FAMILY MEMBERS' AND NURSES' EXPERIENCES AS WELL AS FACTORS INFLUENCING THE QUALITY OF CARE AND SUPPORT DURING RESUSCITATION IN CRITICAL CARE UNIT AT KENYATTA NATIONAL HOSPITAL

Joan Muthoni Ndirangu

H56/87681/2016

A RESEARCH DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF MASTER OF SCIENCE NURSING (CRITICAL CARE) DEGREE OF THE UNIVERSITY OF NAIROBI

2018

DECLARATION

I, Joan M. Ndirangu, hereby declare that this research dissertation titled, 'Family members and nurses' experiences as well as factors influencing the quality of care and support during resuscitation in Critical Care Unit at Kenyatta National Hospital is my original work and has not been submitted in any other institution for the purpose of obtaining a degree or any other academic award.

Signature: ___________________________________ Date: __________________________

Joan M. Ndirangu

H56/87681/2018

DEDICATION

I dedicate this work to my lovely family and friends for their unending support and prayers. You inspired me from the very beginning.

ACKNOWLEDGEMENT

I wish to acknowledge the following individuals that have contributed immensely towards the successful completion of this study.

Special thanks to my supervisors, Ms Hannah Inyama and Professor Anne Karani for their invaluable guidance and encouragement throughout the course of this study.

My gratitude goes to all the research participants; all the nurses working in the main critical care unit and family members for accepting to participate in this study.

I wish to thank all my colleagues and classmates for their input and contributions in the course of my studies at the university.

God bless you all

CERTIFICATE OF APPROVAL

We, the undersigned certify that this research dissertation has been submitted for the degree of Master of Science in Nursing (Critical Care) of the University of Nairobi with our approval as internal supervisors.

Signature: ___________________________________ Date: __________________________

Professor Ann Karani

PhD, MScN, BScN

School of Nursing Sciences

University of Nairobi

Signature: ___________________________________ Date: __________________________

Miss Hannah Inyama

PhD (candidate), MScN, BScN

School of Nursing Sciences

University of Nairobi

TABLE OF CONTENTS

DECLARATION ii
DEDICATION iii
ACKNOWLEDGEMENT iv
CERTIFICATE OF APPROVAL v
TABLE OF CONTENTS vi
LIST OF FIGURES x
LIST OF TABLES xi
ABBREVIATIONS OF KEY WORDS xii
OPERATIONAL DEFINITIONS xiii
EXECUTIVE SUMMARY xiv
CHAPTER ONE: INTRODUCTION 1
1.1 BACKGROUND OF THE STUDY 1
1.2 PROBLEM STATEMENT 2
1.3 JUSTIFICATION OF THE STUDY 4
1.4 RESEARCH OBJECTIVES 5
1.4.1 The Broad Objective 5
1.4.2 The Specific Objectives 5
1.5 RESEARCH HYPOTHESIS 5
1.6 RESEARCH QUESTIONS 6
1.7 EXPECTED STUDY BENEFITS 6
1.8 STUDY ASSUMPTIONS 7
1.9. THEORETICAL AND CONCEPTUAL FRAMEWORK 8
1.9.1 Theoretical Framework: Two Factor Theory 8
1.9.2: Conceptual Framework 10
CHAPTER TWO: LITERATURE REVIEW 11
2.1 OVERVIEW OF THE LITERATURE REVIEW 11
2.2. DEMOGRAPHIC FACTORS INFLUENCE ON QUALITY OF CARE AND SUPPORT DURING RESUSCITATION 11
2.3 NURSES VIEWS AND EXPERIENCES ON QUALITY OF CARE AND SUPPORT DURING RESUSCITATION 12
2.4. FAMILY MEMBERS EXPERIENCES ON QUALITY CARE AND SUPPORT DURING RESUSCITATION 16

2.5. PATIENT RELATED FACTORS' INFLUENCE ON QUALITY CARE AND SUPPORT DURING RESUSCITATION ... 17
2.6. CULTURAL INFLUENCES ON QUALITY OF CARE AND SUPPORT DURING RESUSCITATION ... 19
2.7 INSTITUTIONAL FACTORS INFLUENCING CARE AND SUPPORT DURING RESUSCITATION ... 20
2.8 SUMMARY AND THE RESEARCH GAP ... 21
CHAPTER THREE: METHODOLOGY ... 23
3.1 INTRODUCTION ... 23
3.2 STUDY DESIGN ... 23
3.3 STUDY AREA ... 23
3.4 STUDY POPULATION ... 24
3.5 INCLUSION AND EXCLUSION CRITERIA ... 25
3.5.1 Inclusion Criteria for Nurses ... 25
3.5.2 Inclusion Criteria for Family Members ... 25
3.5.3 Exclusion Criteria for Nurses ... 25
3.5.4 Exclusion Criteria for Family Members ... 26
3.6. STUDY VARIABLES ... 26
3.6.1: Independent Variables ... 26
3.6.2: Dependent variables ... 26
3.6.3: Confounding Variables ... 26
3.7 SAMPLING ... 27
3.7.1 Sample Size Determination ... 27
3.7.2 Sampling Technique ... 28
3.8 PRE-TESTING ... 30
3.9. DATA MANAGEMENT ... 30
3.9.1 Data Collection Tools/Instruments ... 30
3.9.2 Data Collection Process ... 31
3.9.3 Data Cleaning and Entry ... 31
3.9.4 Data Analysis and Presentation ... 32
3.9.5 Data Storage ... 32
3.10 ETHICAL CONSIDERATIONS ... 32
3.11 DISSEMINATION PLAN ... 34
CHAPTER FOUR: RESULTS ... 35

4.1 Introduction....35
4.2 Nurses' demographic information....35
4.3 Family members demographic information....38
4.4 Nurses views and experiences on quality care and support offered during resuscitation....39
4.5 Association between nurses demographic findings and their views on quality of care and support during resuscitation....41
4.6 Qualitative data analysis....43
4.6.1. Theme 1: Stress....43
4.6.2. Theme2: Inadequate/lack of care and support during resuscitation....44
4.6.3: Theme 3: Involving family members during resuscitation as part of care and support to them....48
4.6.4. Theme 4: Culture....53
4.6.5. Theme 5: Patient Related factors influencing quality care and support during resuscitation....57
4.6.6. Theme 6: Lack of support systems....62
CHAPTER FIVE: DISCUSSION....65
5.1 Overview....65
5.2 Family members and nurses experiences on Quality of Care and Support during resuscitation....65
5.2.1 Nurses' Views and Experiences on quality care and support during resuscitation....66
5.2.2. Family members views and experiences on quality care and support during resuscitation....70
5.3. The cultural factors' that influenced the quality of care and support during resuscitation among the nurses and the family members....72
5.3.1. Among the nurses....72
5.3.2 Among the family members....73
5.4 The patient related factors' influence on the quality of care and support offered to nurses and family members during resuscitation....73
5.5: Lack of institutional support in quality care and support during resuscitation....74
5.6. Strengths and Limitations to the Study....75
5.6.1: Strengths....75
5.6.2: Limitations....75
Chapter Six: Conclusion and Recommendations....77
6.1 Conclusion....77
6.2 Recommendations....78
REFERENCES....80
APPENDIX I: QUESTIONNAIRE FOR NURSES....I

APPENDIX II: IN DEPTH INTERVIEW GUIDE FOR NURSES IV
APPENDIX III: IN DEPTH INTERVIEW GUIDE FOR FAMILY MEMBERS.................................. V
APPENDIX IV: PROJECT TIME PLAN VII
APPENDIX V: STUDY BUDGET VIII
APPENDIX VI: INFORMED CONSENT FOR NURSES IX
APPENDIX VII: INFORMED CONSENT FOR NURSES XI
APPENDIX VIII: INFORMED CONSENT FOR FAMILY MEMBERS XIV
APPENDIX IX: MODEL BUILDING FOR THE QUALITY OF CARE XVIII

LIST OF FIGURES

Figure 1: Conceptual Framework 10

Figure 2: Availability of resuscitation guidelines 39

Figure 3: Availability of Debriefing guidelines 40

Figure 4: Nurses debriefed during resuscitation 46

Figure 5: Family members debriefed during resuscitation 48

Figure 6: Informing family members of an ongoing resuscitation 49

Figure 7: Family member witnessed resuscitation 52

Figure 8: Patients culture as a factor influencing care and support 55

Figure 9: Patients Religion as a factor influencing care and support 56

Figure 10: Patient related factors during resuscitation 60

Figure 11: Patients age as a factor influencing the care and support 61

LIST OF TABLES

Table 1: Target Population 25

Table 2: Sample Size 29

Table 3: Nurses' demographic data 37

Table 4: Family members' demographic information 38

Table 5 : Nurses views and experiences on quality care and support during resuscitation 41

Table 6: Association between nurses' demographic findings and their views and experiences on quality of care and support during resuscitation 42

ABBREVIATIONS OF KEY WORDS

AAA:	Aortic Abdominal Aneurysm
AKI:	Acute Kidney Injury
BScN:	Bachelor of Science in Nursing
CCU:	Critical Care Unit
CCN:	Critical Care Nurse
CPR:	Cardiopulmonary Resuscitation
DKA	Diabetic Keto Acidosis
DNR:	Do Not Resuscitate
ICU:	Intensive Care Unit
KNH:	Kenyatta National Hospital
KRCHN:	Kenya Registered Community Health Nurse
MI:	Myocardial Infarction
MScN:	Masters of Science in Nursing
PTSD:	Post Traumatic Stress Syndrome
RTA:	Road Traffic Accident
SPSS:	Statistical Package for Social Sciences
TBI:	Traumatic Brain Injury
WHO:	World Health Organization

OPERATIONAL DEFINITIONS

Care and Support – this entails the care given to the family member from the time they witness their patient being resuscitated as well as having a counseling session for psychological support after resuscitation both for the nurse and the family member.

Critically ill Patient: A patient suffering from life threatening or a potentially life – threatening condition that is deemed recoverable.

Experiences: These are the views that the family member or the nurse may have in regard to care and support during resuscitation

Factor: in this study this refers to cultural and patient related factors

Family member: This is the next of kin of the patient being resuscitated.

Nurse: A qualified health professional that has completed the prescribed nursing training and with a valid practicing license currently working in Critical Care Unit

Postcode stress: level of psychological stress/ stress activation of coping behaviors

Resuscitation: A life saving process that involves delivering chest compressions and ventilation done during a cardiopulmonary arrest situation. It begins from when the resuscitation is initiated up to when the counseling is done to the family members and the team that is involved are debriefed.

EXECUTIVE SUMMARY

Introduction: Resuscitation is a very common practice in the critical care. The experiences that come as a result can bring about emotional and psychological stress to both nurses and family members. In most instances, adequate care and support is not offered to the nurses and the family members. **Study Objective:** The main study objective was to investigate the views, experiences as well as factors that influence the quality of care and support given to nurses and family members during resuscitation in Critical Care Unit at KNH. **Methodology**: The study was conducted in Kenyatta National Hospital whereby a mixed study design was used. The study recruited 52nurses working in the main CCU and 10 family members whose relatives had been resuscitated. Stratification and simple random sampling technique were used to sample the nurses for the quantitative data. A purposive sampling technique was applied for the qualitative data to interview the 10 family members and 15 nurses up until saturation point was achieved. **Data Collection and analysis:** Qualitative data was collected using interviews as per the objectives and then analyzed using NVivo software 11 where themes and sub- themes that constituted narrative based on research objectives were generated. Quantitative data was collected using a structured questionnaire and analyzed using Statistical Package for Social Scientists software Version 23.0. It was summarized in form of tables, graphs and pie charts. **Results**: The study results were that majority 55.8%, (n=29) of the nurses do resuscitation daily. Most of the nurses 86.5%, (n=45) agreed that resuscitation caused excessive workloads and increases nurses stress levels. On whether adequate care and support was offered during resuscitation, only 7.7% (n=4) agreed that they receive care and support in form of debriefing with only 21% (n=11) acknowledging that debriefing guidelines are available. Inferential statistics were used to show the relationship between nurses' demographic data and the care and support during resuscitation. There was a significant relationship between nurses level of education ($p<0.016$) nurses cadre ($p<0.03$) and resuscitation training ($p<0.042$) with the quality of care and support during resuscitation. Logistic multiple regression was used which further identified statistical significance between nurses gender[r=0.34; 95% CI 0.020-0.358; p-value=0.029] and nurses years of experience [r=0.34; 95% CI -0.448—0.055; p-value=0.013] with their experiences on quality of care and support during resuscitation. Several themes emerged from the interviews which included stress, lack of adequate care and support among others. Several patient related factors that would influence care and support during resuscitation including patient's age, diagnosis/prognosis emerged from the interviews. Most family members interviewed expressed that care and support was not given to them during the resuscitation. **Conclusion**: There were several gaps that emerged in the study. Most nurses and family members were not given adequate care and support (debrief) during resuscitation and no protocols existed on the same. **Recommendations**: Nurses and family members need regular care and support (debriefing) during resuscitation. The researcher recommended that the Critical Care Unit and the institution develop protocols, guidelines and a policy on how nurses and family members are supported and cared for during resuscitation.

CHAPTER ONE: INTRODUCTION

1.1 BACKGROUND OF THE STUDY

Resuscitation is a common practice, especially among those patients in critical care unit (CCU). Despite the challenges, resuscitation improves the prognoses, reduces CCU mortality rates, and lengthens the patient's life (Porter *et al.,* 2011). Critical Care Nurses form the backbone of the staff in the CCU and will mostly participate or observe life saving procedures such as resuscitation which can alter their ability to handle negative emotion. Studies show that this can lead to significant decline in their psychological wellbeing (McMeekin D. *et al*., 2017). In a study by Aldawood (2010), resuscitation results in 29 – 53% of the patients' survival making a significant improvement. In a different study done in the US by McMeekin D. *et al*., (2017) estimated that between 40% and 80% of resuscitation attempts in the CCU resulted in immediate or imminent death of a patient within twenty four hours. Participation in both successful and unsuccessful resuscitation according to Drotske &Villiers (2007) cardiopulmonary resuscitation is one of the most stressful events that a nurse has to deal with. The nurses' emotional states, during resuscitation, more often than not go unnoticed. No one remembers that they too get emotionally affected during these widespread resuscitation events in the CCU.

Similarly during resuscitation, poor outcomes for example the demise of a family member is disastrous for the relatives and may end up with severe and long- term lasting impacts on their psychological health and well-being. The global mortality rate post resuscitation according to Gershengorn *et al., (*2012) is currently at 19 – 43%. Preventing cardiac arrest wherever possible is very important, but it is also important to provide respectful care and support to families when their member dies or ends up with poor prognosis post resuscitation and the nurses who are involved in the resuscitation. Research on family's experiences during resuscitation in the

developed countries like the US as indicated by Giles *et al.,* (2017) showed that they received variable quality of care during resuscitation. Family members, who get inadequate emotional support and care after the loss of their loved one according to Drotske& Villiers (2007), may experience long periods of recovery, prolonged grief and high risk of mental health problems. Therefore psychological care and emotional support is of great importance to promote recovery during resuscitation.

Since its introduction in the 1980s, family presence during resuscitation has demonstrated evidence of important benefits and serves as part of the psychological care and support offered to them; yet despite growing support from the public and endorsement from professional groups, family presence is practiced inconsistently and rationales for poor uptake are unclear(Giles *et al.*, 2016).It is paramount to increase the awareness of the important benefits of family presence during resuscitation and the implementation of clinical protocols are recommended as an important starting point to address current inconsistencies and variations in practice. These measures as shown by Giles *et al.,* (2016) would ensure that in future, practice will be guided by evidence and standards for health consumer benefits and welfare rather than personal values. Therefore policies and protocols should be put into place to allow family witnessed resuscitations.

1.2 PROBLEM STATEMENT

Resuscitation is a global health care practice with profound guidelines on how to achieve quality outcome for the patients. Resuscitation can cause emotional and psychological turmoil to the family members and the team involved. Because critical care nurses encounter cumulative

exposures to poor patient outcomes during resuscitation, psychological trauma always follows (McMeekin D. *et al*., 2017). A study done in the US revealed that nurses who participate in uneventful resuscitations develop a heightened level of stress referred to as postcode stress (McMeekin D. *et al*., 2017). They also develop coping behaviors and symptoms of Post Traumatic Stress Disorder (PTSD).From global perspectives, studies have emphasized on the vitality of resuscitation, reflective nursing, and adoption of best practices in resuscitation (Olajumoke *et al.,* 2012). Most of the literature in the developed countries agree there is need for progressive improvement in resuscitation practices, to include the care and support given to the family members and nurses in CCU. These challenges cannot be understood, unless after exploring the views and experiences of key stakeholders such as nurses and family members (Giles *et al.,* 2016).However, documented evidence on resuscitation has majored on family members' involvement during resuscitation, team training needs, and quality resuscitation practices. There is hardly any evidence on family members and nurses' experiences on care and support during resuscitation situations. This gap is also evidenced on studies conducted in Africa. Studies such as Disu *et a.,l* (2015); Okonta &Okoh (2014) have touched on experiences in terms of reflective practice and on what should be improved in future and none on experiences of the family members on care and support offered during resuscitation. No study has been done locally to address this disparity in our national and referral hospital despite its importance hence; this research aims at bridging the gap by assessing the experiences of nurses and family members during resuscitation in Kenyatta National Hospital (KNH), CCU.

