sectional study of patients and health workers' engagement in patient safety in healthcare. The study took both qualitative and quantitative dimensions.

3.4: Study Population

The study population was all the health workers and patients in Kitgum General Hospital, Kitgum district.

3.5: Study Units

These were clients that had visited Kitgum general Hospital during the study period and a health worker in the health facility.

3.5.1: Inclusion Criteria

The following categories were considered;

1. All health workers present in the respective hospital departments at the time of the study. They were free to participate in the study.

2. All patients who are 18years and above and present in the health facility at the time of the study. This is because clients who are 18 years and above are able to provide legally bound personal information in Uganda

3. The patients who were conscious or not severely ill at the time of the study. They, as well, had no history of present or past (5years) mental illness.

3.5.2: Exclusion Criteria

The following categories were excluded;

1. Any health worker who was unwilling to participate in the study.

2. All patients who were less than 18 years, as they are legally considered children in Uganda. It would, therefore, be difficult to obtain information from them.

3. Patients who were unconscious or severely ill at the time of the study, as well as those with present or past (5years) history of mental illness.

3.6: Sample size estimation

Sample size for both respondent patient/clients and health workers were determined as below. For respondent patients, formula for calculating sample size from unknown population size (N) was used. For respondent health worker, formula for calculating sample size from known population size (N) was used.

3.6.1: Respondent patient sample size

Since the population size of patients who were to seek treatment from the hospital during the study period was not known, Cochran formula for large sample size estimation was used (Cochran, 1963). The desired level of precision was taken at positive / negative five percent

(+ / - 5%), that is, e = 5% = ± 0.05. The desired confidence interval was 95% and the degree of variability in the attributes of the population to be measured was assumed to be 50% (0.5), that is, maximum variability. In their revised edition (2009), Glenn and Israel noted that the use of the level of maximum variability (P = 0.5) in the calculation of the sample size for the proportion, generally, produced a more conservative sample size (i.e. a larger one) than was calculated by the sample size of the mean.

Therefore, the sample size was calculated as;

$$n_0 = z^2pq / e^2$$

Where, n_0 is the Sample Size, Z^2 is the abscissa of the normal curve that cuts off an area **α** at the tails (1 – α equals the desired confidence level, e.g., 95%). The value for Z is found in statistical tables which contain the area under the normal curve. **e** is the desired level of precision (Sampling error), **p** is the estimated proportion of an attribute that is present in the population, and **q** is (1-p).

Therefore,

$n_0 = z^2pq / e^2 = (1.96^2) * (0.5) * (0.5) / (0.05^2)$

$= 0.9604 / 0.0025$

$= 384.16$

~ 384

3.6.2: Health workers sample size

As the number of health workers was known (139health workers on record in Kitgum general hospital), a formula for calculation of sample size was used;

$$n = N/ (1 + N (e)^2)$$

Where *n* is the sample size, N is the population size, and e is the level of precision.

Therefore, $n = 139/ (1 + 139(0.05^2))$

$= 103.15$

~ 103

3.7: Sampling Techniques

Both probability and non-probability sampling techniques were used in this study.

3.7.1: The Hospital

Kitgum General Hospital was conveniently sampled based on its availability for this study as the only government hospital in the district. Departments visited by the researcher were Out-patient and In-patient departments, theatre, the hospital compound and administration block.

3.7.2: The Respondents

The respondents were patients and health workers in the health facility. Both simple random sampling and systematic sampling techniques were used to identify and select the respondents

3.7.2.1: The Patient/client Respondents

Both simple random sampling and systematic sampling techniques were used to identify and select the patients. The entry (start) point into the hospital was selected by simple random technique. Prior to the entry into the hospital, all the entry point (Hospital compound, the various Out-patient and the In-patient departments) were identified, randomly assigned numbers and rolled up in many pieces of paper according to the number of the departments. The uniformly rolled pieces of paper were then vigorously shaken in a closed hand and later picked with the researcher's eyes closed. They were then given to a research assistant to open and read it to the rest of the research team. The first paper picked was the department of first

entry. The order of picking was maintained such that the first department got in the paper was the first to be visited by the research team, until all the departments were visited in that order.

Systematic sampling technique was then employed. Every third patient the researcher/research assistant came across was to be interviewed, except where he/she did not meet the inclusion criteria above.

3.7.2.2: The health worker

Simple random sampling technique was used just as for the patient respondent above to get the entry point/start point. Similarly, for every patient respondents interviewed, the health worker who attended to him/her or the health worker who would attend to him/her was to be included except where the health worker had already been involved or he/she did not meet the inclusion criteria.

The top level managers (Medical superintendent, the hospital administrator, the matron) and middle level managers (departmental heads) were conveniently selected as key informants except where they did not meet the inclusion criteria.

3.8: Variables and Indicators for the objectives

The variables for the specific objectives are described below. The dependent and independent variables have been document, as well as their indicators.

3.8.1: Variables and Indicators for objective I

Objective I is divided into two parts, that is, to ascertain the level of awareness about patient safety in healthcare among patients and among health workers in KGH. Sub-sections below have taken care of both parts.

3.8.1.1: Variables and indicator for awareness about patient safety among patients.

The dependent variable used was level of awareness about patient safety. The independent variables used to assess the level of awareness were; hearing about patient safety,

experiencing safety incident, reporting an adverse event, being told when to resume normal activities, being told danger signs to watch for while at home after getting health care and being taught about error prevention by health workers.

Respondent patients who acknowledged having heard about patient safety, having experienced safety incident, having been taught about error prevention or told when to resume normal duty after getting health care or told danger signs to watch for were considered to be aware. The mean percentages of the variables, under 'YES' categories, were used to compute the level of awareness.

The indicators were the number of 'YES' categories of responses given on patient safety awareness by the respondent patients.

3.8.1.2: Variables and indicator for awareness about patient safety among health workers.

The dependent variable used was level of awareness about patient safety. The independent variables used were; hearing about patient safety by the health worker and level of completeness of patient identification particulars on fifty randomly selected patient files.

Those who heard about patient safety before the study time were considered to be aware about patient safety. Similarly, completely filled files, where there were names, age, sex and full address (Village, parish, sub-county, county and district) of the patient were all filled, for year 2013, were considered aware about patient safety. Half-filled files were considered as not aware. The mean percentage of the independent variables under 'YES' category for hearing about patient safety and completely filled file was used to conclude on level of awareness about patient safety by health workers in KGH.

The indicators were the number of 'YES' responses given for hearing about patient safety and the completed files for the identification variable.

3.8.2: Variables and indicators for objective II

The dependent variable for this objective was level of health workers' engagement in patient safety. In assessing health workers engagement in patient safety, responses were sought about the following independent variables; clients seeing the health care provider washes hands before offering a service, clients asking if the health worker had washed his/her hands before offering a service, clients told how much pain to expect during surgery and clients provided with enough information concerning side effects of the medication dispensed to them. These were used for assessing health workers' engagement from patient perspective.

On the other hand engagements, from health workers' perspective, were assessed using the independent variables such as; health worker ever experienced/encountered a patient safety incident and ever reported patient safety incidents.

Seeing health worker wash hand or asking if they had washed before offering a service or patient told about level of pain to expect before or during or after operation were regarded, by the researcher, as engagement in patient safety issues. Similarly, being given information about side effects of medication, experiencing and reporting incidents by H/W was also viewed as engagement in patient safety from the H/W perspective.

The indicators were 'YES' or 'NO' responses given by either the patient or the health worker.

The variables and indicators for objective II are as summarized in table 1 below;

Table 1: variables and indicators for level of health workers engagement in patient safety

Dependent variable	Independent variables	Indicators
Level of health workers engagement in patient safety	• Clients seeing the health care provider washes hands before offering a service • Clients asking if the health worker has washed his/her hands before offering a service. • Clients told how much pain to expect during surgery • Clients provided with enough information concerning side effects of the medication dispensed to them. • etc	Number of 'YES' or 'NO' responses given

3.8.3: Variables and Indicators for objective III

The dependent variable for this objective was level of awareness about patient safety among the respondent patients. The independent variables used to assess awareness were; hearing about patient safety, education about patient safety and error prevention undertaken, being told when to resume normal activities after healthcare, being told danger signs to watch for while at home, reporting an adverse event and experiencing a safety incident, among others.

The mean percentages of the variables under 'YES' categories were then used to conclude the level of awareness about patient safety in KGH.

The indicators were number of 'YES' or 'NO' categories given.

The variables and indicators for objective III are as summarized in table 2 below;

Table 2: variables and indicators for level of patients' engagement in patients' safety

Dependent variable	Independent variables	Indicators
Level of patients' engagement in patient safety in healthcare	• Hearing about patient safety • Patient safety experiences • Reporting safety incident • etc	Number of 'YES' or 'NO' responses given

3.8.4: Variables and Indicators for objective IV

Objective IV was to determine the factors affecting patients and health workers' engagement in patient safety in healthcare in KGH

The variable for this objective were factors that prevent/hinder engagement in safety issues. The indicators are the number of factors mentioned by either the health worker or the patient.

The health workers related factors intended to study as per the reviewed literature were; Support from the institution, Perception of lack of time, H/w professional category, beliefs and demographic variables among others.

The patient related factor intended to study were; acceptance of new patient role, relevance of the issue, health literacy and knowledge, disease severity and demographic variables among others.

3.9: Data collection tools and techniques

The following tools and techniques were used;

3.9.1: Data collection tools

The tools used were; questionnaires, observation checklist, key informant interview guide and documents review guide

3.9.2: Data collection techniques

The following data collection techniques were used in the study;

I. Self-administered semi-structured questionnaires were given to the respondent clients who were able to read and write. For those who were not able to read and write, the research assistant took them through and filled together with them
II. Observation checks were done as the respondent health workers did their routine duties. This was to observe patient safety practices carried, such as hand washing practices among health workers.
III. Key informant interviews were conducted with the top and middle level managers.
IV. Documentation review of previous patient files. Some key documents (patient files) for the year 2013 were retrieved and reviewed. This was to assess the depth of patient identification by H/Ws as a measure to minimize errors.

3.10: Data entry, analysis and presentation methods

The data entry, analysis and presentation used in this research are as below;

3.10.1: Data Entry and Analysis

Computer software, Statistical Package for Social Sciences (SPSS) and Microsoft excel were used for the entry and analysis of the data collected. A team of two well trained and experienced data entrants were used for this purpose.

Chi-square tests and t-tests were carried out to test the significance of difference in the different study variables.

3.10.2: Data Presentation Methods

The data presentation methods used were pie charts, tables, bar graphs and descriptive method for the qualitative components. Simple frequency tables and cross tabulations were drawn to present the results.

3.11: Quality controls

For quality assurance purpose the researcher employed the following quality control measures;

I. Pre-testing of the questionnaires was carried out prior to the study. A pilot survey was carried out to pre-test the tools and ensure that they capture the intended information. This was carried out in KGH. The pilot survey checked the suitability of all the procedures and changes to the questionnaire were consequently made.

II. A number of other ways were used to improve quality of data collection which included; Intensive training of research Assistants, Pretesting of tools, close field supervision of research Assistants, comprehensive training of data entrants and double data entry.

3.12: Ethical considerations

In this study, the following ethical considerations were taken care of;

I. Introductory letter from Uganda Martyrs' University (UMU), Faculty of Health Sciences (FHS) was sought. Permission was also sought from office of the medical superintendent. This was done in conformity with the requirement to undertake this research.

II. Informed consent was sought from the respondents. Confidentiality aspect of this research, as well as its benefits was explained to the respondents. To re-enforce confidentiality, respondent name were not captured in the questionnaire.

III. Voluntary participation/involvement of the respondents was observed by the researcher. Respondents were free to pull out of the study, for whatever reason(s) and their decision would be highly respected.

3.13: Limitations to the study

This study was faced with the following limitations; Time, funds and logistics constraints, given the big sample size, were great concern although they did not affect the validity and reliability of the study.

3.14: Plan for Dissemination of Results.

Upon approval of this research work, the result (copy) would have to be given to the University library, office of the dean of faculty of health sciences, office of the medical superintendent of KGH and the office of District Health Officer (DHO).

The findings are to be shared with the necessary stakeholders including patients and health workers on ground.

CHAPTER FOUR

RESULTS, ANALYSIS AND PRESENTATION

4.0: Introduction

The results of the analysis of the study have been discussed as below. Tables, pie charts and bar graphs were used.

4.1: Respondents

The respondents were clients and health workers (health care providers) in KGH at the time of the study.

4.1.1: Respondent Clients/patients

Respondent clients/patients were both in-patient and out-patients who had visited Kitgum general hospital for medical care in the year 2013.

A total of three hundred and eighty four clients were interviewed with a response rate of one hundred percent.

4.1.2: Socio-demographic characteristics of the respondent clients/patients

The respondent clients/patients were 173(45.1%) males and 211(54.9%) females. Their mean age was 35.1(SD=11.6), 18years minimum and 71 years maximum. The majority (52.9%) were in the young age category (17-35yrs). The middle age (36-55yrs) was the second constituting 41.1% and the old age category ($\geq$56yrs) was the smallest with 6.0%.

One third (33.9%) of the respondents never went to school, 29.2% finished primary, 20.6% finished secondary while only 16.4% finished tertiary education.

4.1.3: Respondent health care providers

A study was made on 103health workers (74.1%) out of the total 139 health workers in the health facility. The greatest category of cadre studied were Enrolled Nurses (19.3%) followed by Registered Nurses (14.5%). The lowest categories were medical officers, Askaries and laboratory staffs, all accounting for 1.2% per category.

4.2: Health seeking behaviour of respondent clients/patients

The health seeking behaviour of client/patient respondents was assessed with the view to see whether or not they would influence patient engagement. The researcher thought that frequent visit to health care facility would increase chances of the patient engaging in patient safety, as well as their level of awareness on patient safety.

Result showed that 10% of the patients visited the hospital more than once a month, 22% visited the hospital once in a year and 38% visited the hospital at least twice in a year while 30% visited once a month.

4.3: Reasons for respondent patients visiting the hospital

The researcher needed to know what category of medical/disease conditions, could bring the patients more frequently to the hospital, as this may affect their engagement and awareness in patient safety.

When the patient respondents were asked why they visited the hospital, the reasons for visiting the hospital varied among simple conditions, chronic conditions and different conditions. Simple conditions were mainly OPD cases which did not require them to be admitted while chronic conditions were chronic illnesses which required the respondent to regularly visit the hospital, at least once in a month. Different conditions were those respondent patients who had both chronic and simple cases.

This study found that the most of these respondent patients had different conditions (37%), followed by those with simple conditions (35%). Respondents with chronic conditions were at 28 percent.

4.4: Level of awareness about patient safety among respondent clients

The study examined the level of awareness about patient safety among the respondent clients. The independent variables used to assess awareness were; hearing about patient safety, education about patient safety and error prevention undertaken, resumption of normal

activities after healthcare, being told danger signs to watch for while at home, reporting an adverse event and experiencing a safety incident, among others.

The mean percentages of these constructs were then used to conclude the level of awareness about patient safety in KGH. This stood at 46.5%, which is quite low as the majority (53.5%) of the respondent patients were not aware of patient safety. The sections below show each of the findings for each of the constructs used

Table 3: Summary of findings on awareness about patient safety among patients in KGH

Constructs Used	**Results (percentage)**
Hearing about patient safety	38%
Experiencing safety incident	53%
Reporting an adverse event	45%
Being taught about error prevention	66%
Told danger signs to watch for while at home	39.3%
Told when to resume normal activities after getting health care	37.8%

Source: Primary

4.4.1: Respondent client/patient hearing about patient safety

Two hundred and thirty eight (62%) of respondents reported to have never heard about patient safety as opposed to 148(38%) who reported that it was not the first time they were hearing about patient safety. In other ward 38% of them heard about patient safety. Of the respondents who reported to have heard about patient safety before the time of the interview, twenty two percent heard from the radio, thirty seven from a health facility while 6% heard from school.

However, of the 62% who had not heard about patient safety before, all of them were able to understand it from the research assistants' explanation.

4.4.2: Has the respondent patient ever experienced a safety incident?

According to the researcher, experiencing a safety incident would make one more aware about health care risks and subsequently the patients become more when seeking health care.

Fifty three percent (53%) of respondents reported to have ever experienced a medical related incident while seeking health care at KGH, while forty seven percent (47%) have not. Of the respondents who experienced an incident, 5% had an under dose of a certain medicine, 10% had wrong medicine, 26% had some medicines omitted, 4.9% were not consulted for a surgical procedure while 13% had delayed treatment

4.4.3: Reporting an adverse event

Reporting adverse event by the patient could mean that he/she is quiet aware of patient safety concept. Those who reported it were considered, by the researcher, to be aware.

Of the respondents patients who had an incident only 45 % had the courage to report it, the rest (55%) did not. The reasons fronted for not reporting the experienced incident were as follows; 22% of the respondents did not know where to report the incident, 20% did not know how to report while 15% feared for the probable consequences.

4.4.4: Clients ever been taught about error prevention

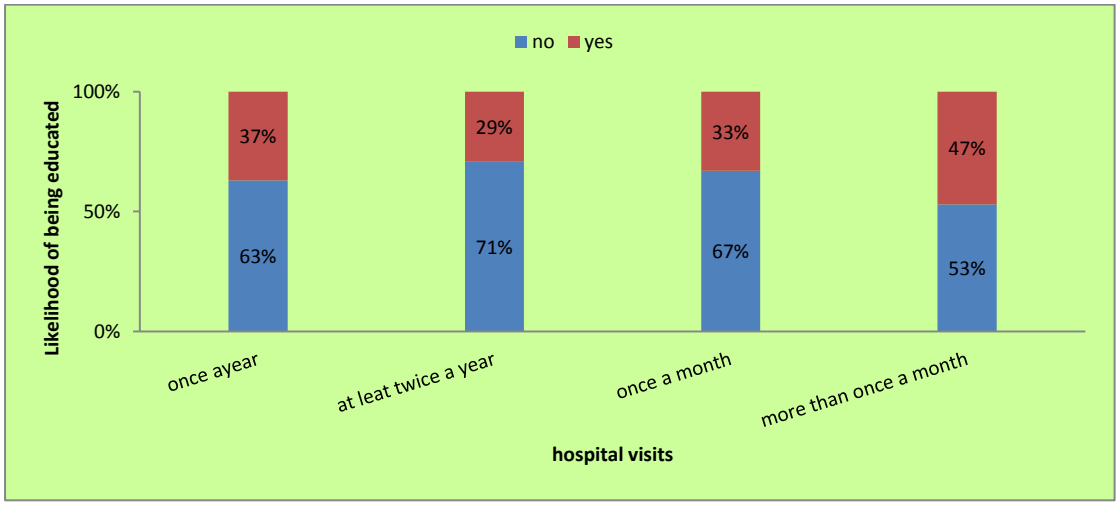
Being taught about patient safety would make one more aware on the subject matter. The researcher, therefore, considered those patients who were taught to be aware and those who were not taught not to be aware.

Two hundred and fifty four (66%) respondents reported to have never been educated about medical error prevention as opposed to 130 (34%) who have ever been educated.

In an interview with a health worker (key informant), the health worker had this to say about the subject matter, '*We have little time to teach every patient who come to the hospital. We are understaffed to do all these'* – narrates a health worker on 18/08/2013

A two way tabulation of number of hospital visits a client made in the year versus the likelihood of being educated about error prevention was done. The result is as shown in figure 2 below;

Figure 2: Number of hospital visit versus likelihood of being educated about error prevention



Source: Primary

Finding showed that majority of clients in each category has never been educated about error prevention hence highlighting lack of association between hospital visit and the likelihood of being educated by the health workers about error prevention. This finding was not significant, (X^2 = 5, (df 3), p value = 0.15).

4.4.5: Danger signs to watch for while at home

Patients told about danger signs to watch for while at home after getting medical care, was looked at, by the researcher, as having made them aware about patient safety. Therefore, those who were told about any danger sign to watch for were considered to be aware as opposed to those who were not.

Finding showed that only one hundred and fifty one (39.3%) of respondents were told, by the health workers, of what danger signs to watch for at home while on medication, compared to 233 (60.7%) that were not.

4.4.6: When to resume normal activities after getting health care

Being told about when to resume normal duty by a health care provider after getting health care, was considered by the researcher, as having made the patients aware of safety concept. Finding showed that out of the total 384 respondents, only 145 (37.8%) were told of the time they should take to resume normal duties, compared to 239(62.2%) who were not. Similarly only 36.7% of respondents were told of which activities to avoid while taking medications at home the rest were not.

4.5: Patient engagement in patient safety

Patient engagement in patient safety in health care, as has been defined by many authors, is too broad and comprised of various components (Refer to literature review and chapter one of this study). Similarly, for this study, the researcher chose a set of factors/independent variables, when combined, to define patient engagement in patient safety. These variables were; patient involvement in decision making, ability of patients to ask questions, patient's ability to identify an incident and patient's ability to report the incident, among others. The dependent variable used was patient engagement.

Patients who were involved in any decision making concerning their care, were considered to have been engaged. Similarly, those who ever experienced a safety incident or ask a doctor/health care provider question concerning their treatment plan were considered to have been engaged. Analysis was done on those who always ask questions and those who do so only to some extent. Finding showed that 23.6% always ask questions while 54.2% only did so to some extent, the rest never ask any question. Out of all these independent variables used, identifying an incident and patient's ability to report the incident did not show any

significant result during the analysis and were, therefore, not used in this study to conclude anything in patient engagement.

Below is a summary table of significant variables used to conclude patient engagement in patient safety in KGH.

Table 4: Summary findings on patient engagement in patient safety

Constructs	**Results (%)**	
Decision involvement	62.4	
Safety experiences of patients	59.8	
Patient ask doctor/health worker about treatment plan	34	
Patient asking H/W questions	Always	23.6
	To some extend	54.2

The mean percentage of decision involvement, safety experiences and patient asking doctor/health worker about treatment plan was found to be 52.1%. The level of patient engagement in patient safety was, based on these, and therefore concluded to be 52.1% in KGH.

4.5.1: Patient involvement in decision making

According to the researcher, complete/definite involvement and involvement to some extent in decision making meant the patient was engaged. Percentage of those who were never involved was not considered. The following constructs/independent variables gave significant findings; disease conditions, educational levels, sex and number of hospital visits. Mean percentage showed that 62.4% of the respondents were involved in decision making to

some extend while 17.7% have always/completely been involved. Refer to table 4 below for detail findings.