1.3 JUSTIFICATION OF THE STUDY

Having worked in KNH, critical care units, especially main CCU, the researcher noted with great concern there is little effort from the stakeholders on assessing the experiences of the nurses and family members on care and support offered to them during resuscitation. In fact, despite credible evidence advocating for involvement of family members during resuscitation and psychological counseling to the resuscitation team Hassankhani *et al.,* (2017), this is not practiced in KNH CCU. Furthermore, due to factors such as limited nursing workforce, organizational culture, and probably professional's behavior, the nurses rarely receive support to grief unsuccessful resuscitation. In an ideal ICU setup the family members and nurses should be debriefed by a qualified clinical psychologist who could be a nurse or doctor with advanced education in clinical psychology. Care and support offered to family members should be a continuous process during and after the resuscitation. For the nurses, care and support should be included in the post arrest care which is a continuation of resuscitation process (American Heart Association, 2012). Staff debriefing has been associated with higher staff satisfaction and reduced stress hence improving future performance (Edelson D *et al*., 2015) Unlike in developed countries where those overwhelmed by resuscitation outcome are advised and recommended for psychological counseling, the KNH practice leaves the nurses to manage the experiences on their own. In most instances, after resuscitation, people go back to their usual duties with the assumption that resuscitation is like any other critical care procedure. In most instances nurses are not taken through counseling and debriefing after the whole process is over. Majority will even shy away from breaking the news to the family members with the fear of the emotional breakdown that follows. The family members on the other hand will feel left out and detached because no care and support was offered during the resuscitation. Assessing the experiences of

both nurses and family members of patients in CCU will be significant towards determining what should be improved and the factors that should be revised to enhance patient and stakeholders outcomes.

1.4 RESEARCH OBJECTIVES

This study was guided by the following research objectives; broad and specific objectives.

1.4.1 The Broad Objective

To investigate the family members and nurses views, experiences as well as factors influencing the quality of care and support during resuscitation in CCU-KNH.

1.4.2 The Specific Objectives

a. To assess the nurses' views and experiences on quality of care and support during resuscitation in CCU-KNH.

b. To assess the family members' views and experiences on quality of care and support during resuscitation in CCU-KNH.

c. To identify the cultural factors' influence on the quality of care and support during resuscitation among nurses and family members in CCU- KNH.

d. To identify the patient related factors' influence on the quality of care and support during resuscitation among nurses and family members in CCU- KNH.

1.5 RESEARCH HYPOTHESIS

The following was the null hypothesis for the quantitative data.

1) There is no significant relationship between the nurses' demographic data (age, level of education and cadre) with the quality of care and support offered to the nurses during resuscitation.

1.6 RESEARCH QUESTIONS

a. What are the nurses' views and experiences on quality of care and support offered to them during resuscitation at KNH-CCU?

b. What are the family members' views and experiences on quality of care and support offered to them during resuscitation at KNH-CCU?

c. How do the cultural factors' influence on the quality of care and support offered during resuscitation among nurses and family members at KNH-CCU?

d. How does the patient related factors' influence on the quality of care and support offered during resuscitation among nurses and family members at KNH-CCU?

1.7 EXPECTED STUDY BENEFITS

In undertaking a study assessing the experiences of the family members and nurses, this study has profound significances to the nurses, the nursing profession, family members, the institution and the scholars. Through understanding their experiences during resuscitation, research will help in improving the care and support given to nurses hence improving the quality of care given to patients in general. It will also improve the care that family members whose relatives have been resuscitated receive. Given that the focus of the research is a critical care area and aspect towards effective health care delivery to the critically ill patients, the results of this study may be used towards policy and protocol formulation in relation to advocating and enforcing the best practice on process and practice of resuscitation. It will also add on to the existing body of literature on experiences during resuscitation by updating and adding new perspectives based on the primary findings that will be reported by the researcher. Finally, the study may elicit the need and interests towards undertaking future studies along the same line with the objectives of furthering the knowledge on family members' involvement during resuscitation. Such further

research studies are relevant and important for improving the current practices or endorsing the current practices with an end goal of improving the quality of holistic care.

1.8 STUDY ASSUMPTIONS

The study assumptions included;

a) The respondents to be recruited would offer sincere and honest responses.

b) The respondent would have a sincere interest in making their decision to take part in the study

c) Rigor and evidence saturation would be achieved for this study

d) All the nurses working in the CCU participated in a resuscitation during their work period in the CCU.

1.9. THEORETICAL AND CONCEPTUAL FRAMEWORK

1.9.1 Theoretical Framework: Two Factor Theory

In assessing the experiences of individuals regarding a service such as nursing services, often people offer opinions based on their satisfaction level. The degree of satisfaction regarding the service is highly probably to be influenced by a number of factors that the person may put into consideration (Somense & Duran, 2014). According to Bohm, (2012) the Two Factor Theory also referred to as Herzberg's Motivation-Hygiene Theory, there are two major set of factors that influence the nature of experiences reported regarding a service. The first set of factors according to Bohm, (2012) are the motivators, which give positive satisfaction arising from internal conditions associated with the aspect being analyzed

The second set of factors includes the hygiene factors whose presence is not expected to influence satisfaction, but their absence results in dissatisfaction Bohm, (2012). This theory has a very close relationship with this study given those family members and nurses may demonstrate varying experiences or views regarding care and support based on the influencing motivation and hygiene factors (Somense & Duran, 2014). From the insights of the Two Factor Theory, major variables that may have considerable impacts of experiences on resuscitation include; demographic factors, cultural factors, institutional factors, and patient factors.

Demographic factors, in this case, entail attributes such as age, gender, education level, and social class. According to Vamos *et al.,* (2009), socio-demographic factors are critical in shaping the perception and interpretation of life experiences. Due to the influence of nature and nurture, the socio-demographic factor can result in two people offering different experiences leading to

the same event. Cultural factors of consideration, in this case, include traditional beliefs, religious practices, and myths. Given that the study setting is a cosmopolitan environment with high chances of people being diverse cultural background, the variable cannot be ignored and it impacts on participants experiences. On institutional factors, highlight that some policies, organization of an institution, and availability of necessary resources to undertake a given task can influence the quality of satisfaction expressed by those evaluating the practice (Lambrou *et al.,* 2010). The Two Factor Theory identifies policies, working conditions, and job security as some of the institutional factors whose absence can result in dissatisfaction with services offered. The patient factors that will be considered include comorbidity, the degree of closeness to family or health professionals, how acute the condition was, and the projected prognosis. All these factors have high possibilities of influencing the reported experiences on care and support during resuscitation.

1.9.2: Conceptual Framework

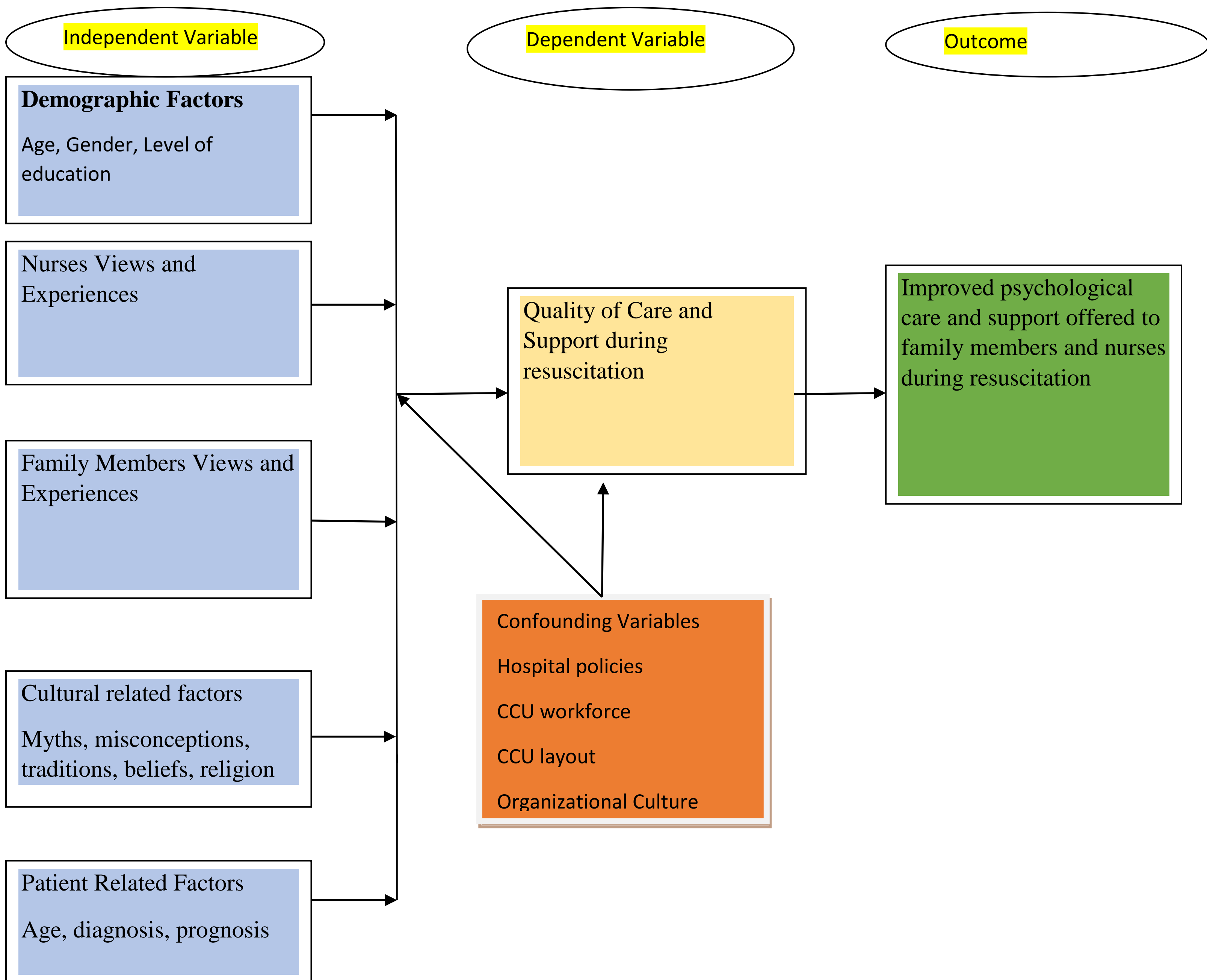

Figure 1: Conceptual Framework

CHAPTER TWO: LITERATURE REVIEW

2.1 OVERVIEW OF THE LITERATURE REVIEW

The primary purpose of the literature review was to present evidence and findings from studies in the past or other literature with similar concepts and content related to the study under evaluation. Exploring the existing literature is critical towards fine-tuning the study topic and reducing redundancies in research (Creswell, 2013). This review was organized thematic to enhance readability, comprehension, and flow of content explored in this study. The rest of the themes were also relevant themes that have a direct contribution to the study topic.

2.2. DEMOGRAPHIC FACTORS INFLUENCE ON QUALITY OF CARE AND SUPPORT DURING RESUSCITATION

Demographic factors such as age and gender have a lot of influence on the quality care and support during resuscitation. In a study by Ersoy *et al., (2009)*, conducted in Turkey assessing family members' attitudes on witnessing resuscitation, demographic factors such as age, gender, family attachment, education level, religion and social class were found to be critical in shaping the family members experiences. In terms of gender, female family members were observed to be more psychologically affected when present during resuscitation. Close family members such as parents witnessing the resuscitation of their children or children witnessing resuscitation of their parents expressed deep empathy during the process of resuscitation as opposed to non-close family members (Ersoy *et al,.* 2009).In a systematic review study by Rittenmeyer & Huffman, (2009), demographic factors were considered influential in decision making regarding whether to be present or absent during resuscitation process. This observation is also fronted by Mutinda &Wagoro, (2017), in their study assessing demographic factors affecting the experience of staff working in critical care unit. In terms of education level family member health literacy was considered a factor improving the attitude, support, and cooperation exhibited during

resuscitation in a study by Leske *et al.,* (2013). However, Chapman *et al.,* (2012), various experiences from nurses associated high level of education with increasing risk of legal cases when family members were present during resuscitation process. Therefore demographic factors have a large influence on experiences on care and support during resuscitation

2.3 NURSES VIEWS AND EXPERIENCES ON QUALITY OF CARE AND SUPPORT DURING RESUSCITATION

Nurses working in Critical Care Units are at a high risk of developing (PTSD) as a result of unsuccessful resuscitation which is not followed with care and support in the form of a debriefing session. Critical Care Nurses are at the fore front of patient care and are the primary care providers during a resuscitation process (McMeekin D. *et al*., (2017). A study done in the UK by Isaacs E. (2015), on various views and experiences from the nurses, loss of a patient can take toll on the team resuscitating the patient. Overtime, they develop emotional defense mechanisms to reduce discomfort in addition to developing cynicism, numbness and professional dissatisfaction if care and support is not offered to them. While little evidence is available to support the effectiveness of debriefing after emotionally disturbing events like resuscitation, Isaacs E. (2015), expresses that there is increasing appreciation for immediate or delayed care and support to the nurses to reduce the effects of poor outcomes during resuscitation among them.

A study conducted by Connelly, (2014), noted that many nurses grieve following the death of a patient; however, their grief is not often acknowledged or discussed. Also, a gap exists on how nurses are prepared for this experience in nursing schools and in orientations to health care organizations.

Due to advanced heath care, the care and support offered to the healthcare providers in western countries such as the US would not be equated to what happens in the developing countries like Kenya. A study done in the US by Isaacs E. (2015), expressed that a survey conducted in 2004, despite a hospital having recorded 176,000 deaths in an acute care department in the US, only one thirds of the staffs surveyed reported having received emotional care. The issue of nurses lacking emotional support during resuscitation and post resuscitation process was also reported by Isaacs & Mash, (2004). Health professionals included in the Isaacs & Mash, (2004), study argued that they felt left out to cope with the emotional and psychological trauma on their own without any facility for supportive care. The author argued that the impact of failed resuscitation to nurses and physicians especially the inexperienced staff can gravely affect the confidence of the involved nurses in future resuscitations. In agreement, Giles *et al., (*2016), observed that in most cases, the focus on emotional support is directed to family members only, leaving the staff to cope with the trauma on their own. In another study, Hassankhani *et al.,* (2017) argues that staffs who develop strong attachment with their patients, which is human, are hit by negative outcomes of resuscitation in same magnitude with the relatives. Nurses too are human beings and get affected emotionally but it is quite evident that most of the time their emotional and psychological concerns are in most cases never addressed.

Apart from providing professional care to the patients, nurses are also charged with the role of offering emotional support to the family members. From the previous experiences encountered, nurses have the biggest say on whether family members should be allowed in or not during resuscitation. In another study by Ferrara *et al.,* (2016)**,** some of the nurses views through their previous experiences expressed that having family members present during resuscitation was

considered a distraction, which could compromise their concentration during resuscitation. Nurses accounted that the relevance of family members' presence during resuscitation process was to be determined by the behaviour of the family members (Tudor *et al.,* 2014).Noting that the hearing sense is the last to die, nurses expressed from their experiences that family members who vent negatively, argue with the team doing the resuscitation or bring about commotion during resuscitation may compromise patient's recovery psyche. On the other hand according to Tudor *et al.,* (2014), some of the nurses' views on having supportive family members during resuscitation was associated with increased survival rates during resuscitation. In a study by Isaacs & Mash, (2004), one of the nurses' views through her experiences argued that family members who are included during the resuscitation should be briefed adequately on the steps and processes to be undertaken. This would help them offer adequate and appropriate care and support to the family members. Otherwise, the medical professionals felt that from their experiences, uninformed family members presence during the resuscitation may complicate the process. From the nurses experiences, mixed reactions exists on whether to allow family members during resuscitation or not with both sides supporting why they should be allowed or not allowed during resuscitation.

In a study by Tudor *et al.,* (2014), which assessed the nurses experiences on family witnessed resuscitation process argues that some considered privacy and confidentiality when undertaking the resuscitation process as crucial in reinforcing their confidence. Resuscitation like any other medical process should be handled by the staffs only and the findings or outcomes presented to the family members. However, some argued that collaboration with family member can allay the fears and perceptions of any wrong doing from the staffs. Such fears and negative perceptions have in the past been propagated to starting litigations on incompetence or negligence (Tudor *et*

al., 2014). There is strong evidence suggesting that nurses fail to allow family members during resuscitation as a result of fear of what may happen based on previous experiences encountered. There are situations that nurses' face during resuscitation that would bring about dilemma that would affect the care and support offered to the family members and even to the patient for instance when it comes to end of life decisions. The do not resuscitate decision by patients or relatives was reported by health professionals to put them at ethical-dilemma (Dzeng *et al.,* 2015). Some nurses considered the decision do-not-resuscitate as a major reason putting them at loggerhead with family members. In cases where the relatives are introducing or emphasizing on do not resuscitate policy, the health care providers were at loss to balance between autonomy and beneficence. In a study by Freeman *et al., (*2014), assessing the local trust on the policy do-not-resuscitate, health professionals considered the importance of validating the decision before implementing it. However, the need to validate the decision resulted in time wasting, time that one cannot afford to misuse during resuscitation.

Several studies conducted attributed the lack of quality care and support during resuscitation as a result of inadequate training to the nurse hence they are not aware that they need to be debriefed in the process. A study done by Powers, (2014), considered further training as a critical approach for improving the knowledge of debriefing as well as improving outcome of resuscitation hence reducing emotional stresses to the medical professionals. Nurses assessed in the study by Powers, (2014), argued that training on resuscitation and the associated practices can help the nurses approach the experiences in an informed and competent strategy hence reducing the stressful events. It is quite evident that nurses can get affected emotionally during the resuscitation process.

2.4. FAMILY MEMBERS EXPERIENCES ON QUALITY CARE AND SUPPORT DURING RESUSCITATION

Family members play a critical role in patients care. Their experiences on quality care and support during resuscitation cannot be ignored. Nurses are not only entrusted with the care of the patient but also the care of the family members during resuscitation (Isaac E. 2015). In the same survey, he found that when a patient died, 70% of the family members received adequate care and support while the other 30% complained that nurses were cold, guilty, nervous and evasive while providing care and support to the family members. A study by Isaacs & Mash, (2004), assessed the experiences of family members during unexpected death of a patient undergoing resuscitation. In their recounting about the resuscitation experiences, most of the family members held that there was a lot of time wasting before commencing the resuscitation. Another resuscitation experience that was shared involved argument between the relatives and the staff, which also delayed the time to start resuscitation. In the same study, the experiences of the family members during the resuscitation period indicated that no one came to comfort them during the period of resuscitation. This was interpreted to mean there was no adequate support for the family members during resuscitation process. Other family members present during the resuscitation complained that the duration seemed so long during the resuscitation considering that they were hearing and seeing everything happening, but the progress was taking too long. The same views were expressed by Masa' Deh, *et al.,* (2014), who argued that family members expressed feelings of being overwhelmed with the process, especially when they were not certain of what to expect. Hence family members should always be given a chance to express their views based on the experiences they encounter during resuscitation.

If adequate care and support is not offered to the family members during resuscitation, emotional breakdown is likely to follow. In their study, Chapman *et al.,* (2012), the nurses and doctors reported that some of the family members expressed strong emotional breakdown after witnessing the unsuccessful resuscitation. The experiences reported by the family members promoted the idea to have the relatives blocked from accessing the resuscitation room. These expressions were also reported by Isaacs & Mash, (2004), with some family members preferring to be exempted during the process of resuscitation and only to be given the outcome of the resuscitation. A study carried out by Bradley *et al., (*2017), found out that family members commended their presence during resuscitation. The relatives quitted their patients that have gone through the resuscitation process successfully as having listened to the encouragement of their relatives to fight and survive. In concurrence with the impact of family members' positive comments and support during resuscitation in determining the outcome of the process, Twibell *et al.,* (2015), argued that the presence of family members showed empathy and love. These two attributes were hypothesized with positive support and motivation for the patient leading to positive outcomes during resuscitation.

From their experiences, Isaac E. (2015) expressed that an unhealthy grief response may lead to increased morbidity and mortality among family members

2.5. PATIENT RELATED FACTORS' INFLUENCE ON QUALITY CARE AND SUPPORT DURING RESUSCITATION

There are various patient related factors that influence the quality of care and support during resuscitation. In a study involving 725 patients by Xue *et al.,* (2013), which focused on assessing factors that influence the care and support after poor resuscitation outcome, patient factors such as diagnosis, presence of other existing illnesses, age of the patient, and severity of the condition

were found to have significant influence. They further added that the recovery and survival of the patient post resuscitation varied based on these factors with extreme ages, high comorbid, and those already severely ill recording poor prognosis. The resuscitation team, mostly comprising of nurses and physicians were more likely to accept failed resuscitation when the odds were against possible survival. Similarly, the relatives with severely ill patient, elderly, or arriving late in the hospital for resuscitation were more likely to express satisfaction with the efforts.

Patient's characteristics eg, comorbids also have a big influence on care and support offered during resuscitation. In furthering this argument on the impact of patient factors on resuscitation, Skrifvars *et al.,* (2007), also assessed whether patient characteristics affected the long-term outcome of resuscitation for cardiac arrest patients. Skrifvars *et al.,* (2007), identified that age and health condition such as renal disease, cardiac failure, thoracic surgery, and hospital stay affected the outcome of resuscitation. This study highlighted that a feeling of disappointment among the resuscitation team was more expected when the patient characteristics showed strong indications of recovery.

There are normally mixed reactions when it comes to whether to allow family members during resuscitation or not. In an opinion discussion paper by Fritz (2017), it was nurses expressed strong opinions to have the focus of care be patient not the decision of whether or not to involve the relatives in the resuscitation process. In his study (Fritz, 2017), argues that shifting the focus to resuscitation team may compromise the assessment of the patient factors and the approach that the resuscitation should be given. In another study by Filho *et al., (*2015), the factors affecting the cardiopulmonary resuscitation (CPR) quality for patients who get a cardiac arrest, patient factors were among the point indicated.

Family members who complained on cases of negligence cited factors such as "*the patient was alive,*""*you delayed despite noting his critical condition*" and "*we were obstructed from witnessing the process*" (Etheridge & Gatland, 2015). The degree of attachment between the patient and the relative or the patient and the health care professionals also influences the respective party experiences and opinions regarding care and support (Hansen *et al.,* 2015). The attachment is often noted when the resuscitation team fails to agree the timing for terminating the resuscitation.

2.6. CULTURAL INFLUENCES ON QUALITY OF CARE AND SUPPORT DURING RESUSCITATION

Culture is a major factor towards influencing the perceptions on health care delivery and healthcare services uptake. Culture shapes the individuals beliefs about health, illness, death, and recovery processes. Zhang, (2015), explored the impact of culture on cardiopulmonary resuscitation. The findings indicated that cultural practices such as the use of herbal medicine, the beliefs on traditional gods affected the perception and attitude on resuscitation. According to Bradley *et al.,* (2017), culture also affects the manner in which experiences in health care are shared or reported. Therefore we cannot underestimate culture during healthcare delivery situations such as during resuscitation.

We live in a culturally diversified region. In their study, Tobi &Amadasun, (2015), emphasized that cultural influences on experiences of resuscitation are more prevalent in the communities where traditional practices are still upheld in the modern society. Most of these communities are found in the developing countries (Twibell *et al.,* 2015). In a study conducted by Powers, (2014),

different religious beliefs influence the perceptions towards resuscitation. Among the Muslim communities, resuscitation is lowly regarded as compared to most Christians. Based on the preconception ideations and perceptions on resuscitation and its importance, the family members and the health care professionals will demonstrate. Cultural influences are also expected to be at play on influencing the degree of care and support the family members may offer. Some cultures consider resuscitation a practice of going contrary to the religious doctrines and cultural understandings.

2.7 INSTITUTIONAL FACTORS INFLUENCING CARE AND SUPPORT DURING RESUSCITATION

Institutional factors also play a big role on care and support during resuscitation. Factors such as policies, guidelines and resuscitation protocol can influence the quality of care and support, during resuscitation for critical care patients (Berger & Polivka, 2015). In a study by McMeekin D. *et al*., (2017) nurses who had institutional debriefing guidelines and support available had significantly reduced postcode stress than CCNs who lacked support. Updating the resuscitation team of the current guidelines is likely to promote the quality of care and support during resuscitation. According to Advanced Trauma Life Support guidelines (2016), family members and nurses should be debriefed regardless of the resuscitation outcomes. According to Dzeng *et al.,* (2015), debriefing policies and protocols should be locally acceptable and meeting the international standards, otherwise, unavailability can severely limit motivation of the resuscitation team or dull the resuscitation environment. A lot of bureaucracies post resuscitation especially as a result of lack of proper debriefing guidelines or lack of a leading person coordinating debriefing activities will affect flow of processes after resuscitation resulting in confusion which will impair the quality of the process even in future (Hunziker *et al.,* 2011). For

proper care and support to be given to both nurses and family members; the institution has to provide adequate support through formulation of guidelines, policies and standards.

Lack of debriefing guidelines influence the care and support offered to the nurses and the family members. On the same footing, a study by Dzeng *et al.,* (2015), identified factors such as resuscitation setting, do-not-resuscitate policies, and the organizational culture as significant towards influencing not only on the practice of resuscitation but the experiences for the staff and for the family members. As earlier mentioned care and support to the family members can be affected by ethical decisions. An institution should have a clear guide on how to validate the do-not-resuscitate decisions, especially if such decisions as offered by another party, not the patient inform of do not resuscitate label. Such clarity, according to Freeman *et al.,* (2014), would go a long way towards reducing confusion and dilemma among the resuscitation team members.

2.8 SUMMARY AND THE RESEARCH GAP

The area of resuscitation has been broadly evaluated through studies conducted globally. However, Flitz (2017), has noted, the focus has been more on the decisions regarding resuscitation as opposed to assessing care and support to the involved party during the resuscitation process. Furthermore, most of the studies conducted as per the existing literature have considered the perceptions of patients, relatives, or health care professionals in isolation without assessing the common ground between these stakeholders in the resuscitation process in terms of the care and support they receive during resuscitation. There is a notable gap in the literature on evidence and data regarding family members' and nurses experiences on care and support during resuscitation process in Kenya, and precisely in Kenyatta National Hospital. It is

this gap that the purpose of the current study is crafted with the aim of filling the void. Assessing their views and experiences on care and support during resuscitation has a large scale potential of not only contributing to the body of literature, but can also inform of feasibility of existing policies and what can be improved to help in improving the practice of resuscitation.

CHAPTER THREE: METHODOLOGY

3.1 INTRODUCTION

This chapter delineates in details the proposed methodology that was adopted by the researcher in completing the study. The main subsections discussed in this chapter include study design, area, population and sampling technique, instrument, and ethical considerations.

3.2 STUDY DESIGN

The study adopted a cross-sectional descriptive research design where both qualitative and quantitative using a semi structured questionnaire and an in-depth interview guide to achieve the research objectives. The study was descriptive because it tried to describe views and experiences using brief interviews with the study participants.

3.3 STUDY AREA

The study was done at Kenyatta National Hospital adult Critical care units. The hospital, which was founded in 1901, is the largest referral hospital in Kenya with roughly 2000 bed capacity (Office of the Auditor General, Kenya 2012). The hospital is located roughly 3.5 kilometers west of Nairobi City, the capital city of Kenya. The total space occupied by the hospital is roughly 18.5 hectares. There are seven critical care units in total and they include: the main Critical Care Unit (CCU), medical CCU, Cardiothoracic CCU, Neuro CCU, Pediatric CCU, Neonatal CCU and the Casualty CCU. The main CCU is in second floor, has a bed capacity of 21 patients and mainly admits patients (both pediatric and adult patients) with different medical, trauma and obstetric emergencies. Some of the medical emergencies admitted include Gullian Barre Syndrome (GBS), Sepsis, shock, respiratory failure, congenital hyperventilation among many

other medical problems. Some of the trauma emergencies admitted include traumatic brain injury, severe head injuries; it also admits patients post-surgery e.g. patients with brain aneurysm and Aortic Abdominal Aneurysm (AAA) post repair who need close monitoring before being discharged to the surgical wards for further care. Medical CCU is in 8th floor has a bed capacity of 6 patients and mainly admits patients with medical emergencies e.g. metabolic emergencies such as Diabetic Keto Acidosis(DKA)and Acute Kidney Injury (AKI) among others and cardiovascular emergencies such as Myocardial Infarction(MI). Neurosurgical CCU which is in fourth floor mostly admits patients post neurosurgery and any other patients requiring neurological care e.g. stroke patients. Cardiothoracic CCU, also in fourth floor mainly admits patients post cardiothoracic surgery. The casualty CCU in the Accident and Emergency department acts as a temporary CCU before a bed is available in the other CCUs for admission, pediatric and neonatal CCU is in the second floor and they mainly admit pediatric patients. The main CCUs is the one in first floor. The neurology CCU, cardiothoracic CCU and casualty are satellite CCUs. The cardiothoracic CCU and the Neurosurgical CCU are currently closed. Part of the human resource in the CCUs includes nurses of different cadres including Assistant Chief Nurse (ACN), Senior Nursing Officer (SNO), Nursing Officer 1, Nursing officer 2 and Nursing Officer 3. The total number of nurses in the main CCU is 113.

3.4 STUDY POPULATION

The study population included nurses working in the main adult critical care units and family members (who were the next of kin) whose relatives had been resuscitated and they were present during the resuscitation.

Table 1: Target Population

Nursing cadres	Number of Nurses
ACN	14
SNO	69
NO1	16
NO2	12
NO3	2
Total	113

Source: KNH Main CCU off duty rota June, 2018

3.5 INCLUSION AND EXCLUSION CRITERIA

3.5.1 Inclusion Criteria for Nurses

- Nurses working in the main CCU
- Nurses willing to participate in the study and who consented

3.5.2 Inclusion Criteria for Family Members

- Family member within the Nuclear family
- Family member who witnessed resuscitation of their loved ones
- Family member who consented to participate in the study

3.5.3 Exclusion Criteria for Nurses

- Those not willing to participate in the study

- Student nurses
- Locum nurses.

3.5.4 Exclusion Criteria for Family Members

- Those not immediate to the relative (a list of all the nuclear family members was obtained from the next of kin)
- Those not willing to participate in the study
- Those whose relatives were admitted in the CCU were resuscitated but never witnessed the resuscitation.

3.6. STUDY VARIABLES

The study had independent, dependent and confounding variables as follows:

3.6.1: Independent Variables

i. Demographic factors for example, age, level of education and cadre
ii. Nurses views and experiences
iii. Family members views and experiences
iv. Cultural related factors for example, traditional beliefs, myths and misconceptions
v. Patient related factors for example, age diagnosis and prognosis

3.6.2: Dependent variables

i. Quality care and support

3.6.3: Confounding Variables

i. Hospital policies

ii. CCU layout and organization
iii. CCU workforce
iv. Organizational Culture

3.7 SAMPLING

3.7.1 Sample Size Determination

3.7.1 a) Sample size determination for nurses

The sample size for nurses was calculated based on Fisher *et al.,* (1998) formula for estimating the minimum sample size that is best representative of the population

Sample size was determined using the following formula:-

$N=\underline{Z^2pq}$

d^2

Where:

N is the desired sample if the target population is >10,000.

Z is the standard normal deviation at the required confidence interval (1.96) which corresponds to 95% confidence interval.

P is the proportion in the target population estimated to have the characteristic being measured. If there is no reasonable estimate, 0.5 is used as it gives maximum variability in a population.

q =1-p

d is the degree of accuracy/precision expected i.e. 0.05.

$N=1.96^2$

$$N = \frac{Z^2pq}{d^2}$$

$N= \quad \underline{1.96^2(0.5)\ (0.5)}$

$$(0.05)^2$$

$$N = \frac{0.9604}{0.0025}$$

$$96.04$$

$$= 96$$

Because the target population was less than 10000, this study used the Openhein, (2003) simplified formula to calculate the desired sample size.

$$nf = \frac{N}{1+(n/N)}$$

Where:

nf= the desired sample size (when the population is less than 10,000)

n= the desired sample size (when the population is more than 10,000).

N=the estimate of the population size.

$$nf = \frac{96}{1+(96/113)}$$

$$= 51.9045$$

$$= 52$$

3.7.2 Sampling Technique

a) For nurses

The nurses were sampled using the stratified sampling technique whereby they were first stratified as per their cadre. Nursing cadres are the various classifications for nurses based on

their years of experiences and level of education. The cadres included senior nursing officer, nursing officer 1, nursing officer 2 and nursing officer 3. The researcher then made a list of all the nurses as per their cadres from the off duty rota. The nurses were then selected using simple random sampling method for the study whereby small pieces of paper labeled "yes" and "no" were distributed to the nurses and only those who had yes on their paper were allowed to participate in the study. For the qualitative component of the study nurses were selected purposively.

Table 2: Sample Size

Nursing cadres	Number of Nurses	Nurses to be Interviewed
ACN	14	6
SNO	69	32
NO1	16	7
NO2	12	6
NO3	2	1
Total	113	52

Source: KNH Main CCU off duty rota June, 2018

b) For the family members

The proposed study adopted purposive sampling method for the family members, which according to Palinkas *et al.,* 2015, is one of the non-probability sampling techniques also referred to as judgmental or selective sampling approach. This sampling technique relies on the researcher's conviction to include individuals as part of the study respondents based on what

they can offer regarding the study under exploration. Palinkas *et al.,* 2015, purposeful sampling technique is popular with mixed methods and mostly qualitative studies seeking to explore a phenomenon involving information rich cases under limited resources. For this study, the family members selected for the study are those who witnessed their family members being resuscitated.

3.8 PRE-TESTING

This was done in the medical CCU, a department that includes nurses who did not participate in the study. Approximately 10% of the sample size was used for pretesting. The tool was pre-tested to assess for validity and reliability and was found to be valid and reliable. The necessary modifications were made thereafter. The interview guide was subjected to peer review and sought expert opinion for accuracy and validity.

3.9. DATA MANAGEMENT

3.9.1 Data Collection Tools/Instruments

Data collection can be done by use of questionnaires, interviews, focused group discussion, observation, or evaluating existing records among others (Bell 2014). The study instrument of choice adopted for a study is dependent on researcher's knowledge, method convenience, study approach (qualitative or quantitative), sample size, and accessibility to respondents (Creswell 2013). For this study, the researcher identified a private room (counselling room) within the CCU where she administered a questionnaire to collect quantitative data and an in-depth interview guide to capture qualitative data. This private room was used for collection of data for both nurses and family members but at different times.

3.9.2 Data Collection Process

A pre-tested semi-structured questionnaire administered by the researcher was used for quantitative data collection among 52 nurses who had been sampled. Data was collected based on the study objectives which included; views and experiences, cultural and patient related factors on quality care and support during resuscitation. In-depth interviews based on the study objectives regarding experiences on quality care and support during resuscitation was conducted among 10 family members who witnessed the resuscitation a week after the resuscitation of their family members(this was to give family members adequate time to recover and gain emotional stability). This took place in the CCU conference room. Discussions were audio-taped and the principle investigator took short notes during the discussion. Those that declined to be audio taped did not participate in the study. In addition to the nurses who had participated in the quantitative data, 15 more nurses who had been selected purposively were interviewed for the qualitative data. The participants who were selected for the in-depth interviews did not take part in the structured interview to avoid biasness. Confidentiality was maintained for information given on all data obtained as no names or personal identifications were used.