Table 5: Summary of findings on involvement in decision making

Constructs		**To some extend involved**	**Definitely/completely involved**
Sex	Male	65%	10%
	Female	60%	24%
Number of hospital visits		64%	18.5%
Educational levels		61%	18.75%
Disease conditions		62%	17.67%

Source: Primary

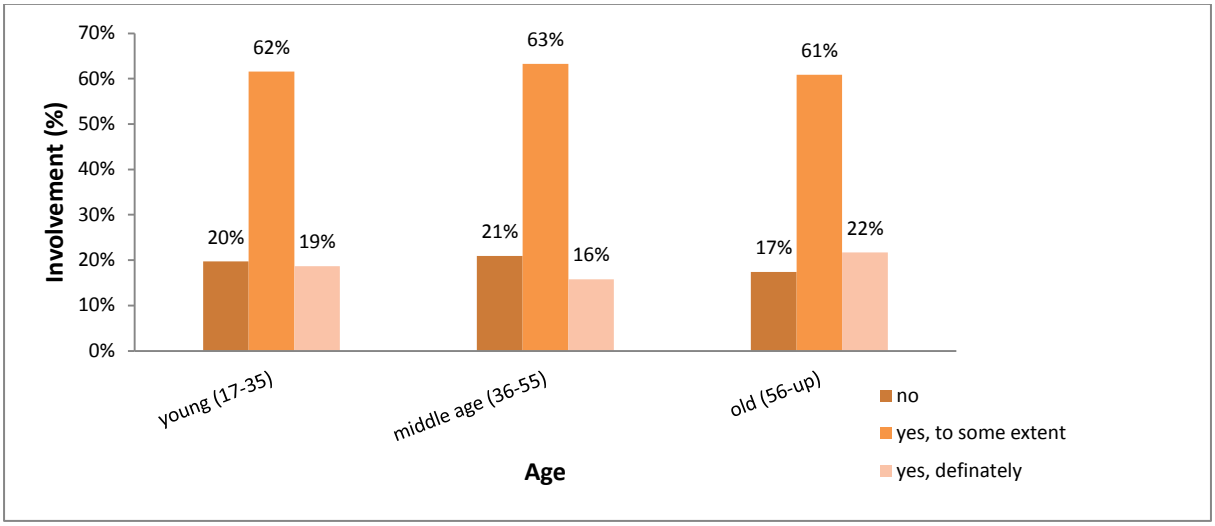
4.5.1.1: Factors influencing involvement in decision making

A number of variables (both demographic and other variables) were examined to determine their effects on client involvement in decision making concerning their care and treatment. These variables were; age of the respondent, sex of the respondent, number of hospital visits per year, level of education, disease condition and how often the respondent asks questions to the health worker**,** among others. Sub-sections below show the variability of these independent variables used.

4.5.1.1.1: Age of the respondent

Age of the respondent patients was tabulated against involvement in decision making, to see whether or not it would affect the decision making ability of the patients. Figure 3 shows findings of the cross tabulation results got.

Figure 3: Age of respondents versus involvement in decision making



Source: Primary

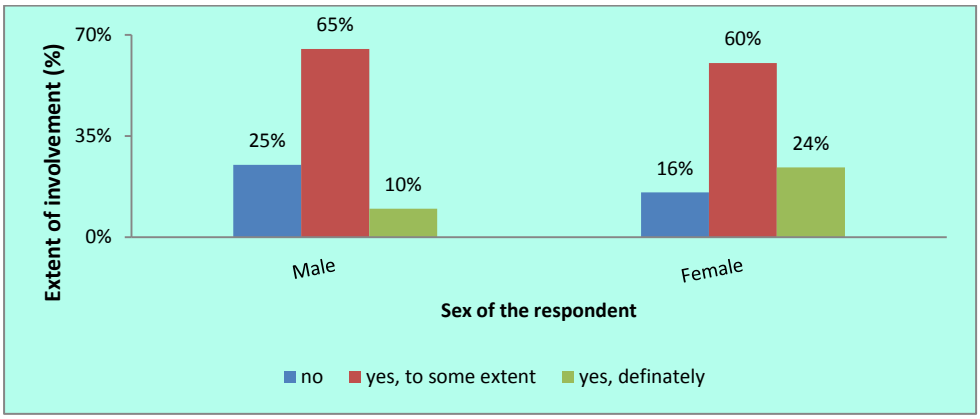
The majority of clients, across all the age categories, were involved to some extent in decision making. Patients/client in the older age group felt more definitely involved (22%) compared to their counterparts. However, these findings were not statistically significant (X^2 = .83 (df 4) p value = .93) suggesting lack of association between age of the client and involvement in decision making.

However, responses from staff interviews revealed that health care workers often tend to involve older patients in decision making as opposed to the younger ones whose concentration of health issues is never definite.

4.5.1.1.2: Sex of the respondent

Sex of respondent patients was analyse against involvement in decision making, with the view to see whether or not it could affect decision making ability of the patients. Figure 4 shows cross tabulation results of the sex of the respondent versus involvement in decision making.

Figure 4: Sex of respondents versus involvement in decision making



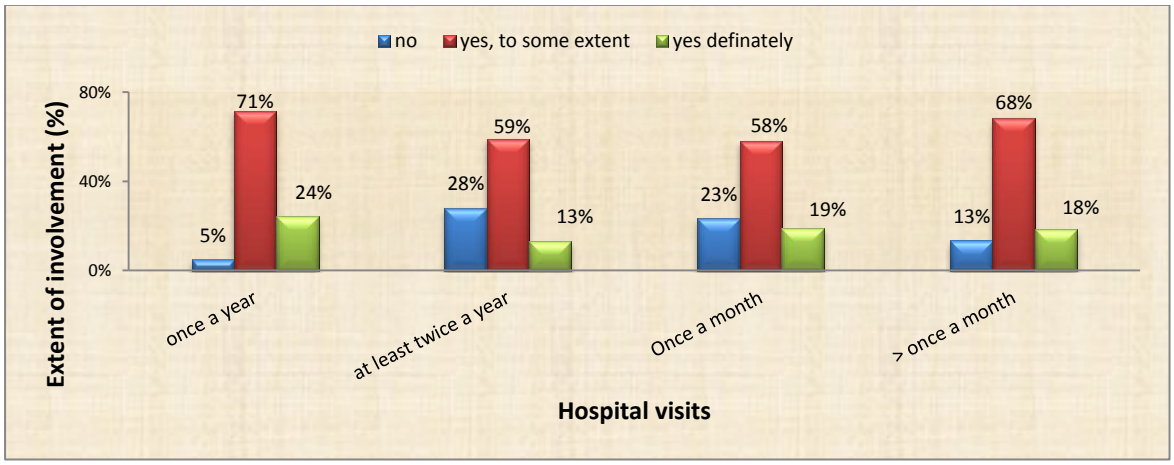
Source: Primary

The majority of respondents in both sex categories have been involved in decision making regarding their care and treatment. However, males were less likely to be definitely involved in decision making compared to their female counterparts. The finding was statistically significant, (X^2 = 19.4 (df 4), p value <0.01). This highlights the fact that males visit the hospital less frequently compared to females and less the chances of being involved.

4.5.1.1.3: Number of hospital visits per year

Similarly, the researcher wanted to find out whether the frequency/number of hospital could affect involvement in decision making of the patient. It is thought that, the more one visit hospital, the more his chances of getting involve and subsequently engage in patient safety. Figure 5 shows the cross tabulation results of the number of hospital vists versus involvement in decision making.

Figure 5: Number of hospital visits versus decision making involvement



Source: Primary

Fewer clients (5%) among those that visited the hospital once a year are less likely to be involved in decison making compared to their counterparts, hence a strong relatioship between hospital visits and involvement in decison making, (X^2 = 21.4, (df 6), p value =.002). These findings are statistically significant meaning that clients who visit the hospital less frequent are more likely to be engaged in decision making. This is because these clients are not used to the hospital environment as opposed to their counterparts who visit the hospital more often. Their counter parts are, therefore, relatively less willing to get involved especially in asking questions about their conditions, they already know what to do.

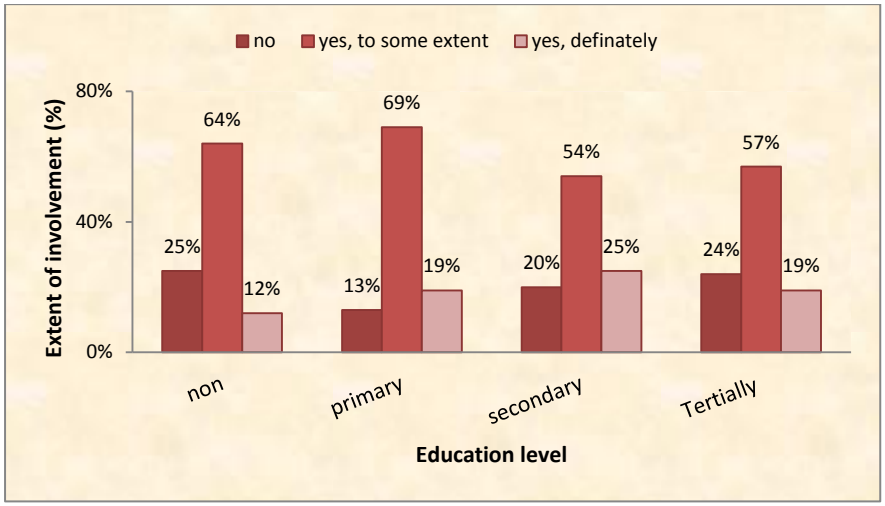
Key informants also mentioned that clients who visit hospital more frequently, know well about their conditions and usually interested in picking the medications and go away.

4.5.1.1.4: Level of education.

Level of education was also assessed to see whether or not it could affect decision making ability of the patients, hence their engagement in patient safety. The researcher thought that patients who were more educated would better get involved in decision making involving their care.

Figure 6 below presents cross tabulation results of education versus involvement in decision making.

Figure 6: Level of education versus decision making involvement



Source: Primary

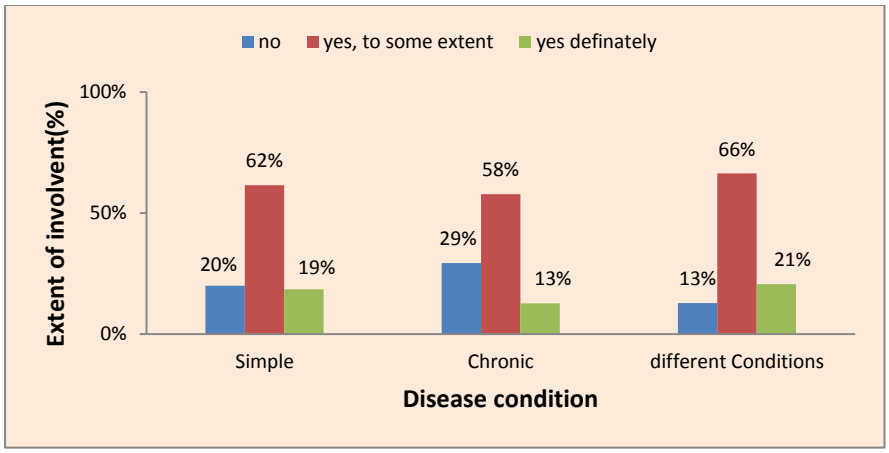
The majority of the respondents across all education categories have been involved in decision making concerning their care and treatment. These findings are statistically significant, (X^2 =12.3, (df 6), p value = .05) although the association seems to be weak.

4.5.1.1.5: Disease condition

Disease condition of patients, according to the researcher, was thought to affect their decision making and hence engagement in patient safety. This is because when one is chronically sick (for example), he/she visits health facility quiet routinely and therefore has more chances of experiencing safety incident, asking questions about his/her care, and so on, all of which contribute towards patient engagement.

Analysis was done on disease condition versus decision making ability. Figure 7 presents cross tabulation results of this analysis.