3.9.3 Data Cleaning and Entry

All data collected was secured safely throughout the study and accessed only by authorized persons so as to ensure confidentiality and to avoid loss of data. All questionnaires were inspected for completeness and accuracy before being accepted for data entry. The semi-structured questionnaire data were entered into a computer using Micro-soft excel spreadsheet. Code numbers were assigned to each questionnaire to allow for clear verification and easy

manipulation, analysis and presentation. The tape recordings were transcribed into a Microsoft office word document before being transferred into NVIVO software version 11.

3.9.4 Data Analysis and Presentation

Qualitative data that was transcribed into Microsoft office word was entered into NVivo software program version 11 then analyzed in form of main themes, subthemes and narratives. Means and standard deviations were used to describe the quantitative continuous variables like age and education level, and years of experience. The information was presented using tables and pie charts. Inferential statistics e.g. chi-square and logistical regression was used to deduce statistical significance between various variables for the quantitative data.

3.9.5 Data Storage

The collected and analyzed data was stored in a locked cabinet and remained under the researcher care. The researcher took a deliberate obligation to safeguard the data from falling into the hands of other people, who may use the data for malicious intentions. The data was retrieved during the analysis process and later kept in the same safe environment until the study was completed. Once the researcher completed the use of the raw data; it was professionally disposed to reduce unethical usage of the data.

3.10 ETHICAL CONSIDERATIONS

This describes the moral values that should be followed while undertaking the research (Bell 2014). In this case, the researcher had a layout of how the various aspects of research ethics were to be considered in the process of the study.

a) Approval was sought from the supervisors after completion of the proposal development.

b) The universal guidelines and policy regarding research work that touched on human beings requires proposal vetting and validation by a board of ethics within the jurisdiction of the study setting (Silver *et al.,* 2013). Therefore, the researcher submitted the proposal to the Kenyatta National Hospital - University of Nairobi Ethics and Research Committee for approval.

c) Once it was approved, the next step was to seek permission from the study setting by appealing and obtaining authorization from the relevant authority at KNH administration.

d) An informed consent, often a written one, affirms that the participant is aware of the proposed study, understands the risks involved, and accepts to be part of the research without any form of intimidation (Fouka &Mantzorou, 2011). With this understanding in mind, the researcher sought to affirm that respondents were requested to give an informed consent on voluntary basis without any form of coercion.

e) Participants were informed about the objectives, risks and benefits, voluntary participation, information sharing of the study and they were assured of confidentiality and respect

f) In upholding anonymity and confidentiality, the researcher used codes such as 001, 002 for quantitative data and pseudo names for qualitative data to identify the study tools instead of using respondents' personal details.

g) A commitment and declaration was made by the researcher to the participants and authorities involved that the data will only be used in the study and for the study purposes and shall not be used for personal interest or to advance any personal or malicious outcomes.

3.11 DISSEMINATION PLAN

I. The ethics and review committee received a copy of the final research dissertation

II. The completed research report was shared to the School of Nursing Sciences faculty and students during the dissertation defence and in the schools website

III. The final research dissertation was availed at the University of Nairobi libraries and online repositories for future references

IV. A manuscript was written from the study findings and submitted to a peer reviewed journal for publication.

CHAPTER FOUR: RESULTS

4.1 Introduction

This chapter presents the study results from 52 participants who responded to a questionnaire, 15 CCU nurses and 10 family members were interviewed. Quantitative data was entered into Microsoft excel spreadsheet and analyzed using SPSS version 23 to capture the specific objectives of the study. Quantitative data analysis was done using descriptive statistics and inferential statistics used to cross tabulate statistical significance. Descriptive statistics were presented using frequency tables and pie charts. The pie charts were drawn using Microsoft excel. Qualitative data was transcribed verbatim, and NVivo software 11 used to deductively analyze the data into themes and subthemes which were presented using tables and pie charts.

4.2 Nurses' demographic information

The study sought to determine the socio demographic data of the respondents. Regarding gender the majority of the respondents were female (67.3%, n = 35). The respondents who were aged between 30-39 years were the majority (53.8%, n = 28) whereas the least being those aged between 20-29 years 3.8% (n = 2). The estimated mean for the age was 39 with a median of 37 and a mode of 36.7. On the marital status, the majority of the respondents were married (82.7%, n = 43), the single status 15.4% (n = 8) and one participant reported to have divorced.

On religion, most of the participants (46.2%, n = 24) were Protestants with the least (3.8%, n=2) having no religion. Most of the participants were diploma holders (69.2%, n = 36) with 28.8% (n = 15) having degree in Nursing. In terms of cadres, majority (55.8%, n = 29) of the participants were Senior Nursing Officers. The years of experience among the participants in Intensive Care Unit ranged between 3 years to 32 years with a slight majority of participants (51.9%, n = 27) had an experience of between 10 – 19 years. The mean for the years of experience was

12.95(SD+6.69), median 11.5 and the mode at 15.Most of the participants had specialized in critical care nursing (82.7%, n = 43). However, only (44.2%, n=23) had undertaken a resuscitation course within the last 2 years. Some participants who lacked training in critical care, indicated besides their basic training in Nursing, they had qualifications in other courses such as nephrology and peri-operative nursing. On the sufficiency of resuscitation training, only (42.3%, n=22) were of the opinion that they were sufficiently trained on resuscitation. These findings are summarized in table 3.

Table 3: Nurses' demographic data

Variable	Frequency	Percentage
Gender		
Male	17	32.7
Female	37	67.3
Age		
20 - 29 years	2	3.8
30 - 39 years	28	53.8
40 - 49 years	18	34.6
50 - 59 years	4	7.7
Marital status		
Single	8	15.4
Married	43	82.7
Divorced	1	1.9
Religion		
None	2	3.8
Protestants	24	46.2
Seventh Day Adventist	8	15.4
Muslims	3	5.8
Catholics	15	28.8
Level of education		
Diploma	36	69.2
Degree	15	28.8
Masters	1	1.9
Cadre		
Assistant Chief Nurse (ACN)	5	9.6
Senior Nursing Officer (SNO)	29	55.8
Nursing Officer I (NOI)	8	15.4
Nursing Officer II (NOII)	8	15.4
Nursing Officer III (NOIII)	2	3.8
Years of experience in ICU		
Below 10 years	17	32.7
10 - 19 years	27	51.9
20 years and above	8	15.4
Specialization in critical care nursing		
Yes	43	82.7
No	9	17.3
Resuscitation course undertaken in the last 2 years		
Yes	23	44.2
No	29	55.8
Sufficiency of resuscitation training to nurses		
Sufficient	22	42.3
Insufficient	30	57.7

4.3 Family members demographic information

Majority 60% (n=6) of the family members were females, Most 70% (n=7) were between the age groups of 30-39 years of age with the least 10% (n=1) being at the age group 20-29. Most 60% (n=6) were Christians with the least 10% (n=1) having no religion. Majority 50% (n=5) had the highest level of education being college level. This information was presented in table 4

Table 4: Family members' demographic information

Variable	Frequency(n)	Percentage(%)
Gender		
Male	4	40
Female	6	60
Age		
20-29	1	10
30-39	7	70
40-49	2	20
50-59	0	0
Above 60	0	0
Religion		
None	2	20
Christian	6	60
Muslims	0	0
Others	1	10
Highest level of education		
None	0	0
Primary	0	0
Secondary	4	4
College	5	5
University	1	1
Others	0	0

4.4 Nurses views and experiences on quality care and support offered during resuscitation

The views and experiences entailed responses to specific questions on resuscitation and debriefing in ICU such as frequency of resuscitation, availability of resuscitation guidelines, availability of debriefing guidelines.

The researcher sought to determine whether the participants were aware of any resuscitation guidelines used in the institution. A majority (53.8%, n = 28) of the participants indicated that they had resuscitation guidelines within the Critical Care Unit but majority were not sure of which ones were being used. Those who indicated that they had resuscitation guidelines listed several guidelines they use like ACLS protocol, ACLS-BLS protocol, ACLS/ATLS/BLS, and American Heart Association (AHA) guideline. The results are as shown in figure 2.

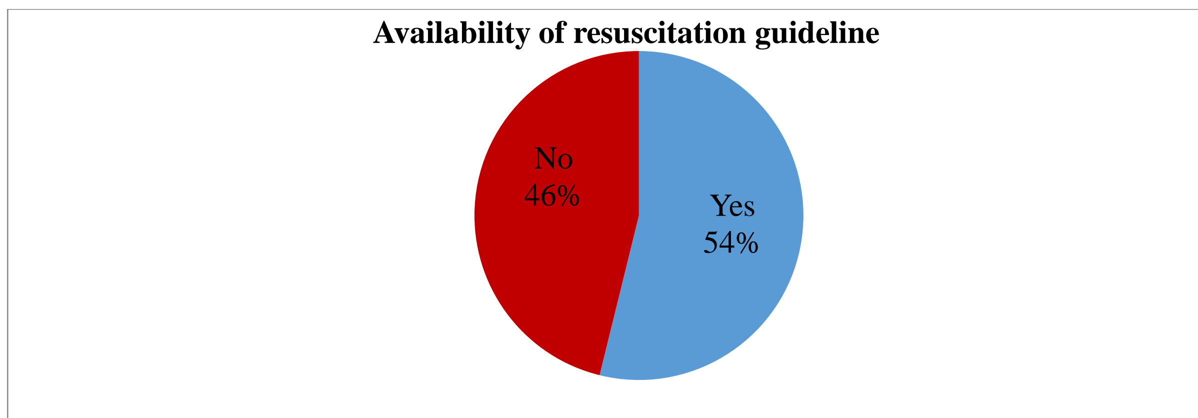

Figure 2: Availability of resuscitation guidelines

In addition the researcher sought to find out the frequency of participants involvement in resuscitation in the unit. The findings were that majority (55.8%, n = 29) of the participants do resuscitation daily with 44.2% (n = 23) responding that they resuscitate weekly. On whether there were debriefing guidelines (care and support) for use after resuscitation, only 21.2% (n =

11) of the participants acknowledged that there were debriefing guidelines available. This information was presented in figure 3.

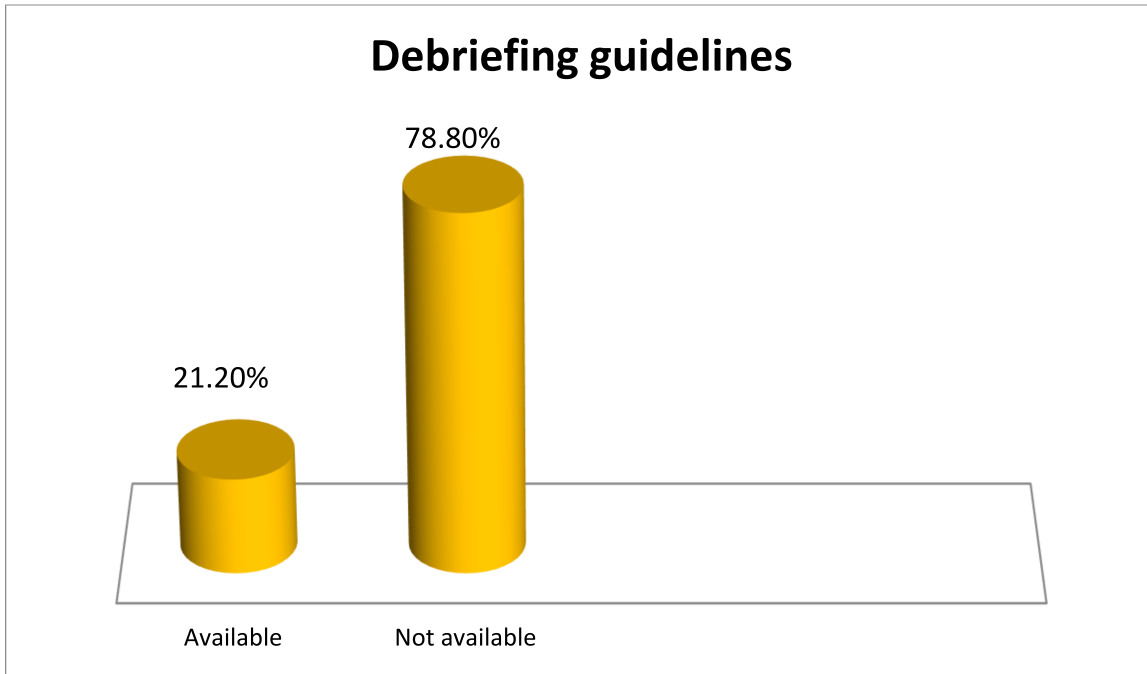

Figure 3: Availability of Debriefing guidelines

Furthermore most of the participants agreed to the following views and experiences during and after resuscitation: that resuscitation causes excessive workloads and increases nurses' stress levels (86.5%, n = 45), there was hardly adequate time for debriefing immediately after resuscitation (67.3%, n = 35) and that nurses are at a high risk of Post Traumatic Stress Disorders secondary to resuscitations (92.3%, n = 48). On the other hand, majority of the participants disagreed with the following views and experiences: that nurses are taken through debriefing immediately after resuscitation (84.6%, n = 44), there is a specific individual allocated to debrief nurses immediately after the resuscitation (92.3%, n 48) and that nurses fail to respond to resuscitations due to the stress associated with resuscitation outcomes (78.8%, n = 41). The findings are as illustrated in Table 4

Table 5 : Nurses views and experiences on quality care and support during resuscitation

View/experience	Frequency, n (%)	
	Yes	No
Resuscitation causes excessive workloads and increases nurses' stress levels	45 (86.5)	7 (13.5)
Nurses are taken through debriefing immediately after resuscitation	4(7.7)	48 (92.3)
There is a specific individual allocated to debrief nurses immediately after the resuscitation	4 (7.7)	48 (92.3)
There is hardly adequate time for debriefing immediately after resuscitation	35 (67.3)	17 (32.7)
Nurses are at a high risk of Post Traumatic Stress Disorders secondary to resuscitations	48 (92.3)	4 (7.7)
	True	**False**
Nurses fail to respond to resuscitations due to the stress associated with resuscitation outcomes	11 (11.2)	41(78.8)

4.5 Association between nurses demographic findings and their views on quality of care and support during resuscitation.

The researcher cross tabulated the demographic data and views and experiences during resuscitation to find out if there was any significant relationship. As far as level of education was concerned, there was a statistical significance between the level of education and the care and support during resuscitation at a p value of 0.016. From the primary data there was also a statistical significance between the nurses' cadre and the care and support given during resuscitation with a p value of 0.003 as well as resuscitation guidelines training sufficiency and the care and support offered during resuscitation with a p value of 0.042. These results were as presented in table 5.

Table 6: Association between nurses' demographic findings and their views and experiences on quality of care and support during resuscitation

Variable	Adequacy of debriefing time offered to the nurses		X^2 Test P-value
	Yes n(%)	No n(%)	
Level of Education a) Higher Diploma b) Degree and above	28(53.8%) 7(13.5%)	17(32.7%)	**0.016**
	Specific individual (Nurse/counselor)allocated for debriefing per shift		
	Yes n (%)	No n (%)	
Nursing Cadre a) NO1-NO111 b) SNO	3(5.8%) 1(1.9%)	48(92.3%)	**0.003**
	Nurses are taken through debriefing		
	Yes n (%)	No n (%)	
a) Sufficiently trained on resuscitation b) Not sufficiently trained on resuscitation	15(28.8%) 33(63.5%)	4(7.6%)	**0.042**

To get the factor that significantly explained the quality of care, the researcher went further and did a Logistic multiple regression using the weighted Response for the quality of care (Refer in the Appendix ix). The demographic factors explained only 34% of the variability in quality of care (R^2). Two factors were isolated, that significantly explained the quality of care among the nurses at (p-value<0.05). These were gender [r=0.34; 95% CI 0.020-0.358; p-value=0.029] and nurses years of experience [r=0.34;95% CI -0.448—0.055; p-value=0.013].

4.6 Qualitative data analysis

To determine the family members and nurses' experiences on care and support during resuscitation at Kenyatta national hospital's critical care unit, this study adopted a qualitative approach using in-depth semi structured interviews where by fifteen nurses and ten family members consented and participated in this study. All interviews were recorded on a tape recorder. The interviewees were all coded with pseudo names. Several questions were asked and responded to. NVIVO software 11 was used to analyze the qualitative data. Six themes emerged from the analysis namely, stress, inadequate/lack of care and support, involving family members, culture, patient related factors and lack of policies/guidelines. These six themes were supported by a number of sub-themes and narratives.

4.6.1. Theme 1: Stress

4.6.1. (a): Nurses responses about stress during resuscitation

All the nurses from their views and experiences indicated resuscitation to be very stressful and overwhelming; this is what some of the nurses had to say:

"I find resuscitation overwhelming because you see in ICU basically you are trying your best to see this patient walk out of the ICU……………………………………… you feel demoralized and you feel like you've wasted a lot of time doing what you can and the patient is not improving or maybe you don't get a successful resuscitation."-Nurse Dan

"In regards to the nurses and doctors, they really get stressed (long pause) everyone was up on their heels trying to resuscitate the patient and to bring the patient back to life." Nurse Jane

"For the nurses (clears throat) it is an emotional and stressful process for them during resuscitation because they are holding the patient life on their hands" -Nurse Mary

"The response during resuscitation ...... is too slow; maybe due to fear and stress of the outcome…….. you can call that you are resuscitating but you get the response is not as good." Nurse Mary

"Personally (pauses) I don't like resuscitating children, it is too stressful and emotional but I do try. It's a bit emotional with children depending on how, the interaction you've had. ……………………………..there is an emotion when you are resuscitating a very young child and an old guy."- Nurse Jane

4.6.2. (b): Family members' responses about stress.

This is what some of the family members had to say;

"we found them surrounding him (sobs) pressing his chest (long pause) my heart broke (long pause) we were really stressed……one nurse held my hand she was trying to explain what was happening and she told me his heart has stopped because his blood pressure had gone down, they were trying to press his heart so that it can come back to life"-Family member Faith.

"It was a stressful moment for us watching everything that was happening but am glad I got a chance to be with him during his last moments" Family member Lucy

"(aaah) *it was really difficult and tough for me (pauses)………I hope I will not have such an experience again."*- Family member Dan.

4.6.2. Theme2: Inadequate/lack of care and support during resuscitation

Most of the family members and nurses from their views and experiences expressed that they did not receive adequate care and support during resuscitation;

4.6.2. (a): Inadequate/lack of care and support to the nurses:

Most of the nurses; 93.3% (n=14) said they did not receive any care and support during resuscitation from their view and experiences,

"I don't feel taken care of because no one cares about you after the resuscitation. The only person cared for is the patient, I think, everyone's concentration is usually on the patient but not the care giver"- Nurse Rose

"Psychologically I am not really taken care of and even emotionally coz there are moments when we go to the nurses room and we are crying……………………. We are humans and there are moments when we break down and cry, and you just cry on your own, and leave that room and come back to continue with the work without any debriefing, without any psychological support"-Nurse Mary

"I was not offered any support. We just consult each other as colleagues after resuscitation"– Nurse Mary

"I don't know whether there is any support or care that is supposed to be done to a person after resuscitation"- Nurse Dan

"Personally, I have never attended any debriefing session because it is not offered at KNH ICU."-Nurse Judy

"Here no, elsewhere, yes. I think it is about the human resources and we only have one counselor in the ICU and basically we've see her lean towards relatives more than the staffs."- Nurse Jane

Only one of the nurses agreed to have attended to a debriefing session.

"Yes I have but not initiated by me. This one I think was here and many where I used to work in Aghakhan. In Kenyatta, yes we had one. There was a patient, a child called Eliana who had hypoventilation syndrome and was mechanically dependent. The baby had stayed in ICU for 3 years since birth and her death caused us so much pain as we were all so attached to her. That is the only debriefing session I remember we did .Apart from "Eliana!!??"I have not seen any other the debriefing.....that one went for quite a number of days......"-Nurse Joyce

This information was presented in the following pie chart:

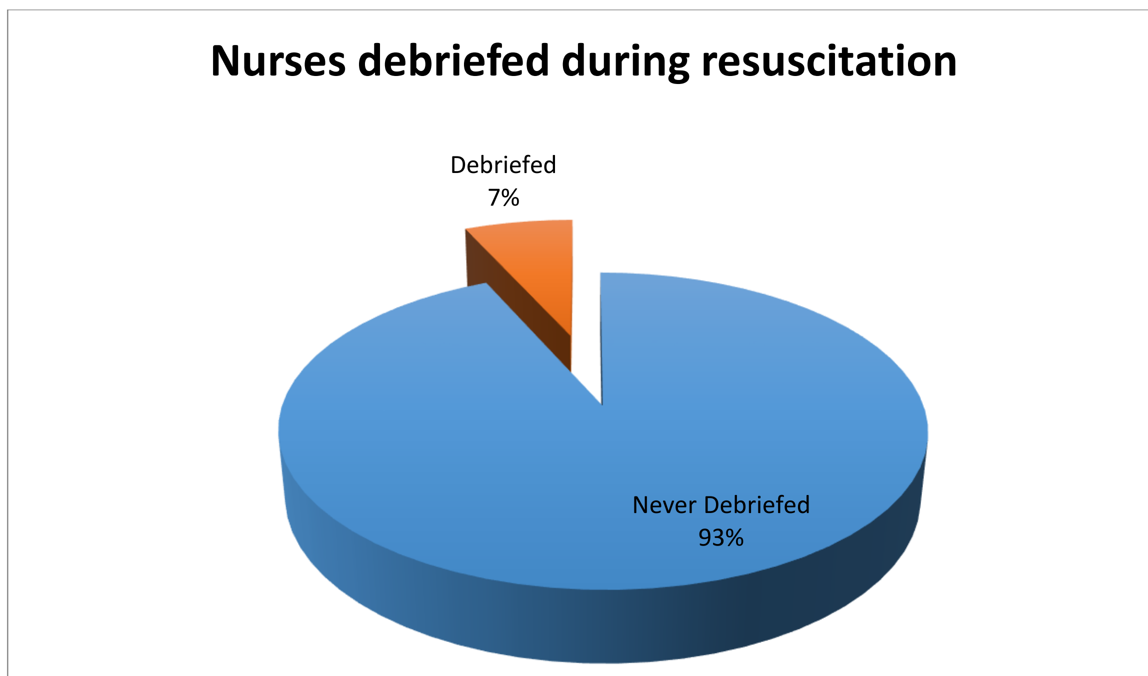

Figure 4: Nurses debriefed during resuscitation

4.6.2. (b). Lack/inadequate care and support to the family members

Most of the family members; 70% (n=7) said that they were not offered care and support during resuscitation

"I did not receive any care, in fact once I saw what was happening I couldn't contain myself I broke down one of the doctors told me to wait outside they shall get back to me."- Family member Stella

"*They just closed the curtain and told me to wait outside, that was all……"* Family Member Dan

"I was there when the whole event unfolded, one of the nurses said "tell this people to wait outside,……we will get to them later,"……. nothing else was told to me." Family member Jane

"I did not receive any care during the process I was only told to wait in a room and nothing else was told to me" Family member Dan

"Actually because we were just two of us just me and my sister we were just stranded there (clears throat) nobody was talking to us, we were left on our own."-Family member Moses

Out of the three that received care and support during resuscitation, only 10% (n=1) family member agreed that adequate care and support was offered during resuscitation and the other 20% (n=2) was not satisfied with the care given during resuscitation

"As for my part, I was happy for what they told me and was able to witness and they tried their best despite our brother being very sick and I hope that is what they do to all relatives whose relatives are going through the same."-Family member Judy

"I would want these doctors to explain to the relatives what they were doing, we were offered counseling but we felt it was not enough."- Family member Samson

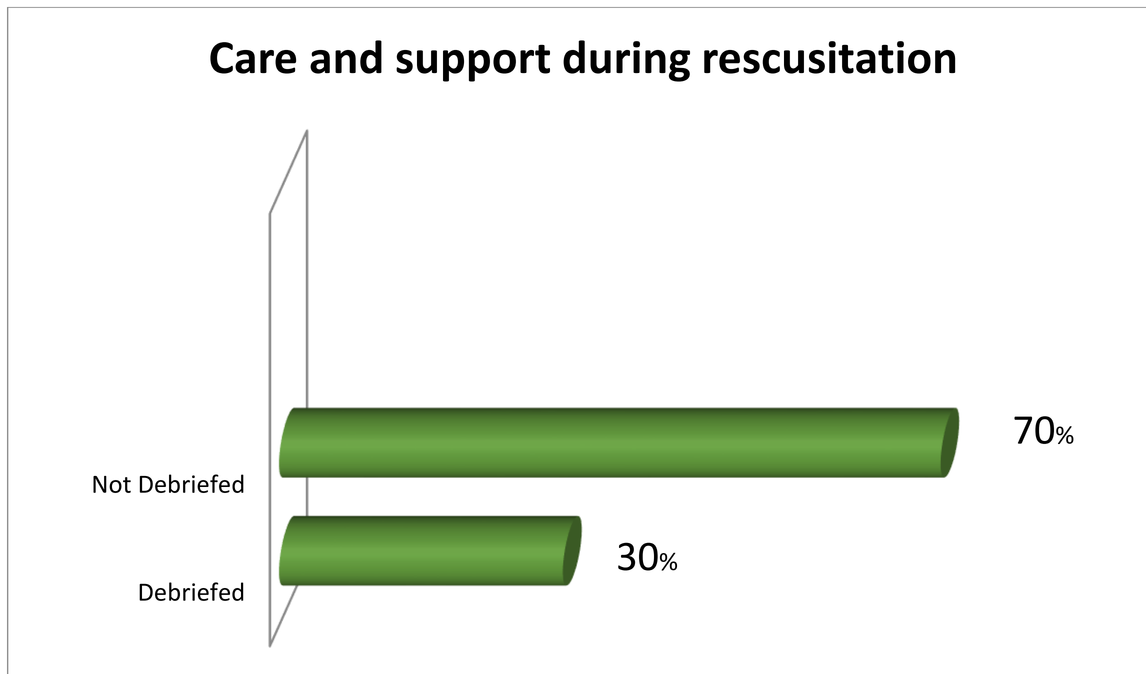

Figure 5: Family members debriefed during resuscitation

4.6.3: Theme 3: Involving family members during resuscitation as part of care and support to them.

Three subthemes emerged including: nurses informing family members of an ongoing resuscitation, nurses allowing family members to be present during resuscitation and family members being informed about an ongoing resuscitation

4.6.3.1. Subtheme 1: Nurses informing family members about an ongoing resuscitation

Most 73.3% (n=11) of the nurses interviewed expressed that they have informed family members about an ongoing resuscitation while the rest 26.7% (n=4) have never informed family members of an ongoing resuscitation.

"Yes I have. There is a patient we had and when the patient started deteriorating; the heart rate was going down, the blood pressures were going down, I called the son before we commenced the resuscitation and for sure he came and witnessed the resuscitation. "-Nurse Mary

"Yes. It was a child, so we resuscitated and then the child picked but also we could foresee we will not reach far so we called the family members, they came. Infact when they came, before even they got in, he had another arrest. We resuscitated, the child picked and now I had to talk to them as in telling them the child is not doing well, have changed condition, we've tried all ways …………………………. but we are doing our best. But we've seen it good to let you know how the child is doing."- Nurse Jackie

"*As per our protocol, as a primary nurse I am not in a position to inform the family members but they were informed.*" –Nurse Jane.

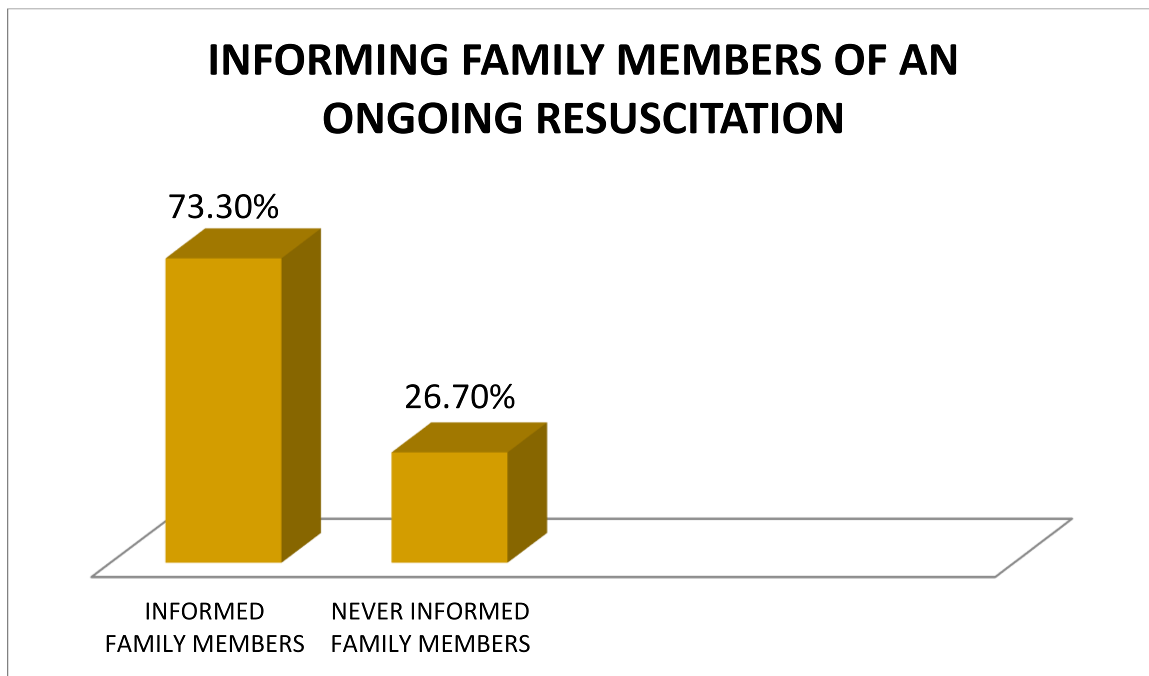

Figure 6: Informing family members of an ongoing resuscitation

4.6.3.2. Sub-theme 2: Allowing family members to be present during resuscitation

On the opinion of allowing family members to be present during resuscitation as part of care and support given to the family members, the respondents were split into three; those for 53.3% (n=8) those against 26.6% (n=4) and those neutral 20% (n=3). In all the cases, there were varied

reasons including ethical issues, emotional support, psychological support, hospital protocol/guidelines, time factor and continuity of care. For those who felt that family members should be allowed during resuscitation, had these to say:

"During resuscitation I was with the relatives especially the son and I offered the support, I encouraged him, I told him about the disease process and the outcomes after the resuscitation"- Nurse Rose

"Yes I have done one. I called the relatives because during resuscitation they were around. They had earlier requested if the resuscitation goes on, they should be informed, --- one of them was a medic and requested that if he would be around during the resuscitation of which I allowed him in and he was there during the process and it was even easier to break down the news after that."- Nurse Cate

"According to me they (the relatives) should be there because it helps them endure the whole process well. As much as they wouldn't recover fully, with the prognosis of the resuscitation, I think it would help them go through it in a calm and better way rather than being chased away during the resuscitation process." –Nurse Mary

"I think they should be there. This is their family member and they are supposed to know each and every step that is being undertaken to take care of that family member. When you tell them that you did your best and they were not there to see that best part you were undertaking or playing they do not understand; at times they might even blame you. Even when it comes to that emotional healing, you know it starts early enough" - Nurse Grace.

For the interviewees that were against the family members being present during resuscitation had varied reasons as well. Some of the reasons were:

"Not really that they should be there physically but I think they should know that resuscitation is happening. In a simple way it be explained to them. But physically they should not be there because they can affect the outcome of the resuscitation and may feel that enough has not been done to their patient or rather it is a bit stressing to them especially if they are not medics and they do not understand something you do like compressions. It would be scary to them."-Nurse Judy

"No. They should not because at that time the nurses should concentrate on the patient management. I think when the relatives are around they consume time". –Nurse Jackie.

" I would not expect the relatives to be at the bed side where we are resuscitating but can be within whereby when the condition changes or when we are done with the resuscitation we can just call them to come and view the body or see that we are calling off the resuscitation"-Nurse Faith

This information was summarized in a pie chart as follows:

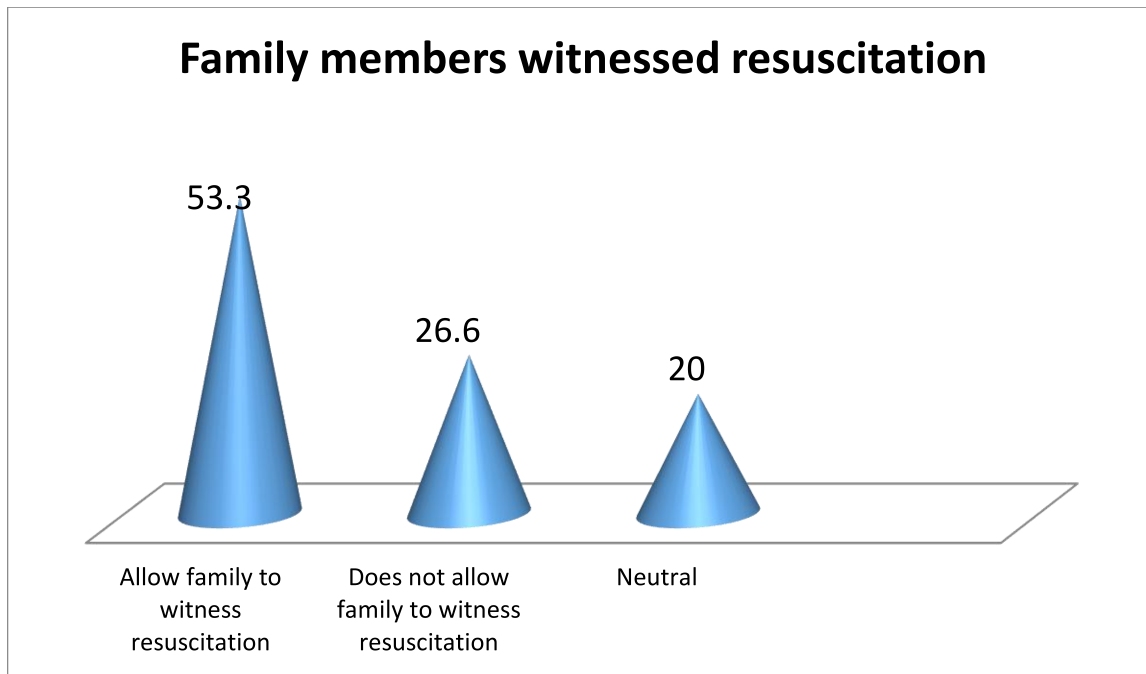

Figure 7: Family member witnessed resuscitation

4.6.3.3: Subtheme 3: Family members being informed of an ongoing resuscitation

All family members that were interviewed were informed of the resuscitation while it was still going on. However, only a few were allowed to witness the whole process. This is how they described the process:

"Ok, it was lunch time, we had come to visit her and we had been told that she is very sick (pauses), we were told to wait outside and since visiting hours were up. And were waiting for 4p.m so as to go in and see him again but before then were called by a strange number and she identified herself as a nurse and was asked where I was and was told to immediately come to the ICU."- Family member Moses

"We came after a call from ICU we saw they were helping him we found them surrounding him (sobs) pressing his chest (long pause) one nurse held my hand she was trying to explain what was happening and she told me his heart has stopped because his blood pressure had gone

down, they were trying to press his heart so that it can come back to life, that is what they told me. that was all I was told" –Family member Esther.