Figure 7: Disease conditions versus decision making involvement



Source: Primary

The majority of clients across all disease condition categories had been involved in decision making concerning their care and treatment options. However, patients who visit the hospital with different conditions were more likely to be involved to some extent in decision making compared to their counterparts, (X^2 =11.295, (df 4), p value = .023). This means that there is an association between the type of disease the client/patient presents with and the extent of involvement in decision making. '*Clients who visit the hospital with different conditions take time to ask the health care providers as opposed to those with chronic and simple conditions'*-narrates a health care provider on 18/08/2013.

4.5.1.2: Factors influencing involvement in decision making from health workers perspective

The researcher, through his research assistants observed the health workers for the time they take when interacting with patients of various disease conditions. Interacting with patients for longer duration, more than 5minute, was thought to give better chances of engagement in patient safety.

Finding showed that majority of the health workers (up to 56.6%) were found to interact for longer times (more than 5minutes) with patients with different conditions. In so doing, this category of patients had better opportunity of getting involved in decision making than other categories.

4.5.2: How often the respondent patients ask questions to the health workers

In terms of asking questions, the researcher wanted to know what factors affected patient ability to ask questions. The following independent variables were used; age of respondent, sex of the respondent, educational level, number of hospital visit and disease conditions of the patient. Of all these variables, only sex and educational level of the respondents were significant and hence these were used to determine the level to which questions were asked.

The study found the mean percentage of those who asked questions to some extend were found to be 54.2%, while those who always ask questions were 23.6%.

Table 6 below shows summary of the significant findings on this subject matter.

Table 6: Summary findings on level of asking questions

Constructs		**To some extend**	**Yes, Definitely**
Sex	Male	48%	34%
	Female	59%	15%
Level of education		55.5%	21.8%

Source: Primary

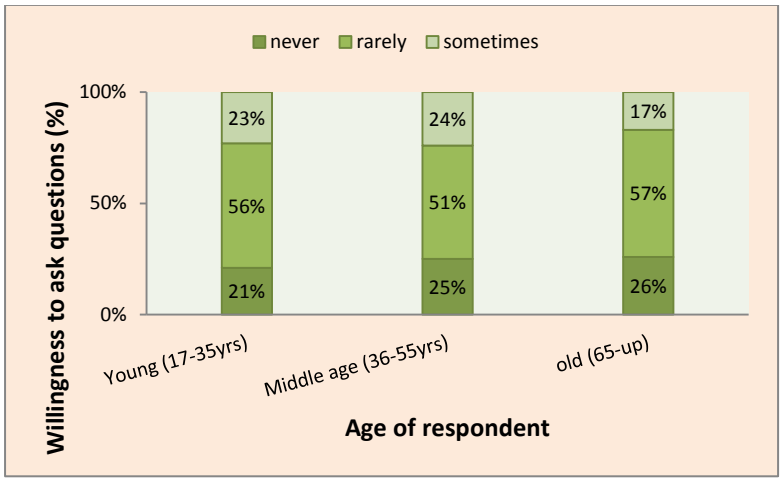
4.5.2.1: Factors influencing the clients ability to ask questions during hospital visits.

Each of the variables used to conclude on ability to ask questions were analysed and results displayed in the sub-sections below. Refer to independent variables stated in section 4.5.2 above.

4.5.2.1.1: Age of the respondents

Age of respondents was analysed against ability to ask question, to see whether or not it could affect willingness to ask questions hence engagement in patient safety. Figure 8 shows a two way tabulation results of age of the respondent versus the client's willingness to ask questions.

Figure 8: Age of the respondents versus willingness to ask questions



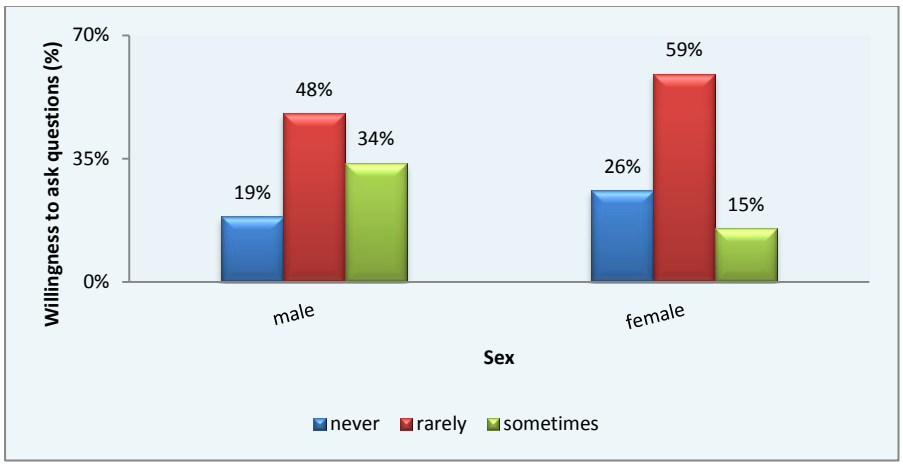
Source: Primary

The majority of clients across all age groups rarely ask questions while visiting the hospital. However, it's also clear that clients in the old age category are less likely to ask question compared to their counterparts. These findings are not statistically significant, (X^2 =1.5, (df 4), p value = .85), meaning that there is no association between age of a client (>18) and the willingness to ask questions while seeking medical care.

4.5.2.1.2: Sex of the client and the willingness to ask questions

Again, sex of the respondent was analysed to see whether or not it would affect ability to ask questions. The researcher thought male would ask questions more frequently than their female counter parts, thereby becoming more engaged in patient safety. Figure 9 presents cross tabulation results of sex of the respondent versus willingness to ask questions during medical consultations.

Figure 9: sex of the respondent versus willingness to ask questions



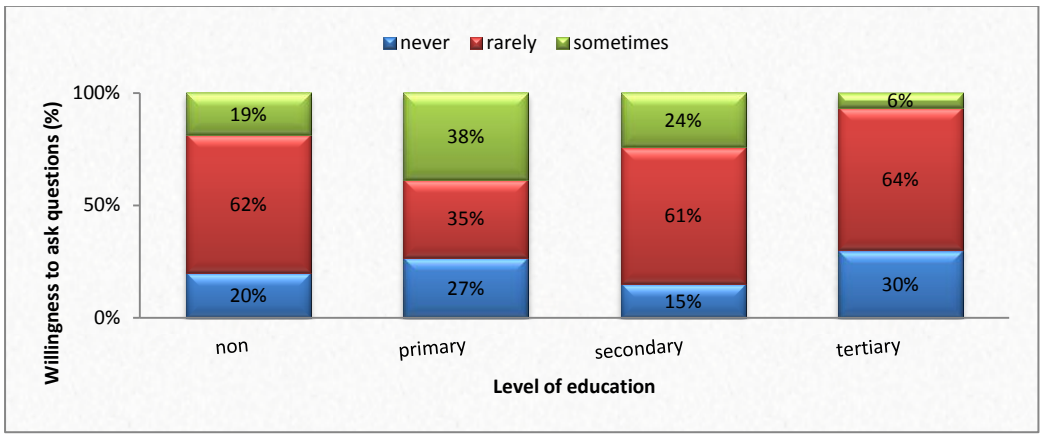
Source: Primary

The majority of clients in both sex categories rarely ask questions, but men were more likely to ask questions sometimes, compared to their female counterparts. This finding was statistically significant hence an association between sex of a client and the willingness to ask questions, (X^2 = 18.6 (df 2), p value < .01).

4.5.2.1.3: Respondent's level of education

The educational level of the respondent patients was also thought significantly vary with engagement in patient safety in terms of asking questions. The researcher expected better level of engagement among the educated patient than the less educated category. Figure 10 shows a two way tabulation results of level of education of a client versus the willingness to ask questions.

Figure 10: Respondent's level of education versus willingness to ask questions



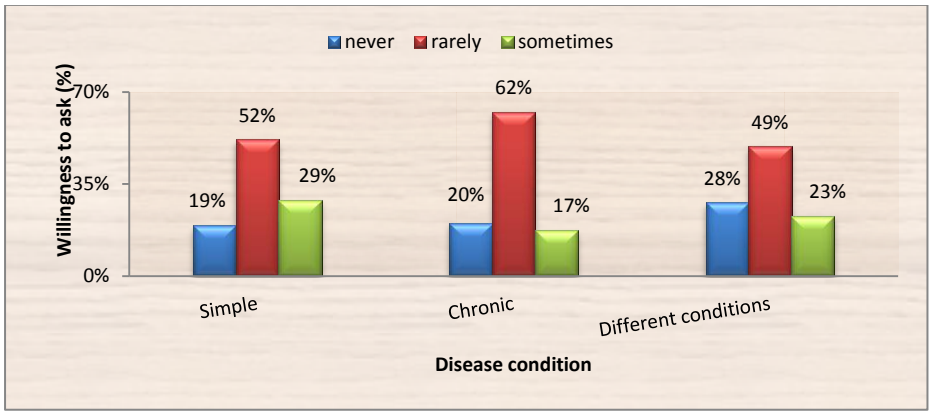
Source: Primary

The majority of clients rarely ask questions concerning their health across all the three categories. Patients who have attained tertiary education were more likely never to ask questions (30%) compared to their counterparts. Similarly clients with primary education are more likely to ask questions sometimes (38%) compared their counterparts in the other education level categories. These findings are statistically significant, (X^2 = 35 (df 6), p value < .01). This means that possibly clients with no education at all find it hard to figure out what questions to ask, and conversely client who have attained tertiary level of education do understand the basic issues about the common diseases and therefore ask less questions. '*It is up to the health care provider to diagnose and treat me, so how can I start asking questions'*- narrates one client who arguably never went to school. Another one said, *"For me I fear health workers because they don't listen to us"*

4.5.2.1.4: Disease condition and willingness to ask questions

Disease condition of the respondent was, also thought, to affect engagement level in terms of asking questions. Figure 11 is a tabulation finding of clients' disease condition versus the willingness to ask question during hospital visits.

Figure 11: Disease conditions versus willingness to ask questions



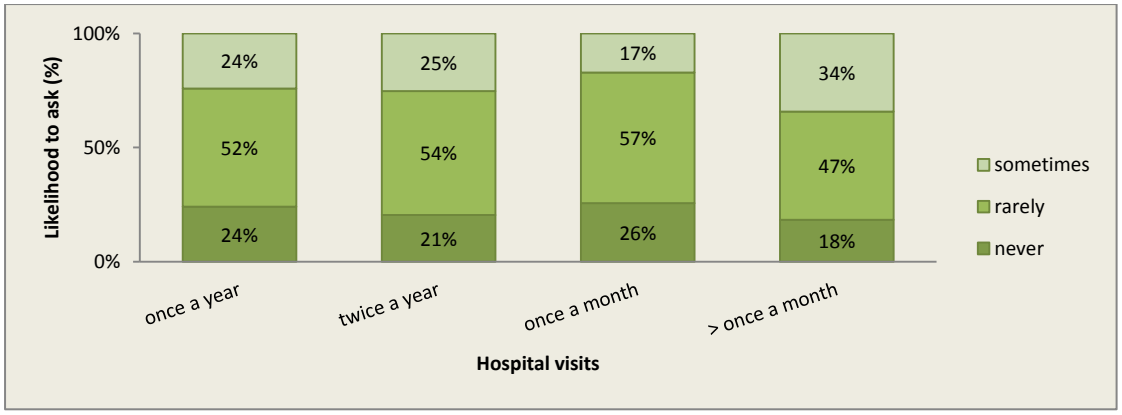
Source: Primary

The majority of clients in all the three categories by disease condition rarely asked questions. Respondents with simple conditions were more likely to ask questions sometimes (29%) during their hospital visits compared to their counterparts. It is also clear that clients with different conditions are more likely to ask questions more than the client with a chronic condition. The finding was not statistically significant (p value = .085)

4.5.2.1.5: Number of hospital visits

Number of hospital visit was, as well, thought to affect engagement in patient safety. This was analysed against likelihood to ask questions. Figure 12 presents cross tabulation results of the analysis

Figure 12: Number of hospital visits versus likelihood to ask questions



Source: Primary

The majority of respondents across all the categories rarely ask questions while seeking medical care. Respondents who visited the hospital more than once a month was more likely to sometimes ask questions compared to their counterparts. This findings was not statistically significant, (X^2 = 5.8, (df 6), p value =.44), suggesting a very weal association between number of hospital visits and the likelihood of asking questions.