4.6.4. Theme 4: Culture

Culture did not emerge as one of the factors that affected the care and support offered to the nurses and family members during resuscitation at the CCU KNH. However majority of the nurses 66.7% (n=10) agreed that the patients culture would affect the care and support given to them during resuscitation. Among the family members interviewed; none mentioned culture as one of the factors that influenced care and support. Some of the subthemes that emerged includes: Traditional beliefs and religion

4.6.4.1: Subtheme 1 Traditional beliefs

Majority 66% (n=10) of the nurses believe that the patients culture would affect care and support given to them;

"Yes (Pauses) I once asked a male relative to come and witness resuscitation of his mother, a Maasai man and he said it is a taboo for the men to see the mother naked and he never came."
Nurse Faith

"Some traditions believe that when patients are almost dying, there is no need for resuscitation. Like the Somalis, they just come and if you are not careful they will come and close those curtains and even kill the patient before you do that resuscitation and we have witnessed many. They come and when they get their patient is in a critical condition, they just want him to die and they carry the body. So if you are not aware they will even strangle the patient and come and tell

you 'Sister ameenda tupee mwili twende' (Sister, she/he has rested, allow us go with the body)" – Nurse Abby.

"I think ……. considering we are a diverse Nation with probably 47 tribes, different social economic backgrounds, different cultural ways of handling grief. There are those who wail, there are those who hold on tight in their grief, and I think it becomes very, I don't know how to say it .....on how you would approach one client from another bearing in mind the different aspects of their culture in terms of grieving." Nurses Moses

I personally I don't have any believes or myths when doing resuscitation but I have handled relatives who have cultural issues on resuscitation. I have handled relatives especially from the Islamic tradition who believe we shouldn't resuscitate. Actually you should let go and when it comes to that it clashes with my training and academic background coz I have to do something and for them they want me to release the patient. So the issues of I'm I practicing Euthanasia...... So it clashes with my believes"-Nurse Jane

Other nurses 33.3% (n=5) expressed that they did not experience any cultures that affected the quality of care and support during resuscitation. One had the following to say;

"So far because you see Kenyatta, basically I've never experienced any cultural difficulties here in Kenyatta because most of the patients that we receive here in ICU they are......it's not a demeaning per say but they are low class patients and they are not so much affected with culture. Culture mostly affects these, you know, a certain class of people in Kenya……… I'm only sensitive to cultures so if I'm aware of patients wishes culture wise, I'll do as per the wish of the patient but personally I don't have any."- Nurse Dan

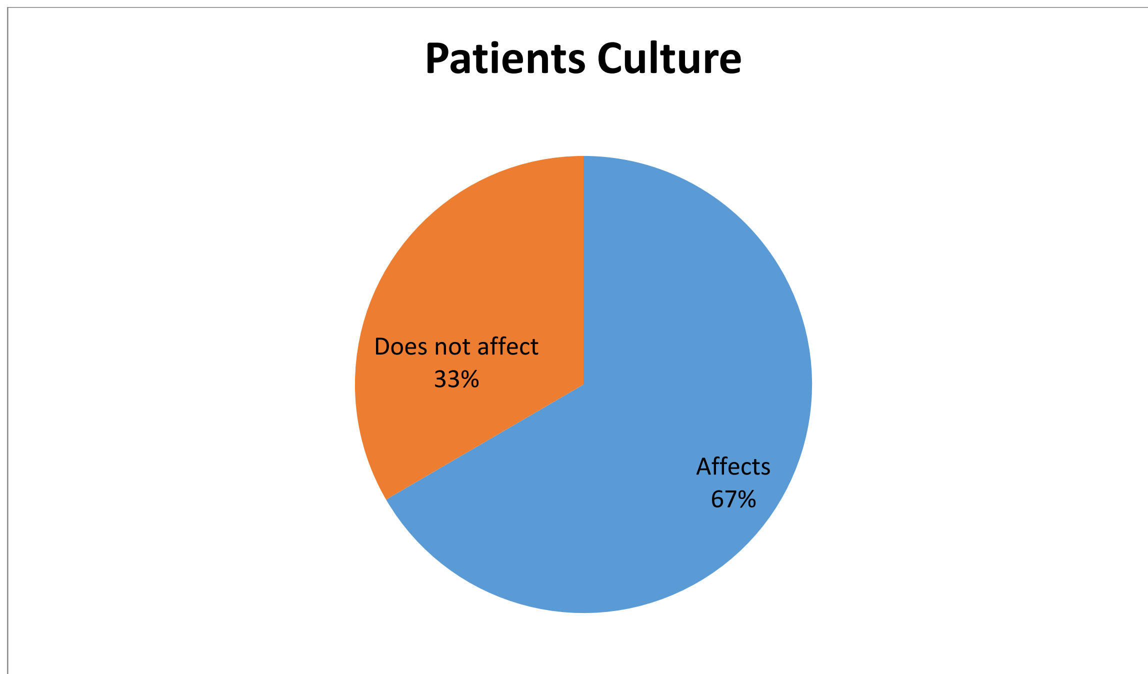

Figure 8: Patients culture as a factor influencing care and support

4.6.4.2 Sub-theme 2: Religion

More than half 53.3% (n=8) of the nurses said there were patient's religious factors that affected the care and support during resuscitation at the CCU Kenyatta national hospital while the others 46.7% (n=7) disagreed.

"Unless may be at times we have the Muslims who say that do not resuscitate our patient………. But then again this do not resuscitate is not conclusive because they do not come with a signed consent".-Nurse Jane

"The only thing I know that has affected resuscitation is……... May be when the issue of the blood comes in that is when say…..there are these religious people….."Jehovah witness" (a kind

of a religious group). From my experience, they do hinder resuscitation process especially if blood is needed but you respect their wish. ”-Nurse Mary

“Of course, they are so many; cultural aspects, religious aspects, you know we are in African country we must admit that. Some religion aspect for example; there are those who believe that if time has come it has come no need to struggle about it. Sometimes you just want to let this person rest. Other cultural aspect is that sometimes in our African culture we fear sometimes a person may continue doing CPR on most patients just due to fear. For me I believe in science, you do it right way. If you achieve spontaneous circulation well, if you don't then don’t struggle...........” – Nurse Jane.

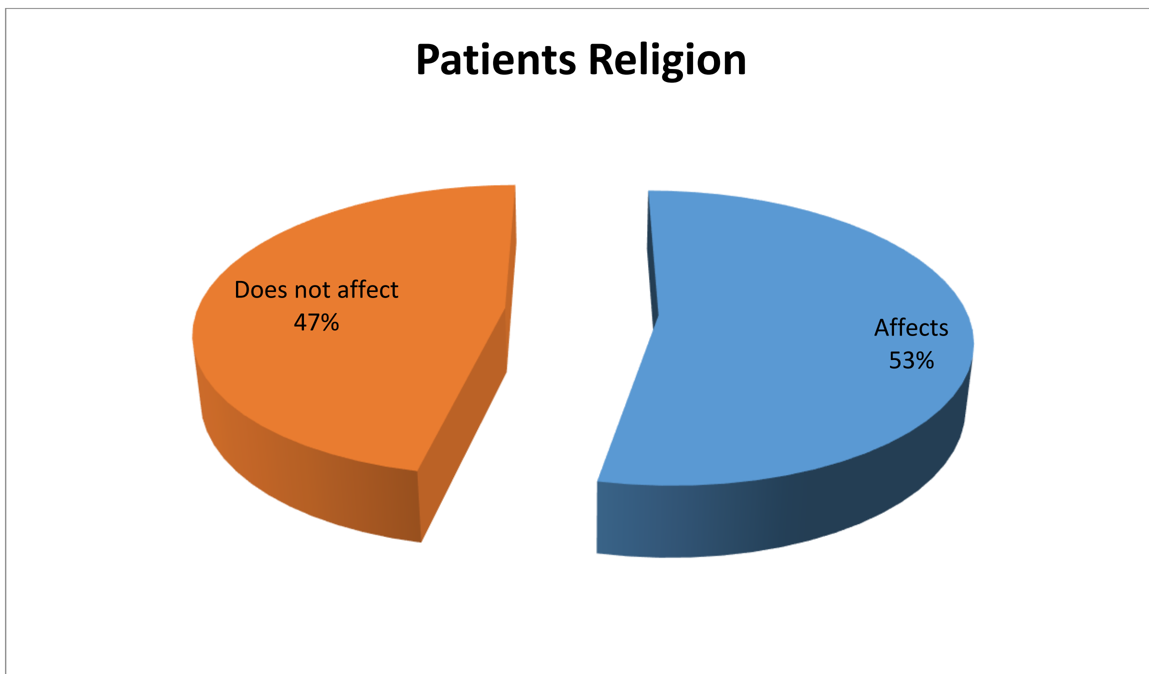

Figure 9: Patients Religion as a factor influencing care and support

Most of the family members 70% (n=7) said that as per their religion God is the giver and taker of life. The other 30% were neutral on matters religion This is what some had to say;

"I am a Christian and believe that God is the giver of life and he is the one who takes………….."- Family member Dan

"All I would say is that God is determines our destiny and may his will be done"- Family member Judy

"I have nothing to say about my religion" Family Member Jane

4.6.5. Theme 5: Patient Related factors influencing quality care and support during resuscitation

Patient related factors that influenced the care and support during resuscitation was one of the themes. Out of this theme, two subthemes emerged including; Patients diagnosis/ prognosis and patients age.

4.6.5.1: Sub theme 1: Patients diagnosis and prognosis

Most of the nurses 80% (n=12) agreed that the patients diagnosis and prognosis did affect the care and support they received during resuscitation while 13.3% (n=2) said that they would give their best regardless of the patients diagnosis or prognosis. Only 6.6% (n=1) was neutral about the same issue. Those that agreed that the patient's diagnosis and prognosis affected the care and support given had the following to say:

"*Yes. If a patient has a brain death or metastatic cancer you don't really want to add more suffering to the patient by resuscitating. When the prognosis is poor, really you would not want to use more resources when you know that there will be no outcome at the end of it. Even the*

time of the day….. I can imagine you resuscitating at the wee hours of the night, you are tired, you do not have as much effort as compared to the morning hours"-Nurse Mary

"Yes. Perhaps you have a patient with may be a stage 4 cancer and may be you have one who has just had an RTA (Road Traffic Accident) and you believe that this RTA patient will come out of that life threatening situation. Prognosis: To some extent it does. If prognosis is not promising you would attempt resuscitation but not insist for a long time." Nurse Moses

"Yes. It does. Prognosis, if it is a case that even if you resuscitate there is no quality of life, we do not dwell so much on it. Likewise the diagnosis of a patient does affect that in terms of……; Let's say a case with cancer that has metastasized and the patient has gone into cardiac arrest, if you look at the outcome of that patient it really doesn't increase quality of life. So in that case I think prognosis and diagnosis matters." -Nurse Jane

"Yes, terminally ill patients and cost benefit. For terminally ill you might not take a lot of time…… the patient will continue to be on the vent despite the family having exhausted their resources. ......In terms of time taken; not really but cost issues only come when he is a terminally ill patient."-Nurse Moses.

Those that said that prognosis and diagnosis will not affect the care and support given said the following:

"Yes. We will handle them the same regardless" "It (being a VIP), having a terminal illness or his prognosis doesn't matter If it is resuscitation, it is still the same we treat the patients equally."-Nurse Jane

One was neutral on the same issue and had the following to say:

"There are quite a number of factors that we consider in resuscitation. Depending on other comorbids, yes and no. Yes if for example the patient, even if the patient has not signed a DNR form, and maybe he or she is advanced age, like for example maybe 95 years, has other comorbids, is on inotropic support, so yes I will not take a long time resuscitating. And no if the patient is young, and there is no any indication and the patient depending on the primary reason as to why the patient is in ICU diagnosis will not be a factor" –Nurse Dan

Other unique patient related factors that emerged included pregnant mothers in a cardiac arrest, resuscitation of a prominent person;

"Pregnancy can actually be another patient related factor, we know those are two patients you have but the mother takes precedence as compared to the baby in the uterus. So it can be a bit of a challenge during resuscitation."- Nurse Monica

"*Probably a VIP so apparently before it is agreed upon to call off the resuscitation it takes a bit of time and a lot of consultation. So the resuscitation can actually go for a long time with no added value in view of they have to consult*"- Nurse Margaret

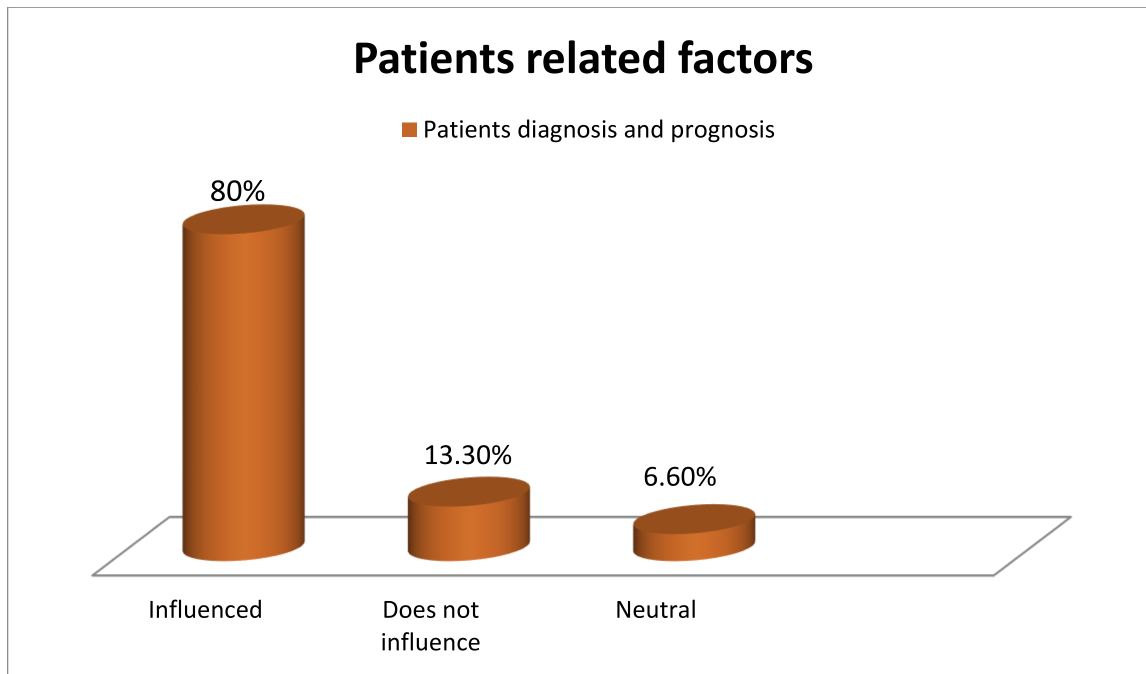

Figure 10: Patient related factors during resuscitation

4.6.5.2 Sub-theme 2: Age

Majority 86.6% (n= 13,) of the nurses said that the patient's age may affect the care and support during resuscitation at the CCU.