4.5.2.2: Factors influencing the clients ability to ask questions during hospital visits from health workers perspective.

Patient ability to ask questions was also assessed from health workers perspective. This was done through key informant interviews with top level and middle level managers. For patient responses, data was collected using questionnaires. Sub-sections below show the result of some of the analysis.

4.5.2.2.1: Clients asks doctor to explain the treatment plan to be followed at home

Respondent patients were asked whether they ask their doctor question about treatment plan while at home. Finding showed that 67% of respondent patients never asked the doctor about their treatment plan while at home, as opposed to 33% who did.

A tabulation of age of the respondent versus the ability to ask the doctor about their treatment plan while at home was done. See table 7 below;

Table 7: Age of the respondent versus the ability to ask the doctor about their treatment plan while at home

Age category	Don't ask for treatment plan	Asks for treatment plan
Young (17-35)	70%	30%
Middle age (36-55)	63%	37%
Old (56-up)	65%	35%

The majority of clients in all the three age categories never asked for the treatment plan while at home. The table also illustrates that more clients in the young age group are less likely to

ask the health workers, compared to individuals in the other two categories. The finding was not statistically significant (X^2 = 2.4 (df 2), p value = .35).

4.5.3: Respondent patient experiences of patient safety incidents

Experiencing safety incident was thought by the researcher, as making respondent patient not only aware about patient safety and also more engaged than other patients who never experienced it.

The following independent variables were used; number of hospital visit, disease condition, acknowledging encounter of safety incident and educational level of respondents. Finding showed that fifty three percent (53%) of respondents patient reported to have experienced a health care related incident and 47% have never. Of the incidents experienced, 72% were in OPD, 16% in maternity ward while 12% were in other in-patient departments. These incidents were mainly diagnostic, medication (dose related) prescription, communication and surgical errors.

However, when the study sought to determine the factors commonly associated with experiencing safety incident, the number of hospital visit, educational level and disease conditions of the patient were statistically significant. The findings are illustrated in table below.

Table 8: Summary findings on respondent patients who experienced safety incident in KGH

Constructs	**Yes**	**No**
Number of hospital visit	63%	37%
Educational level	61%	29%
Disease condition	62%	38%
Acknowledging encounter of safety incident	53%	47%

Source: Primary

The mean percentage for patient safety experiences was found to be 59.8%. This is the level of safety experience by the patients in KGH

4.5.3.1: Which factors influence clients' likelihood to experiencing medical related incidents?

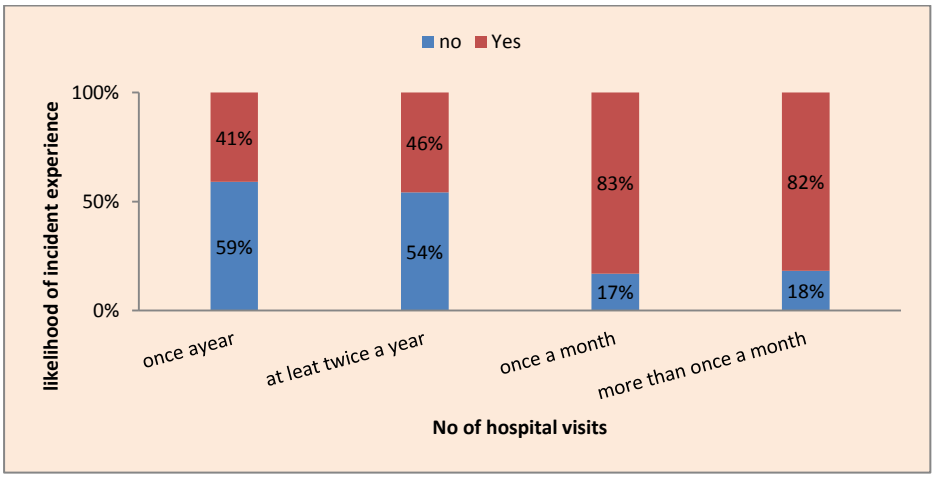
Experiencing safety incident was thought to vary with the following independent variables; number of hospital visit, disease condition, acknowledging encounter of safety incident and educational level of respondents, among others.

Sub-sections below illustrate results of the analysis.

4.5.3.1.1: Number of hospital visits versus experiencing an incident

More number of hospital visits was thought to increase chances of experiencing a safety incident. Analysis was done to see how it varies with experiencing an incident. Figure 13 illustrates a two way tabulation results of average number of hospital visits a respondent made versus the likelihood of experiencing a medical related incident.

Figure 13: Number of hospital visits versus experiencing an incident



Source: Primary

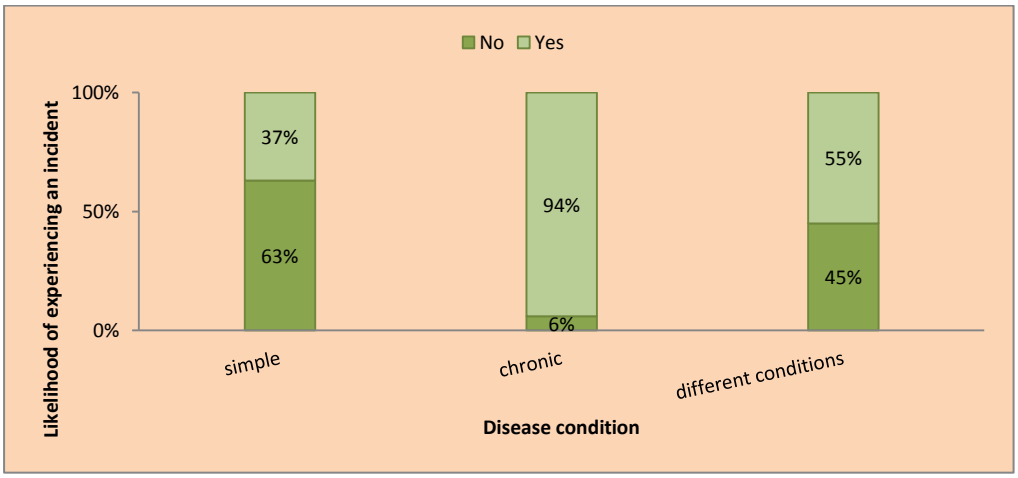
Respondents, who visited the hospital at least once a month, were more likely to experience medical related incidents compared to their counterparts who visit the hospital fewer times in

a year. The finding was statistical significance, (p value < .01.) hence and association exist between the frequency of hospital visits and the chances of experiencing an incident.

4.5.3.1.2: Type of disease condition

Similarly, a disease condition of the respondents was expected to significantly vary with one's chances of experiencing safety incident. Figure 14 shows the outcomes of cross tabulation of the type of disease condition versus the likelihood of experiencing a medical related incident.

Figure 14: Disease conditions versus likelihood to experience incident



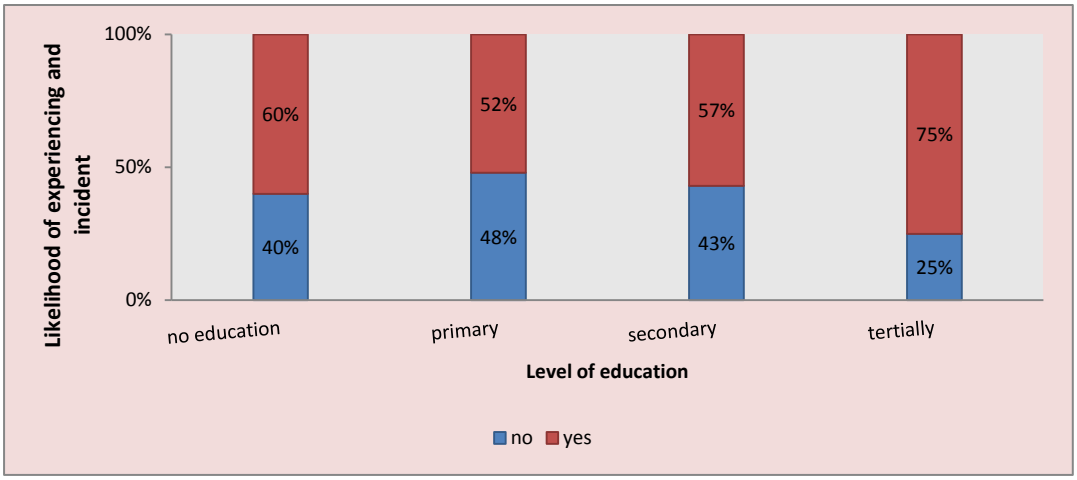
Source: Primary

Respondents who visited the hospital with chronic conditions were more likely to experience safety incidents compared to their counterparts. The findings are statistically significant, (X^2 = 81, (df 2), p value < .0, highlighting an association between the nature of the disease condition and the chances of experiencing an incident. '*When a client has multiple disease conditions, the health care provider has increased chances of making a mistake, as this require so many investigations before diagnosis could be made'* - narrated one health care provider on 19/08/2014

4.5.3.1.3: Level of education

It is thought that the higher one's level of education, the lower the chances of getting safety incident. The researcher analysed the educational level of the respondent against likelihood of getting safety incident, figure 15 below.

Figure 15: Educational level versus likelihood to experience incident



Source: Primary

Finding showed that those clients with highest level of education (tertiary) were more likely of experiencing safety incident than other categories. Although this findings was statistically significant, (X^2 = 9, (df 3), p value = .03), the reason is not very clear. Probably, this could mean that the more educated a client is, the more s/he is aware of safety risks and therefore able to recognise whether a safety risk has happened or not. For those in the lower education category, they may not quickly know whether or not they experienced an incident and they therefore tend to under report as well.

4.6: Factors affecting patient engagement in patient safety in KGH

The study investigated the factors affecting patient engagement in patient safety. Findings were divided into demographic factors and other factors.

The demographic factors, quantitatively, proved to be significant were; age, sex and educational levels of the respondent patients.

Others factors, other than demographic factors, were; lack of awareness about their roles in patient safety, disease condition of the patients and the number of hospital visit the respondent made, as well as the negative attitude of health worker. Health workers reported worker overload (31.9%) hence limited time to engage patient in patient safety issues.

4.7: Level of awareness about patient safety among health workers

The level of aware about patient safety in health care among the health workers was assessed. The constructs/independent variables used were; hearing about patient safety and level of completeness of patient particulars on patient files. A documentation review of previous patient files (50files) was made to ascertain the level of completeness of the identification particulars. The identification particulars looked at was patient name, age, sex and complete address (Village, Parish, Sub-county, county, district and country)

The study found that only 20% of the health workers heard about patient safety concept and 82% of the reviewed files were completed. The mean percentage was found to be 51%, which was taken as the overall level of awareness about patient safety among health workers in KGH. Refer to sub-sections below for each of the constructs/variables used.

4.7.1: Has the health care provider ever heard of patient safety concept in health care?

Health workers were asked whether or not they have ever heard about patient safety. Responses were divided into 'YES' or 'NO' categories.

Finding showed that only twenty percent (20%) of health care workers at KGH acknowledged having heard about patient safety concept. The majority, accounting for 80 % did not hear about patient safety concept, except at the time of the study.

4.7.2: Level of completeness of patient particulars

The researcher believed that that when one is aware about patient concept, he/she would fill all the require identification details of the patients. It is thought that this minimise chances

safety incidents such as giving right medicine/care to a wrong patient due to missing identification details.

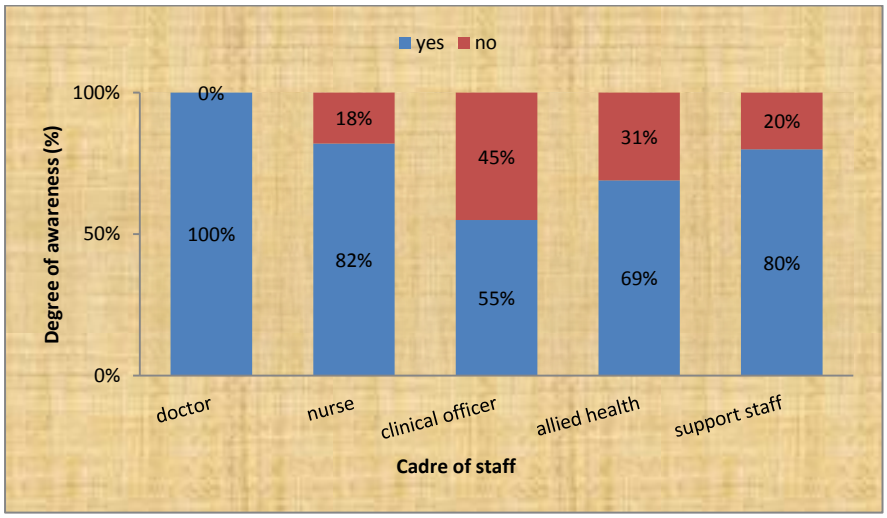
A review of previous patient files (50files), randomly selected, for the year 2013 was made. Finding revealed that 41files (82%) were completed while 9files (18%) were half way filled. Of the 18% of the files which were not completely filled, 33.3% had no sub-county and county on them.

Completion of patient identification particulars were considered as health workers being aware about patient safety hence minimising associated safety risks that could occur due to non-completion. The identification particulars looked at was patient name, age, sex and complete address (Village, Parish, Sub-county, county, district and country) in course rendering health care during the admission period.

4.7.3: Cadre of staff versus their awareness on patient safety

The researcher went ahead to analyse, with the view to see whether cadre of staffs would significantly vary. Tabulation was done about cadre of staffs versus their awareness on patient safety. Figure 16 presents cross tabulation results of cadre of the staff versus awareness of patient safety initiatives.

Figure 16: Cadre of staff versus their awareness on patient safety



Source: Primary

Doctors and nurses are more likely to be aware of patient safety initiatives, compared to the clinical officers. However the same trend is not replicated as we go down the staff cascade. The findings do not show a clear association between the cadre of the staff at KGH and the likelihood of awareness of patient safety initiatives, (X^2 =31, (df 4), p value =.001.

4.8: Level of health workers engagement in patient safety

In assessing health workers engagement in patient safety, responses were sought about the following variables; clients seeing the health care provider washes hands before offering a service, clients asking if the health worker has washed his/her hands before offering a service, clients told how much pain to expect during surgery and clients provided with enough information concerning side effects of the medication dispensed to them. Other variables looked at were; health worker experience/encounter with patient safety incident and reporting patient safety incidents.

Seeing health worker wash hand or asking if they had washed before offering a service or patient told about level of pain to expect before or during or after operation were regarded by the researcher as engagement in patient safety issues. These were from patient perspective. Similarly, being given information about side effects of medication, experiencing and reporting incidents by H/W was also viewed as engagement in patient safety from the H/W perspective.

Of these, patients seeing health worker wash hand before offering a service was not statistically significant. Table below shows the findings used to approximate health workers engagement in patient safety.

Table 9: Summary findings on constructs used to approximate health workers engagement in patient safety.

Constructs	Yes	No
Patients told about pain to expect after procedure/surgery	43%	57%
H/Ws provided information about side effect of drugs	70%	30%
H/W experienced safety incidences	70%	30%
H/W reported safety incident	22.7%	77.3%

Source: Primary

The study found the mean percentage of the "YES" category was 51.4%. Therefore, the level of health workers engagement in patient safety was found (concluded) to be 51.4%.

The sub-sections below reveal the details of the constructs/variables used for this approximation.

4.8.1: Clients seeing the health care providers wash hands before offering a service.

Respondent patients were asked whether or not they have ever seen a health worker wash hand before offering them a service. Only twenty five percent (25%) of the clients reported having ever seen a health care provider wash hands before providing a service. The researcher then wanted to see how frequency of hospital visit affected seeing H/W wash hand. Tabulation results of frequency of facility visits versus seeing the health workers wash hands before providing a service was done. The result was reflected below;

Table 10: Frequency of facility visits versus clients seeing the health workers wash hands before providing a service

Construct	Has the client ever seen the health worker wash hands before offering a service	
Frequency of hospital visits	Yes	No
Once a year	25%	75%
At least twice a year	21%	79%
Once a month	32%	68%
More than once a month	18%	82%

Source: Primary

The majority of patient respondents in all the categories have never seen a health care provider wash hands before offering a service. Clients who visited the facility once a month were more likely to see a health care provider wash hands compare to their counterparts. However, the finding was not statistically significant, (X^2 =4.7, (df 3), p value = .19), meaning there is no association between the frequency of hospital visits and the likelihood of seeing a health care provider wash hands before providing a service.

4.8.2: Client asking if the health worker has washed his/her hands before offering a service.

Responses were sought from patients as to whether or not they ask their health care providers about washing hand before offering them a service. This was viewed as a strong engagement in of the H/W in patient safety. Analysis was done on frequency of responses, level of education and cadre of staffs. The results are as in the sub-sections below;

4.8.2.1: Frequency of responses given about health workers washing hand before offering a service

When the respondent patients were ask how often they engage their health worker in patient safety through asking challenging questions on hand washing, the responses were tabulated. Table 11 presents findings on how often the clients who never see the health care provider wash hands before providing a service ask them (H/W) if they had washed their hands.

Table 11: How often the respondent asks the health worker if he/she has washed hands before offering a service

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	never	34	11.7	11.7	11.7
	rarely	47	16.1	16.1	27.9
	sometimes	186	64.8	64.8	92.7
	always	21	7.3	7.3	100.0
	Total	288	100.0	100.0	

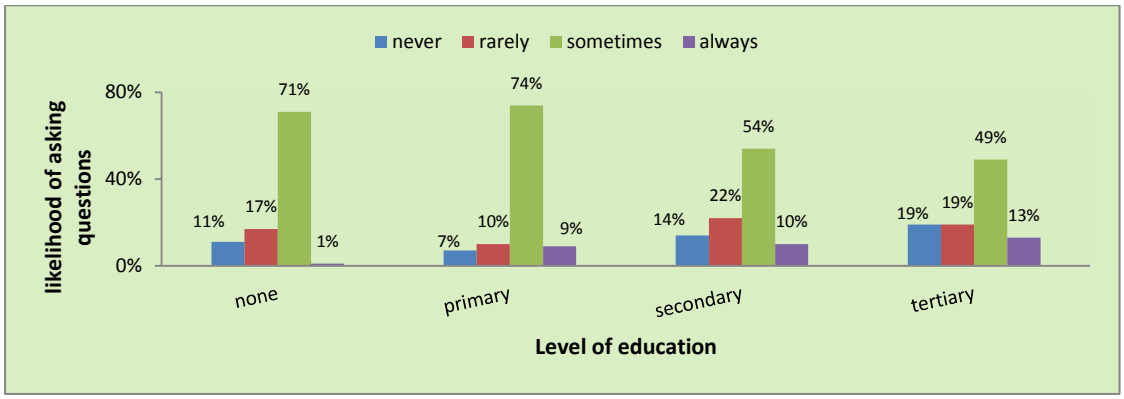
Source: Primary

Only 7.3% of clients who had never seen a health care provider wash hands before providing a service, always ask if he/she has washed hands before offering a service. However, the majority do sometimes ask and up to 28% rarely or never bother to ask.

4.8.2.2: Level of education

Level of education was also analysed to see how significant it could affect patient ability to engage H/W in patient safety through asking question on hand washing. The researcher expected that the higher a patient's education, the more their ability to ask question, hence engage H/W in patient safety. Figure 17 presents cross tabulation results of level of education versus ability to ask whether the health care provider has washed hands before providing a service.

Figure 17: Level of education versus ability to ask whether health care provider has washed hands before providing a service.



Source: Primary

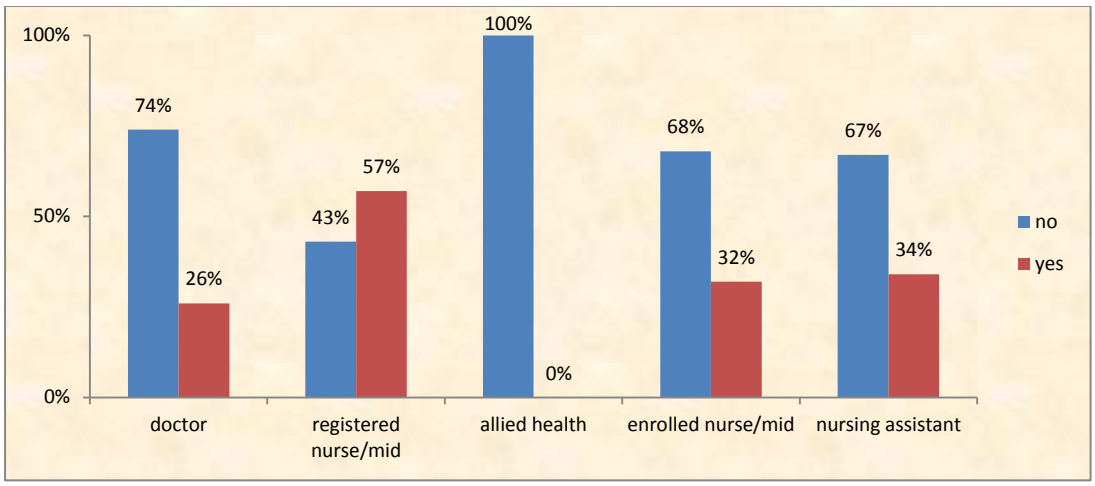
The majority in all education categories do sometimes ask the health care providers if they had washed their hands. Clients who attained tertiary education were more likely to ask questions compared to their counterparts. These findings are statistically significant, (P value =.002), suggesting an association between level of education and the likelihood to ask if the health care provider has washed hands.

4.8.2.3: Cadre of staff versus hands washing before offering a medical service.

Cadre of staffs was analysed against hands washing before offering a medical service. Up to sixty seven percent (70%) of the interviewed health care providers agreed not to wash hands every time they offer a medical service.

Cross tabulation results of cadre of staff versus washing hands before offering a medical service was then done. Refer to figure 18 below.