"Yes. During resuscitation the first question would be: what is the age of the patient? So age sometimes may influence based on individual person or a team consent. When you get a 96 year old person you are doing a resuscitation, sometimes the question may be: where are we heading to? It is a basic question. So it may influence. And to a 12 year old child everybody might be sweating" - Nurse Joseph

"Yes. Because we have infants, we have children, we have old age. So I am imagining an 80 year old and a 5 year old. As a person, as human being we tend to make more time, more effort on a 5 year old than on the 80 year old because for an 80 year old they have lived enough, the organs

have failed but for the 5 year old you imagine the mother, this is your child, you want the to......so you put more effort on the 5 year old as compared to an eighty year old."- Nurse Jane

"*……The resuscitation of a child is not the same as the resuscitation of an adult. In my own opinion or in my practice I have seen us doing resuscitation more time than expected for children and they come up rather than the adult, adult resuscitation takes less time than that of children take"* -Nurse Carol

"Yes. It does. On an aged patient we don't dwell much on a prolonged resuscitation"- Nurse Jane

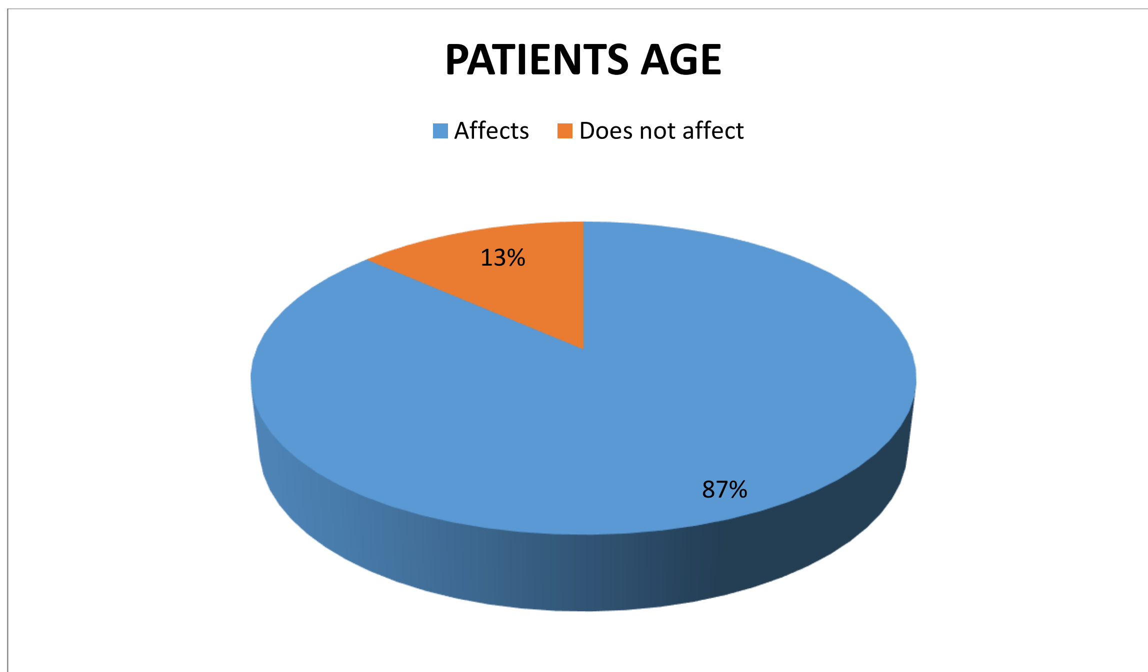

Figure 11: Patients age as a factor influencing the care and support

Among the family members interviewed, mixed reactions were expressed on whether the age of their loved ones influenced the care and support given. 50% (n=5) felt that age influenced the care and support and had the following to say;

"my mother was very elderly & very sick) we also felt that it contributed to her not getting enough attention………….." Family member Mary

"*My brother was in his 60s and you could tell from their facial expressions that they had already lost hope*……" Family member Antony

Those that felt that age had no influence on care and support given had the following to say;

"My brother was well just in his early 40s he had small kids and wife who were dependent on him …………………………they took a short time we did not feel they did their best they would have done better to bring him back to life." Family Member Jane

"*He was a very young person, he had not lived for long and he had no family, we were very shocked by his death and I know even him, he would have wished to live for longer, but now the accident took away his life. We felt more would have been done to save his life because he was very young*"-Family member Hellen

The rest were too emotional to comment

4.6.6. Theme 6: Lack of support systems

During the interviews, lack of support systems emerged as some of the factors that affected the quality of care and support to the nurses during resuscitation. Three subthemes emerged from these factors including; staffing, training and equipments

4.6.6.1 Sub-theme 1: Staffing

Some attributed the lack of debriefing and resuscitation outcomes to under staffing at the Kenyatta national hospital CCU.

"*I have not attended one. I think in our set up we have many patients, we have many relatives and we only have one counselor who deals with all the relatives and I think it is too much for her. I think in the near future (the hospital administrators) should add more support systems that encourage debriefing"* –Nurse Jackie.

"I'd wish for us to have better support systems in terms of more counselors on the ground and probably debriefing moments ……………..that could help us to vent out"-Nurse Patience

"Then again ratios of the nurses to patients. That one would be improve some of these outcomes of resuscitation to be better"- Nurse Terry

"I would wish that they improve the system to add more personnel especially the Nursing. Each nurse should have a patient because we usually strain when it comes to resuscitation because you have to leave other patients unattended so that you can concentrate"-Nurse Abby

You would have done like two cycles alone before the rest of the team comes on board. I don't know if it is due to lack of enough staff or overload, I can't really tell but something really needs to be done. We need like let say a resuscitation team that should always be there for fast response not only in ICU but in other departments also so that if in ICU we have two resuscitation then we have other teams that come from lets say other emergency units like A & E, other ICUs, renal, CCUs and areas where critical care nurses work."- Nurse Carol

4.6.6.2. Sub-theme 2: Equipment

Another issue that emerged was lack of adequate equipment for resuscitation.

"Also equipment for resuscitation. At times you get the laryngoscopes, they are not in well lighting or you keep trying it is...........or going the other side to borrow, there is a resuscitation going on."-Nurse James

"Availability of more drugs and equipment especially pumps for giving ionotropes, calculating fluids so that you give the exact amount."-Nurse Abby

"You know we are in third world country so there are several aspects in terms of equipment, patient ratios, drugs; appropriate drugs used during resuscitation."-Nurse Moses

4.6.6.3. Sub theme 3: Training

"I have never attended any counseling course, if I had, I would be in a better position to debrief the nurses and family members especially during weekends and at night when there is no counselor" Nurse Mary

"I have never undertaken any resuscitation course since the one I did in my higher diploma, they need to train us on the current updates"- Nurse Cate

"The last Resuscitation course I did was in 2000 when I was joining KNH CCU, the management is not very aggressive on trainings, especially on resuscitation courses, they need to improve on that"- Nurse Dan

CHAPTER FIVE: DISCUSSION

5.1 Overview

Kenyatta National Hospital is the pinnacle point of reference for most complicated cases in Kenya and to some extent East and Central Africa. For any referral centre, the CCU is usually a critical department given that most complicated cases end up being admitted in this department. With limited CCUs in the country, the CCUs in KNH set the blueprint for other hospitals seeking to set CCUs, especially with the current health system which is under county government. According to Lott *et al.,* (2009), the patient interventions made in CCUs are generally targeted at improving the physiological disturbances regardless of the underlying primary health problem. One of such interventions is resuscitation, which is very common in the CCU. As previously discussed CCNs get emotionally affected especially if the resuscitation is not successful, therefore, it is essential to understand the care and support offered to nurses and family members in the CCU at KNH in comparison to international best practice to ensure the local practices are in keeping with the international standards. For this purpose, this study set-out to investigate the family members and nurses' experiences on factors influencing quality care and support during resuscitation. The findings obtained were adequate to address the study objectives as discussed in the subsequent section under each of the specific objectives targeted in the study.

5.2 Family members and nurses experiences on Quality of Care and Support during resuscitation

The first and second specific objectives of the study aimed at exploring the views and experiences on both the nursing staff and the family members to the quality of care and support offered during resuscitation.

5.2.1 Nurses' Views and Experiences on quality care and support during resuscitation

The study findings indicated a myriad of nurses' views and experiences in relation to care and support during resuscitation. They were as follows:

a) From the quantitative data, it was quite significant that nurses are at risk of getting PTSD as a result of unsuccessful resuscitation. Majority responded that care and support in form of debriefing was not offered during resuscitation. Most of the nurses also responded that no individual was available to debrief the nurses during resuscitation. Majority said that despite the psychological stress that exist during resuscitation; they still do respond to resuscitation. From the narratives however some indicated that the response during resuscitation is too slow. Literature explains that critical care nurses after frequent exposure to unsuccessful resuscitation develop ineffective coping behavior such as delay to respond to resuscitation or total avoidance which decreases or eliminates their stress (McMeekin D. *et al.*, 2017).

b) Based on results from quantitative data, there was a significant relationship between nurses' level of education, cadre and sufficiency of resuscitation training guidelines with care and support offered to them during resuscitation. Nurses with lower levels of education for example diploma holders, junior nurses and those inadequately trained perceived less quality care and support was offered during resuscitation. From the logistical multiple regression, in as much as only 34%(n=52) explained the demographic variables to having contributed to experiences on quality of care and support, gender and years of experience could not be ignored as they showed statistical significance between

the nurses demographic data with experiences perceived on quality of care and support during resuscitation.

c) Majority of the nurses described resuscitation to be very stressful, emotionally and psychologically overwhelming. Majority of the nurses argued that they do get affected emotionally and psychologically by incidences of unsuccessful and poor resuscitation outcomes. In a study conducted by Connelly (2014), noted that many nurses grieve following the death of a patient often after resuscitation. Others expressed their dissatisfaction with the outcome when they do not achieve their intended goals especially for those who indicated that they were very close to their patients. In a similar study by Hassankhani *et al* (2017), argues that nurses who develop strong attachment with their patients, which is human, are hit by negative outcomes of resuscitation in the same magnitude with the relatives. From this study in comparison with other studies done internationally therefore means that psychological and emotional stress exists in the critical care unit especially during resuscitation. From the researcher's point of view, the nurses felt emotionally and psychologically stressed because they did not receive any care and support in terms of debriefing during resuscitation.

d) It was evident from the study that most of the times there is hardly any care and support offered to the nurses during resuscitation. This care and support in form of debriefing was one of the biggest gaps identified. This lack of emotional and psychological support, which appears to be more of an organizational culture rather than individual's decision, may have some far reaching ramifications in as far as the welfare of the nurses is concerned. In a study done by Isaacs & Mash (2004), nurses argued that they felt left out to cope with the emotional and psychological trauma on their own without any chance for

supportive care. In a similar study by Giles *et al (*2016), it was observed that in most cases, the focus on emotional support is directed to family members only, leaving the staff to cope with the psychological trauma on their own. The poor score on debrief to the nurses and offering professional, psychological and emotional support to the nurses, is an issue that is evidenced in the existing global literature. In a similar study by Drotske & De Villiers, (2007), emphasized the importance of debriefing process for the resuscitation team to ensure that the team reflect on the issues, undergo effective grieving process, and reduce psychological distress related to the loss of clients in the wards. Debriefing is critical as it helps the nurses to improve the practice of resuscitation by allying issues of guilt, querying competency or blame-game, but instead reinforces confidence and competence (Filho et al, 2017). According to ILCOR (2015) guidelines, a debriefing session should be organized to not only the nurses but all the staff involved in the resuscitation. Some of the reasons thought to hinder adequate care and support included; availability of only one counselor who mostly dealt with family members, lack of time and lack of clear protocols on debriefing. From the researchers' point of view, the lack of care and support to the nurses in form of debriefing was majorly attributed to the fact that no policies and guidelines existed on the same hence making it an organizational failure.

e) Majority of the nurses agreed that they do inform relatives of an ongoing resuscitation. There were however mixed reactions on whether to allow family members to witness resuscitation or not. The primary findings highlight that there is no clear protocol at KNH on whether family members should be or should not be present during resuscitation

Based on the international best standards and recommendations from professional bodies, family members should be allowed to be present during a resuscitation (Giles et al,

2016). In a study conducted by Tudor *et al* (2014), nurses accounted that the relevance of family members' presence during resuscitation process was to be determined by the behaviour of the family members. Those who were for the family members being present during the resuscitation process argued that their presence would help them cope with the outcomes much better and clear any queries on incompetencies. In a similar study conducted by Tudor *et al* (2014) it was argued that collaboration with family members can allay the fears and perceptions of any wrong doing from the staffs. Such fears and negative perceptions have in the past been propagated to starting litigations on incompetence or negligence. The other nurses expressed weighty reservations on having the family members present during resuscitation. Some of the concerns included the fact that the relatives may suffer panic attacks; become hysterical; forcefully volunteering to conduct the process; failing to accept negative outcomes, or interfere with the resuscitation process in one way or another which would lead to lack of concentration and time wasting. These reservations were also expressed in a study by Hassankhani *et al* (2017), who considered the presence of family members a double edged sword from the perspective that it adds both positive and negative implications to the patient outcomes. Leske *et al* (2017), argued that for family members to be present, there should be prior education to family members or be locked out only to see but not participate in the process. From the researchers point of view, whether to allow family members during a resuscitation or not should be clearly understood by ensuring proper and clearly laid out guidelines are available about the same but from the primary study in comparison with other conducted studies, the researcher strongly feels that the benefits of involving family members which in fact is part of the psychological care and support to the family

members outweighs the fear that comes from allowing the family members be part of the resuscitation process.

f) The fear of psychological trauma on witnessing the resuscitation was also raised. In a study done by Ferrara *et al* (2016)**,** having family members present during resuscitation was considered destruction, which could compromise the concentration of the health professionals doing the resuscitation. From this study and the international studies therefore, family members should be assessed and given a chance to see whether they will manage to witness resuscitation or not. From the researchers point of view, in support of other studies, the family members should always be assessed and given a chance to decide whether they would want to be present during the resuscitation or not.

5.2.2. Family members views and experiences on quality care and support during resuscitation

a) The experiences and views of the family members regarding the manner in which the news on resuscitation was shared denote lack of clarity of a protocol on relaying information to relatives. The family members argued that they received calls from the hospital being asked to report at the CCU stations. A study done by Eric I (2015) proposed a framework for care of the family members to include how to care for the family members who are within when the event takes place and how to go about informing family members who are not present when it happens. All the family members expressed that they were given a phone call and were able to witness the resuscitation. In a similar study done by Twibell *et al* (2015), argued that the presence of family members showed empathy and love.

b) Most described the process to be stressful, overwhelming and scary. The same views were expressed by Masa' Deh *et al* (2014), who argued that family members expressed feelings of being overwhelmed with the process, especially when they were not certain of what to expect. From the researchers point of view, the feeling of overwhelming is expected when family members witness resuscitation of their loved one.

c) The primary data revealed that some of the family members supported the idea of being present during resuscitation while others considered such a practice as unnecessary. Those supporting argued that their presence helped them cope with the outcomes more effectively while also appreciating the dedication of the hospital staffs. According to Powers (2014), some of the reasons for advocating for presence of family members during resuscitation were to facilitate effective appreciation of resuscitation outcomes and offer support to the staffs where necessary.

d) Most of the family members who witnessed the resuscitation expressed that no care and support was offered to them during the resuscitation process. In a similar by Mash and Isaac (2014), found that the experiences of the family members during the resuscitation period indicated that no one came to comfort them during the period of resuscitation. This was interpreted to mean there was no adequate support for the family members during resuscitation process. In a study done in the USA by Eric I. (2015) showed contrary results, from his findings, 70% of the family members received adequate care and support while the other 30% complained that nurses were cold, guilty, nervous and evasive while providing care and support to the family members. According to the ILCOR (2015) a specific member of staff should be delegated to remain with the family members to offer empathetic but realistic care and support during the resuscitation. From

the researcher's point of view, lack of adequate care and support to the family members is very common as evidenced in the primary data and most other researches done. This could be as a result of lack of guidelines and a proper framework on how family members should be handled during a resuscitation process.

5.3. The cultural factors' that influenced the quality of care and support during resuscitation among the nurses and the family members.

5.3.1. Among the nurses

a) Most nurses expressed that they did not have any cultural factors that would influence the quality of care and support during resuscitation. The only notable concerns expressed by the nurses were the fact that they demonstrated cultural awareness and sensitiveness given that they were used to attending to culturally diverse populations. They argued that sometimes they do experience some cultural factors from patients and family members that would influence the quality of care and support during resuscitation. In their study, Tobi &Amadasun (2015), emphasized that cultural influences on experiences of resuscitation are more prevalent in the communities where traditional practices are still upheld in the modern society. Some examples given included, relatives not agreeing to witness resuscitation of their loved one as it was considered a taboo in some communities. Religion was also strongly expressed as one of the cultural factors that would hinder resuscitation in that resuscitation measures eg, giving blood transfusion which is a life saving measure. Some shared their experiences and said that if they had a patient from the Muslim community; it would be difficult for them to do resuscitation as this is regarded to as prolonging suffering on their loved one. In a study conducted by Powers

(2014), different religious beliefs influence the perceptions towards resuscitation. Among the Muslim communities, resuscitation is lowly regarded as compared to most Christians.

5.3.2 Among the family members

a) Most of the family members expressed that they are Christians and had no cultural factors that would influence the care and support they received during resuscitation. From the researchers point of view the lack of cultural factors influencing care and support offered during resuscitation could be influenced by lack of cultural diversity among patients at the period of data collection.

5.4 The patient related factors' influence on the quality of care and support offered to nurses and family members during resuscitation.

Several patient related factors emerged to have influenced the quality of care and support during resuscitation. Some of these patient related factors included the patients' age, diagnosis and prognosis. Other unique factors that also emerged included the patients' social status and time of day when resuscitation was being conducted.

a) Age was strongly expressed by the nurses as one of the main patient's related factors and it would determine the time and effort put towards the resuscitation. Most nurses would put more time and effort resuscitating pediatrics and young adults as compared to the elderly patients. In a study by Xue *et al* (2013), which focused on assessing factors that influence the care and support during resuscitation, age of the patient was found to have a significant impact. The resuscitation team, mostly comprising of nurses and physicians were more likely

to accept failed resuscitation in the extremes of age. Some of the family members felt that patients age influenced the care given during resuscitation.

b) Patients' diagnosis and prognosis was also strongly expressed as one of the patient related factors that influenced the care and support during resuscitation. It emerged that little effort and time would be put when dealing with a terminally ill patient as compared to the less terminally ill patient. In the same study by Xue *et al* (2013), the team resuscitating would put into consideration on the patients diagnosis and prognosis and would more likely accept a failed resuscitation if the patient was terminally ill. The family members interviewed also gave similar experiences. Those whose relatives were terminally ill to conditions such as metastatic cancer demonstrated acceptance after the loss than those who had family members with acute illnesses such as RTA patients. From the primary

c) Patients with do not resuscitate orders also emerged from the primary data as one of the factors affecting quality of care and support during resuscitation. In a study by Dzeng *et al* (2015) and Etheridge & Gatland (2015), argued that do-not-resuscitate condition noted with some patient can also compromise the quality of care and level of support offered to the patient while at the CCU.

d) The socioeconomic status of the patient and time of day that resuscitation was being done emerged as a factor determining the quality of care and support offered, such an experience qualifies it as a discriminative practice.