Figure 18: Cadre of staff versus hands washing before offering a medical service



Source: Primary

Registered nurses/midwives were more likely to wash their hands every time they offer a medical service (57%). The allied health professions were less likely to wash their hands. These findings are statistically significant, (X^2 = 17, (df 4), p value = .002, suggesting an association between cadre of staff and observation on hygienic practices.

4.8.2.4: Why healthcare workers do not wash hands

The health workers were asked why they do not always wash hand before offering a service. Thirty nine percent (39%) of the staff which do not wash hands always before offering a service because of lack of constant supply of water, 51% attributed it to work overload while 10% usually forget.

4.8.3: Client told how much pain to expect during surgery/painful procedure

Patients were asked as to whether H/W told them the amount/degree of pain to expect before a painful procedure. Being told about pain to expect was viewed as H/W engaging in patient safety. Out of all the clients who had conditions that required surgical intervention/painful procedure, only 43% of them were told, by the health care provider, how much pain to expect before the operation/procedure and the rest (57%) were not.

4.8.4: Did the health workers provide enough information concerning side effects of the medication dispensed to you?

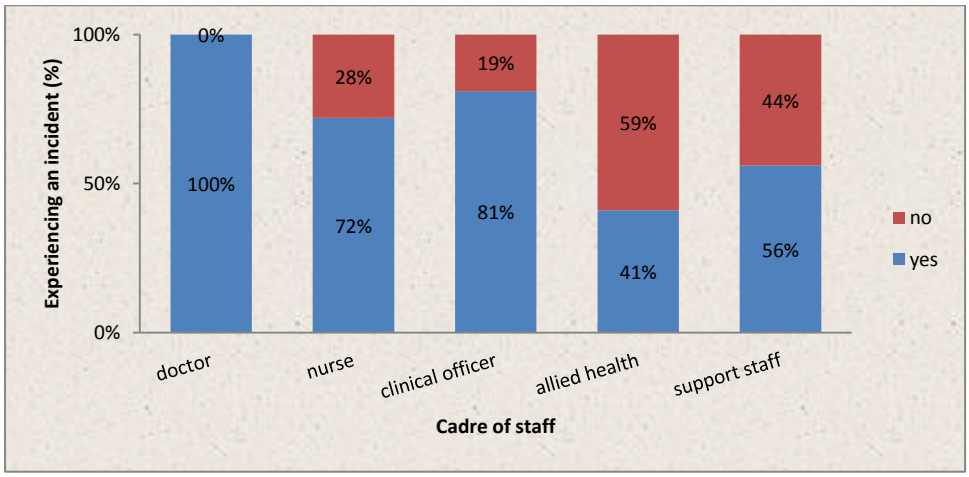
Again, patients were asked whether or not they were given enough information about side effects of drugs dispensed to them. Being told the side effect of the drug by the health worker was considered as an engagement on the H/W side. Up to seventy seven percent (70%) of respondent clients said that health care providers gave enough information about the side effects of the medications dispensed to them. *'We do give those information to our clients'* – narrates a health worker

4.8.5: Has the health care provider ever experienced/encountered a patient safety incident?

Experiencing a safety incident was view as having aware about patient safety and hence likelihood of engaging much higher than in those had never experienced it. Thirty four percent (34%) of staff had ever experienced a medical incident and of those, only 23% reported the incident while the rest (77%) did not.

Cadre of staff and experiencing a medical incident was then tabulated. Figure 19 present cross tabulation results of cadre of staff versus experiencing a patient safety incident.

Figure 19: cadre of staff versus experiencing a patient safety incident.



Source: Primary

Being a doctor, nurse or clinical officer was more likely to have experienced an incident than being an allied health professional or support staff, (X^2 = 23, (df 4), p value < .001), hence a

significant finding. This may be due limited encounter with patient among the allied health professionals, or being more careful as compared with the former category.

4.8.6: Health workers reporting patient safety incidents

Reporting an incident by a health worker was viewed, by the researcher, as having engaged in patient safety. Health workers were asked whether or not they reported safety incidents they experienced. Table 12 below shows whether or not the incidents were reported, out of the 34% (35) staffs that have ever experienced/encountered patient safety incident.

Table 12: Reporting patient safety incidents among health workers

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	8	22.7	22.7	22.7
	No	27	77.3	77.3	100.0
	Total	35	100.0	100.0	

The majority (Valid responses only) of staffs (77.3%) did not report the incidents they encountered. When they were asked why they did not report, the responses were given as in table 13 below;

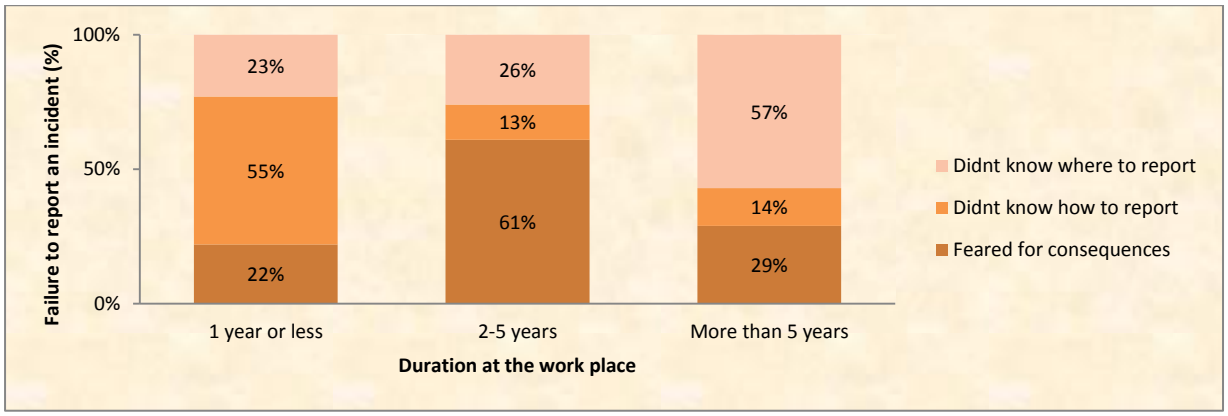
Table 13: Why staffs who experienced the incident never reported them.

Reasons for not reporting incidences	**Frequency**	**Percent**	**Cumulative Percent**
I feared for the consequences	10	38.8	38.8
I did not know how to report	3	10.4	49.2
I did not know where to report	14	50.8	100.0
Total	27	100.0	

Source: Primary

The majority of health workers (77.3%) who never reported the incidents did not know where to report (50.8%). The fear of the consequences of reporting ranked second on the list, showing that the hospital management does not encourage the staff to report the incidents once they happen. '*We are very busy and have a lot of other things to do. Reporting of patient safety incidents will be handled gradually'* – narrates a key informant/manager on 19/08/2013 Duration of stay (staff experiences) at KGH was analysed against their failure to report medical incidents. Figure 20 presents cross tabulation results of duration of staff stay at KGH versus failure to report the experienced medical incident

Figure 20: Duration of staff stay at KGH versus failure to report the experienced incidents



Source: Primary

The new staffs (less experienced) were less likely to know where to report, 2-5 years category were more likely to fear of consequences while the longest serving were less likely to know where to report the experienced incident. The findings were statistically significant demonstrating an association between the duration of staff stay at KGH and the reasons of not reporting the incidents.

4.9: Factors affecting health workers engagement

The factors affecting health workers' engagement in KGH was investigated. They were ranging from the perception of lack of time, weak institutional support toward patient safety and fear of likely consequences of engaging patients.

CHAPTER FIVE

DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.0: Introduction

To explore patients and health workers' engagement in patient safety in health care, the researcher collected and analysed data from three hundred and eighty four clients (384) and 103 health care workers from KGH. The data also revealed the lived experiences of clients while seeking health care service from KGH.

5.1: Discussion of the findings

In discussing the study findings, the areas looked at include; level of awareness about patient safety among patients and health workers, level of health workers engagement in patient safety in healthcare, level of patient engagement in patient safety. The factors were discussed concurrently.

5.1.1: Level of awareness about patient safety among patients and health workers.

According to Albolino et al. (2010) whose study looked at patient safety and incident reporting among Italian healthcare workers, 70% of respondents confirmed involvement in patient safety initiatives. Data analysis from this study, found level of awareness about patient safety to be 46.5% among patients and 51% among health workers. This level is still quite low.

5.1.2: Level of health workers engagement in patients' safety and factors affecting the engagement

Davis et al. (2007) found that when patients were instructed by a doctor to ask challenging questions of themselves and nurses, patient willingness to ask question was significantly increased. Thus, physician instruction and education surrounding the reasons why patients should ask questions may have a significant impact on patient error prevention behaviors. In a similar way, Schwappach (2011), assert that hospitals should educate patients on how to

prevent errors and that the patients' intentions to engage in safety are significantly predicted by behavioral control, subjective norms, attitudes, safety behaviors during hospitalization and experiences with taking action by the health facility staff. Similarly,

For this study, a number of constructs was used to approximate health care workers' engagement in patient safety. They included; health care workers ability to recognise an incident, ability to report the incident, hand washing culture and health worker's ability to encourage the client to speak up in case of an incident, among others.

In their advocacy, for respect for patient rights, through the patient charter, Ministry of health (MOH) asserts that all health workers must observe these rights. In this way, the engagement of both patients and health workers in patient safety would improve (MOH, 2009)

5.1.2.1: Ability to recognise an incident

Data analysis demonstrated an association between cadre of staff and experiencing a medical incident but could not demonstrate the same for the duration of employment in years of staff at the current workplace.

5.1.2.2: Ability to report the incident

This study showed that 77.3% of the staffs at KGH did not report the incidents they encountered. There was, however, an association between the duration of stay of staff at KGH with failure to report an incident. Duration of stay in KGH is, therefore, a big contributing factor to that effect. This findings are similar those of Albino et al. (2010) and Charles et al. (1994).

5.1.2.3: Hand washing culture

There was statistically significant association between cadre of staff and hand washing culture. Many times the staffs forgot to wash hand, a factor attributed due to heavy workload.

5.1.2.4: Health worker's ability to encourage the client to speak up in case of incident happening.

A study done by Davis et al. (2007), however, found that by health workers involving themselves in encouraging questions, patient willingness to ask questions was significantly increased. However, data analysis from this study showed that a small percentage of health care workers always encourage patients to speak up in case of a medical incident.

Entwistle et al. (2010) also points out that one of the most common ways of encouraging patients to play an active role in patient safety is asking them to speak up if they have concerns about their own safety.

5.1.3: Level of patient engagement in patients' safety and the factors affecting the engagement

Here some elements were chosen to define patient engagement and these included; patient involvement in decision making, ability of patients to ask questions, patient encouragement by the health workers to participate, patient's ability to identify an incident and patient's ability to report the incident among others. These were done in comparison with the reviewed literature as below;

5.1.3.1: Decision making

Data analysis indicated that about a quarter of clients were definitely involved in decision making concerning care and treatment. Analysis also demonstrated an association between sex and involvement in decision making, a finding earlier demonstrated by Davis et al. (2011) whose study showed that women were more involved than males.

Other factors that significantly influenced involvement in decision making of clients included hospital visits per year, level of education and the disease condition the client presents with in the hospital. These findings are in consonance with earlier study findings by Davis et al. (2011), who demonstrated an association between level of education and involvement in decision making. However in contrast to the study findings by Davis et al. (2007) who

demonstrated a significant association between young age group and involvement in patient safety initiatives, this study could not establish a significant association between age of a client and involvement in decision making.

5.1.3.2: Asking questions during care and treatment

Data analysis also showed only a small number (23%) of clients sometimes asked questions during care and treatment. Factors that significantly influenced asking questions to a health worker included; client's sex, level of education and the feeling involved enough in decision making process. These findings rhyme with those of Davis et al. (2011), Longtin et al. (2010) and Howe (2006) which demonstrated that highly educated patients opted for a more active role in patients' safety initiatives than the less educated. Data analysis could not however demonstrate an association between age of the client and the willingness to ask questions as earlier asserted by Longtin et al. (2010) and Howe (2006).

5.1.3.3: Experiencing a medical incident

Data analysis also showed that significant number of health workers had ever experienced or recognised a medical incident happening to them or to a person in their care. This shows that the majority of clients are able to recognise a medical error or a near miss.

5.1.3.4: Education about error prevention

A small percentage (34%) of respondents has been educated about error prevention while seeking medical care at KGH. Factors that significantly influence a client's likelihood of being educated according to this study include; sex of respondent. The hospital administration needs to intensify its efforts in educating the clients about patient safety initiatives as a whole.

5.1.3.5: Watching a staff wash hands before offering a service

The findings of this study mirror those of Waterman et al. (2006) who demonstrated that more clients were uncomfortable asking hospital staff if they washed their hands.

Fewer respondents (25%) reported having ever witnessed a hospital staff wash hands before providing a medical service such as examining a patient or giving an injection. In fact, less than 10% of respondents that never saw the staff wash their hands actually had the courage to ask if they did wash their hands.

5.2: Conclusions

In conclusion, health workers in KGH were 4.5% more aware about patient safety in health care than the patients. Similarly, patients in KGH were 0.7% more engaged in patient safety than the health workers. The level of health workers' engagement in KGH is not up to the desired standard, considering the findings from the various factors that approximate, when combined, health care workers' engagement.

Similarly, the level of patient engagement in patient is also not adequate. Patients have put in some initiatives, following the study findings, which need to be encouraged so that their engagement can go up.

Level of awareness about patient safety among both patients and health workers, was found to be low as well in KGH. The findings suggest that patient safety initiatives have not been enforced well enough. Those who knew about the concept probably could have learnt it from school other than from the hospital.

5.3: Recommendations

Based on the study findings, I would make the following recommendations;

I. The hospital administration needs to put in place strategies to introduce and improve on the implementation of patient safety initiatives. The hospital need to embrace the patient charter which was launched by MOH in 2009, if patient engagement is to improve.

II. The researcher recommends further research to be done in the area of patient safety both in the same hospital (KGH) and in other health facilities. The results may need to be compared.

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APPENDICES

Appendix I: INTRODUCTION AND CONSENT

Dear respondent, my name is Omona Kizito, a student of Uganda Martyrs' University, Faculty of Health Science. I'm carrying out research on patients and health workers'

engagement in patient safety in health care. I'm very much appreciative for your participation in this research.

Every answer you will give will be kept with utmost confidentiality. Your opinion will be highly respected. If we come across any question which you do not feel comfortable with and you do not want to answer, please kindly inform me and we go to the next question.

At this time do you want to ask me any question about the research?

May I begin now?

Appendix II: QUESTIONNAIRE FOR PATIENTS RESPONDENTS.

Some guide for respondent, to help answer the questionnaire

Patient Safety: Reducing and preventing unsafe acts in the health care system.

Patient Safety Incident: An unintended and undesired incident that occurs during the process of providing health care or providing medications and results in patient injury or death, e.g., given the wrong dosage of medication, misdiagnosis of disease, unexpected surgery complications. They are health care associated risks.

SECTION A: Background information (demographics)

Q1. Age (In years) ☐

Q2. Gender; Male ☐ Female ☐

Q3. Educational level

a) Non ☐ b) Primary ☐ c) Secondary ☐ Tertiary ☐

SECTION B: Health seeking behaviour of clients

Q4. How often do you visit this health facility?

a) Once a month ☐ b) More than once a month ☐ c) Once a year ☐

b) At least twice a year ☐

Q5. What are your reasons, in terms of disease conditions, for visiting the hospital?

a) Simple disease condition ☐ b) Chronic disease condition ☐

c) Different disease conditions ☐

SECTION C: Engagement in patient safety practices

I. Involvement in decision making

Q6. Does your health worker involve you in decision making about your health care?

a) Never ☐ b)Yes, to some extent ☐ c)Yes, definitely ☐

Q7. If Never, or to some extent, why do you think (factors) health workers never involve you or do so only to some extent?

…….....……

……..……

……..……

Q8. On addition to your answers in Q7 above, which of the following factors contribute to your lack of /inadequate involvement by the health workers? Your…

a) Age ☐ b) Sex/Gender ☐ c) Number of hospital visits per year ☐ d) Level of education ☐ e) Disease condition ☐

II. Asking questions about your health care

Q9. How often do you ask questions to the health workers about your health care?

a) Never ☐ b) Rarely ☐ c) Sometimes ☐

Q10. If a), explain why

……

……

……

……

Q11. Which of the following factors contribute to your lack of/ inadequate asking of questions to the health workers about your health care? Your…

a) Age ☐ b) Sex/Gender ☐ c) Level of education ☐ d) Number of hospital visits ☐ e) Disease condition ☐ e) Feeling involved enough, hence no need for more questions ☐ f) Others, specify……

Q12. Do you sometimes ask your doctor (health worker) to explain your treatment plan as you go home? a) Don't ask for treatment plan ☐ b) Ask for treatment plan ☐

Q13. Have you ever seen a health worker wash hand before offering you a service?

a) Yes ☐ b) No ☐

Q14. If yes, which cadre? a) Doctor ☐ b) Registered Nurse/ Midwife ☐ c) Enrolled Nurse/Midwife ☐ c) Clinical officer ☐ d) Other allied health professionals ☐ e) Nursing assistants ☐ f) Others, specify…….

Q15. How often do you ask the health workers if he/she has washed hands before offering you a service? a) Never ☐ b) Rarely ☐ c) Sometimes ☐ Always ☐

Q16. Do your health workers always tell you;

1) When to resume normal activities after getting health care? a) Yes ☐ No ☐
2) Were examples of the activities to avoid mentioned to you? a) Yes ☐ No ☐
3) Danger signs to watch for while at home? a) Yes ☐ b) No ☐
4) Site effects of medications dispensed to you? a) Yes ☐ b) No ☐
5) Severity of pain to expect before a surgery or any procedure? a) Yes ☐ No ☐

III. Patient experiences of medical incidents

Q17. Have you ever experienced a medical incident? a) Yes ☐) No ☐

Q18. If yes, from which hospital department? a) OPD ☐ b) Maternity ☐ c) Others, Specify……

Q19. If yes, which category of incident? a) Diagnostic incident ☐ b) Medication incident ☐ c) Communication related incident ☐ d) Surgical errors ☐ e) Others, specify……..

Q20. Which factors contributed to your likelihood to experience medical related incidents?

……..

……..

SECTION D: Awareness about patient safety

Q21. Have you ever heard about patient safety before this study? a) Yes ☐ b) No ☐

Q22. Have you ever been taught about error prevention in health care? a) Yes ☐ b) No ☐

Q23. Have you ever experienced a safety (medical) incident? Responses in Q17 apply here.

Q24. Have you ever reported an adverse event? a) Yes ☐ b) No ☐

Q25. If no, explain why;

a) I didn't know where to report ☐
b) I didn't know how to report ☐

c) I feared for probable consequences ☐

Q26. Do your health workers always tell you; (Responses in Q16. 2) & 3) apply here)

1) Danger signs to watch for while at home? a) Yes ☐ b) No ☐
2) Site effects of medications dispensed to you? a) Yes ☐ b) No ☐

Appendix III: TOOLS FOR HEALTH WORKERS

SECTION A: Simple observation check list

Serial Number	**Person observing**	**Activities observed**
01.	Researcher/Research Assistants	Time taken with each category of patients
		Encouraging patients to ask questions about their care
02	Patients	Seeing health workers wash hand before offering a service
		Cadre of the H/W who washed hands

SECTION B: DOCUMENTATION REVIEW (50 PATIENT FILES)

Review files for presence of each of the following;

- Patient name
- Age
- Sex
- Village
- Parish
- Sub-county
- County
- District

SECTION C: INTERVIEW GUIDE FOR KEY INFORMANTS/HEALTH WORKERS

a) Demographic (Background) information

Q1. Age (In years) ☐

Q2. Sex: Male ☐ Female ☐

Q3. Cadre (Example; Clinical officer, Medical officer), specify…….

Q4. Years of serving in KGH…….

b) Engagement in and awareness about patient safety practices

Q5. Have you ever heard of patient safety concept in health care (before this study)?

a) Yes ☐ b) No ☐

Q6. Different categories of patients (Example: Those with simple disease conditions, those with chronic disease conditions and those with different/multiple disease conditions) do visit your health facility. Which of those categories take more time with health workers, in terms of asking questions about their health? Share with us your experience.

……

……

……

Q7. With which category of patients above, do health workers most commonly encounter safety incident?

……

……

……..

Q8. Please share with us your encounter with patients who visit your health facility once in a month, twice in a month, twice in a year and once in a year. To what extent do they engage themselves in patient safety?

……

……

……

……..

Q9. Do you encourage your clients to ask questions concerning their healthcare?

……

……

……..

Q10. Which factors influence clients' likelihood to experiencing medical related incidents from you?

a) Work overload ☐ b) Stress ☐ c) patient unwillingness to participate in safety issues ☐ d) Others, specify……

Q11. Have patients ever been taught about medical incidents and error prevention in your facility? a) Yes ☐ b) No ☐

Explain……

……

……

Q12. Do you always wash your hand before offering a service to a patient?

a) Yes ☐ b) No ☐

Q13. If no, why? a) Work overloads ☐ b) Lack of constant water supply ☐

c) I forget ☐ d) Others, specify……

Q14. Do you always provide enough information concerning side effects of the medications to be dispensed to your patient? Explain

…….

……

……

……..

Q15. Have you ever experienced/encountered a patient safety incident? a) Yes ☐ b) No ☐

Explain……

……

Q16. If yes, did you report it? a) Yes ☐ No ☐

Q17. From response in Q16. above, if no, why? a) I did not know where to report ☐ b) I did not know how to report ☐ c) I feared for the consequences ☐ d) Others, specify…….

Please, explain……

……

THANK YOU FOR YOUR PARTICIPATION AND CORPORATION.

APPENDIX IV: COPY OF INTRODUCTORY LETTER

Uganda Martyrs University

making a difference

Faculty of Health Sciences
+256772529191/+256751529191
Email: pgovule@umu.ac.ug
5th September 2013

To: The Officer Responsible

Dear Sir/Madam,

RE: INTRODUCING DR. OMONA KIZITO

This is to introduce to you **Dr Omona Kizito** a bona fide student of **Uganda Martyrs University**. He is pursuing a course leading to the award of Master of Science in Health Services Management (Msc. HSM). He is currently undertaking a research for his academic dissertation. The research topic is:

PATIENTS AND HEALTH WORKERS' ENGAGEMENT IN PATIENT SAFETY IN HEALTHCARE: A CASE OF KITGUM GENERAL HOSPITAL AND ST. JOSEPH'S HOSPITAL

The topic and protocol have been approved by the relevant university authorities.

Any assistance rendered to him in this respect will be much appreciated by the University.

Yours Sincerely,

PHILIP GOVULE
Programme Coordinator-Msc. HSM
C.c. Dean of Faculty of Health Sciences

APPENDIX V: MAP OF UGANDA SHOWING LOCATION OF KITGUM DISTRICT



SOURCE: UBOS 2012