5.5: Lack of institutional support in quality care and support during resuscitation

a) It was evident from the study that there were no institutional protocols and guidelines on care and support for the family members and the nurses during resuscitation. Other issues that emerged were lack of adequate resources in terms of nurse counselors or nurses trained

in counseling who could offer the care and support to the nurses and the family members during resuscitation. Other than that, poor nurse to patient ratios and lack of properly working equipments and drugs used in resuscitation also emerged as factors that increased stress levels during resuscitation

5.6. Strengths and Limitations to the Study

5.6.1: Strengths

The study's major strengths were associated with the quality of the data collected. They were as follows:

1) There was no reason to doubt the sincerity of the respondents, which would have compromised the quality of the study.
2) The data collection process was rigorous and enabled the researcher to collect adequate data to saturation. The ability to collect adequate data ensured that the study objectives could be adequately covered and the research questions addressed.
3) The researcher gained profound support all through, which improved the appraisal process through the study process; thus enhancing the quality of the study.

5.6.2: Limitations

The following were the study limitations

1) The study used purposive sampling technique to collect self reported cross-sectional data which entailed the recollection of a past event (resuscitation) which could easily result in a recall bias.
2) There was lack of local evidence to appraise the primary data. This limitation arose due to inadequate studies on CCU resuscitation conducted in the Kenya. However,

the limitation did not have profound dent of the quality of the study given that the researcher was able to appraise the primary data using the available evidence from studies conducted outside the country.

Chapter Six: Conclusion and Recommendations

6.1 Conclusion

The research was a success in the sense that the targeted objectives were sufficiently covered and the specific research questions addressed using the primary data collected. In most cases, the primary data collected showed strong congruence to the existing evidence. In summary, the study concludes that:

a) The nurses expressed displeasure with the lack of professional and guided quality of care and support during resuscitation (debriefing) for the nurses. This displeasure is a matter of concern for the institution considering developed countries have well established debriefing procedures for health professionals working in CCU.

b) With regards to family members, a notable concern was insufficient quality of care and support offered during resuscitation for them and the brevity of the information relayed to the relatives regarding the resuscitation without any proper framework.

c) Among the top patient related factors influencing the quality of care and support offered during resuscitation were age of the patient, the primary diagnosis, and prognosis of the patient, which were supported by adequate evidence from previous studies.

d) Cultural related factor was not a strong factor from the primary data influencing the quality of care and support during resuscitation for both the nurses and family members.

e) There is no institutional protocol/guideline to govern the care and support offered to nurses and family members during resuscitation. Other than lack of institutional guidelines, inadequate nurse counselors who would offer the care and support during resuscitation also emerged. Poor nurse to patient ratio and poor and unavailable working equipments also increased stress levels during resuscitation.

6.2 Recommendations

The study makes the following recommendations based on the findings and the conclusion of this study. This recommendations are discussed from the departmental, institutional and at the country level.

a. The Critical Care Unit need to strengthen quality of care and support offered to the nurses during resuscitation. They need to develop protocols on care and support (debriefing) given to the nurses during a resuscitation process. The institution should institutionalize professional debriefing process as a policy for the nurses and other health professionals involved a resuscitation process. As a nation, the government in conjunction with the ministry of health should develop policies on care and support for all nurses. The ministry should also fund research projects to explore more ways on how nurses and health care providers are debriefed.
b. The Critical Care Unit should develop protocols on how care and support is given to family members during a resuscitation process. Also family conferences which are multidisciplinary are highly recommended in the department as this brings together all the family members and healthcare providers to discuss the care of the critically ill patient and the expected prognosis. The institution should develop policies on care of family members during resuscitation.
c. The Critical Care Unit should come up with a training protocol that oversees training of all the nurses on current and up to date resuscitation guidelines. The institution should develop policies that ensure all the nurses are trained in resuscitation and plan for resuscitation drills on the same.

d. The Critical care unit management needs to advocate for addition of more resources including more nurses who are trained in counseling, the necessary resuscitation equipments including drugs and improve the nurse to patients ratio. The institution should recruit more human resources in CCU including those trained in counseling and help in procurement of more resuscitation equipment.
e. Future research should focus on developing more studies on care and support to not only the nurses but to other healthcare workers during resuscitation.

REFERENCES

Aldawood, A.S. (2010). Prognosis and resuscitation status of critically ill patients with lung cancer admitted to the intensive care unit. *Anaesthesia and Intensive Care, 38*(5); pp 920 - 923

American Heart Association (AHA); (2012): Structured and Supported Debriefing Course; www.onlineaha.org; [accessed 13.03.18].

Bell, J. (2014). *Doing Your Research Project: A guide for first-time researchers*.London, UK; McGraw Hill Education (UK).

Berger, J., Polivka, B. (2015).Advancing nursing research in hospitals through collaboration, empowerment, and mentoring.*Journal of Nursing Administration, 45*(12); pp 600 – 605

Bohm, J. (2012). Two-factor theory – at the intersection of health care management and patient satisfaction.*ClinicoEconomics and Outcomes Research: CEOR, 4*, pp 277–285.

Bradley, C., Keithline, M., Petrocelli, M., Scanlon, M., Parkosewich, J. (2017).Perceptions of adult hospitalized patients on family presence during cardiopulmonary resuscitation. *American Journal of Critical Care, 26*(2); pp 103 – 110

Chapman, R., Watkins, R., Bushby, A. & Combs, S. (2012). Family-witnessed resuscitation: perceptions of nurses and doctors working in an Australian emergency department. *Emergency Medicine,* Article ID 369423

Connelly, L.M. (2014). Ethical considerations in research studies.*Medsurg Nursing. 23*(1):pp 54-55

Creswell, J.W.(2013). *Research design: qualitative, quantitative, and mixed methods approaches* (4th ed.). Thousand Oak, CA; SAGE Publications, Inc.

Disu E, A, Ferguson I C, Njokanma O F, Anga L A, Solarin A U, Olutekunbi A O, Ekure E N, Ezeaka V C, Esangbedo D O, Ogunlesi T A. (2015). National neonatal resuscitation training program in Nigeria (2008-2012): A preliminary report. *Nigerian Journal of Clinical Practice, 18*(1);102-109

Drotske, J.S. & De Villiers, P.J.T. (2007) Resuscitation debriefing for nurses at the Accident and Emergency Unit of St Dominique's Hospital in East London (South Africa), *South African Family Practice, 49*(10), 17-17d, DOI: 10.1080/20786204.2007.10873653

Dzeng, E., Colaianni, A., Roland, M., Chander, G., Smith, T.J., Kelly, M.P., Barclay, S., Levine, D. (2015). Influence of institutional culture and policies on do-not-resuscitate decision making at the end-of-life. *Journal of American Medical Association, 175*(5); pp 812 – 819.

Edelson DP, Litzinger B, Arora V, et al. (2008) Improving in-hospital cardiac arrest process and outcomes with performance debriefing. Arch Intern Med; 168:1063–9.

Eric I, Greif Support in the ED *Medscape Publication*, March (2015) [Online] Available: https://emedicine.medscape.com/article/806280-overview [Accessed Mar. 10, 2018] (General Internet Site)

Ersoy, G, Yanturali, S., Suner, S., Karakus, N.E., Aksay, E., Atilla, R. (2009).Turkish patient relatives' attitudes towards family-witnessed resuscitation and affecting sociodemographic factors.*European Journal of Emergency Medicine, 16*(4); pp188 – 193

Etheridge, Z. ; Gatland, E. (2015).When and how to discuss "do not resuscitate" decisions with patients.*The British Medical Journal, 350*(h2640).

Ferrara, G. Denise, R. & Cline, T.W. (2016).Evaluation of physicians' and nurses' knowledge, attitudes and compliance with family presence during resuscitation in an emergency department setting after an educational intervention.*Advanced Emergency Nursing Journal, 38*(1); pp 32 – 42.

Filho, C.M.C., Santos, E.S., Silva, R. &Nogueira, L.S. (2017). Factors affecting the quality of cardiopulmonary resuscitation in inpatient units: perception of nurses. *Revista da Escola de Enfermagem da USP, 49*(6); pp 907 – 913

Fisher A.A., Laing J. E., Stoeckel J.E and Townsend J.W (1998). Handbook for Family Planning Operations Research Design 2nd ed. p43. Population Council. New York, USA

Fouka, G. &Mantzorou, M.(2011). "What are the Major Ethical Issues in Conducting Research? Is there a Conflict between Research Ethics and the Nature of Nursing." *Health Science Journal. 5*(1):3-14).

Fritz, Z. (2017). Resuscitation policy should focus on the patient, not the decision. *The BMJ, 356*(j813)

Gershengorn, H.B., Li, G., Kramer, A. &Wunsch, H. (2012).Survival and functional outcomes after cardiopulmonary resuscitation in the intensive care unit.*Journal of Critical Care, 27*(4); e9 – e17.

Giles, T., de Lacey, S. & Muir-Cochrane, E. (2017). How do clinicians practice the principles of beneficence when deciding to allow or deny family presence during resuscitation? *Journal of Clinical Nursing*,.

Giles, T., de Lacey, S. &Muir-Cochrane, E. (2016). Factors influencing decision-making around family presence during resuscitation: a grounded theory study. *Informing Practice and Policy Worldwide, 72*(11); pp 2706 - 2717

Hansen, C., Lauridsen, K.G., Schmidt, A.S., & Lofgren, B. (2015). Physicians feel competent in deciding when to terminate resuscitation but have limited knowledge on termination guidelines and rely on unnvalidated and controversial factors when abandoning resuscitation. *Circulation, 132*(A16023).

Hassankhani, H., Zamanzadeh, V., Rahmani, A., Harririan, H. & Porter, J.E. (2017). Family presence during resuscitation: a double-edged sword. *Journal of Nursing Scholarship, 49*(2); pp 127 – 134.

Hunziker, S. et al. (2011).Teamwork and leadership in cardiopulmonary resuscitation.*Journal of the American College of Cardiology, 57*(24); pp 2381 – 2388

ILCOR (2015) worksheets on resuscitation; www.americanheart.org/presenter.jhtml=3060115 [accessed 15.03.2018]

Isaacs, A., Mash, R.J. ;2004;. An unsuccessful resuscitation: The families' anddoctors' experiences of the unexpected death of a patient.*South African Family Practice, 46*(8); 20-25.

Lambrou, P., Kontodimopoulos, N, Niakas, D. (2010).Motivation and job satisfaction among medical and nursing staff in a Cyprus public general hospital.*Human Resources for Health, 8*(26)

Leske, J. S., McAndrew, N. S., Brasel, K. J., &Feetham, S. (2017). Family Presence during Resuscitation after Trauma. *Journal of Trauma Nursing : The Official Journal of the Society of Trauma Nurses*, *24*(2), 85–96.

Lott, J.P., Iwashyna, T.J, Christie, J.D, Asch, D.A, Kramer, A.A,, Kahn J.M. (2009) Critical illness outcomes in specialty versus general intensive care units. *American Journal of Respiratory and Critical Care Medicine 179*(1):pp 676-683

Masa'Deh, R., Saifan, A., Timmons, S. &Nairn, S. (2014). Families' stressors and needs at time of cardiopulmonary resuscitation: a Jordanian perspective. *Global Journal of Health Science, 6*(2); pp 72 -85

Mc Meckin D.,Hickman R., Douglas S.,Kelley C.;Stress and Coping of Critical Care Nurses after Unsuccessful Cardiopulmonary Resuscitation; *American Journal of Critical Care; (*2); pp128-135

Mutinda, J.N., Wagoro, M. ;2017; .Sociodemographic factors influencing the experience of ethical dilemmas among nurses in critical care unit of Kenyatta National Hospital, *American Journal of Nursing Science*. *6* (2);pp 113-124.

Okonta, K.E. &Okoh, B..A. (2014). Basic cardiopulmonary resuscitation knowledge of house-officers in a tertiary institution: factors determining accuracy. *The Pan African Medical Journal, 18*;pp 209 – 214

Olajumoke, T., Afolayan, J., Raji, S., &Adekunle, M. (2012). Cardiopulmonary resuscitation - knowledge, attitude & practices in Osun State, Nigeria . *Journal of the West African College of Surgeons*, *2*(2), 23–32.

Oppenheim, M.M., Dyrud, L.P. & Ray, L.(2003). Plasma instabilities in meteor trails: linear theory. *Journal of Geophysical Research, 108*(42); pp 1 – 7

Palinkas, L. A., Horwitz, S. M., Green, C. A., Wisdom, J. P., Duan, N., Hoagwood, K. (2015). Purposeful sampling for qualitative data collection and analysis in mixed method implementation research. *Administration and Policy in Mental Health*, *42*(5), 533–544. http://doi.org/10.1007/s10488-013-0528-y

Porter, R., Goodhart, I. & Temple, A.(2011). Predicting survival in cardiac arrest patients admitted to intensive care using the prognosis after resuscitation score. *Critical Care, 15*(s1); pp 299 – 304

Powers, K. (2014). Family presence during resuscitation of adults: the impact of an online learning module on critical care nurses' perception and self-confidence. *UNLV Theses, Dissertations, Professional Papers, and Capstones,* 2204

Resuscitation Council (UK).(2017). In-hospital resuscitation.*Resuscitation Council of UK.* Retrieved from <https://www.resus.org.uk/resuscitation-guidelines/in-hospital-resuscitation/>

Rittenmeyer, L. & Huffman, D.(2009). How Professional nurses working in hospital environments experience moral distress: a systematic review. *JBI Library of Systematic Reviews, 7*(28); pp 1234 - 1291

Silverman, D (2010), *Doing Qualitative Research* (3rd ed.) London, UK; Sage Publications.

Skrifvars, M.B., Castren, M., Nurmi, J., Thoren, A.B., Aune, S. &Herlitz, J. (2007). Do patient characteristics or factors at resuscitation influence long-term outcome in patients surviving to be discharged following in-hospital cardiac arrest? *Journal of Internal Medicine, 262*(4); 488- 495.

Somense, C.B, Duran, E, Christiane M., ;2014;. Hygiene and motivation factors of nursing work in a cardiology ward.*RevistaGaúcha de Enfermagem*, *35*(3), 82-89.

Tian, J., Kaufman, D.A, Zarich, S, Chan, P.S., Ong, P., Amoateng-Adjepong, Y., Manthous, C.A. (2010).Outcomes of critically ill patients who received cardiopulmonary resuscitation.*American Journal of Respiratory Critical Care Medicine, 182*(4); pp 501 – 506

Tobi, K.U.,Amadasun, F.E. (2015). Cardio-pulmonary resuscitation in the intensive care unit: an experience from a tertiary hospital in Sub-Saharan Africa. *Nigerian Medical Journal, 56*(2); pp132 – 137

Tudor, K., Berger, J., Polivka, B.J., Chlebowry, R., Thomas, B. (2014).Nurses’ perceptions of family presence during resuscitation.*American Journal of Critical Care, 26*(6); e88 – e96

Twibell, R. S., Craig, S., Siela, D., Simmonds, S., Thomas, C. (2015). Being there: inpatients' perceptions of family presence during resuscitation and invasive cardiac procedures. *American Journal of Critical Care, 24*(6); e108 – e115

Vamos, E.P. Csepanyi, G., Zambo , M. , Molnar, M.Z., Rethelyi, J., Kovacs, A, Marton, A, Nemeth, Z., Novak, M. &Mucsi, I. (2009). Sociodemographic factors and patient perceptions are associated with attitudes to kidney transplantation among haemodialysis patients, *Nephrology Dialysis Transplantation*, *24* (2); 653–660

Xue, J., Leng, Q., Gao, Y., Chen, S., Li, Z., Li, H., He, A. (2013). Factors influencing outcomes after cardiopulmonary resuscitation in emergency department.*World Journal of Emergency Medicine*, *4*(3), 183–189.http://doi.org/10.5847/wjem.j.issn.1920-8642.2013.03.005

Zhang, Z., Chen, M.L., Gu, X,L., Liu, M.H., Cheng, W.W. (2015). Cultural and ethical considerations for cardiopulmonary resuscitation in Chinese patients with cancer at the end of life.*The American Journal of Hospice & Palliative Care, 32*(2); 210 -215

APPENDIX I: QUESTIONNAIRE FOR NURSES

Introduction

I am ____ carrying out a research study on "*Family Members and Nurses' Experiences on Care and Support During Resuscitation at Kenyatta National Hospital's Critical Care Unit"*, in partial fulfillment for the award of Degree of Master of Science in Nursing , University of Nairobi. The information provided in this questionnaire will be used for academic purposes only and confidentiality will be highly upheld.

Thank you.

Instructions

1. Read through the questionnaire carefully before filling in.
2. Please answer these questions to the best of your knowledge.
3. Write your response in the spaces provided and in the manner instructed

PART A: DEMOGRAPHIC INFORMATION

PLEASE TICK AS APPROPRIATE:

Q1. Gender: Male [ ] Female [ ]

Q2. What is your age bracket?

20-29yrs [ ] 30-39 [ ] 40-49[ ] 50-59 [ ] Above 59 [ ]

Q3. Marital status: Single [ ] Married [ ] Divorced [ ]

Widowed Separated [ ] Others [ ]

Q4. Religion: None [ ] Protestant [ ] Seventh day [ ]

Muslim [ ] Traditional [ ] Others [ ]

Q5. Highest level of Education completed:

Certificate [ ] Diploma [ ] Degree[ ]

Masters [ ] PHD [ ] Others [ ]

Q6. Professional qualifications: Registered Nurse[ ] Enrolled Nurse [ ]

Q7: Position/cadre: ACN [ ] SNO [ ] NO1 [ ] NO2 [ ] NO3 [ ]

Other [ ]

Q8: Years of working experience: ___________________

Q9. Do you have specialization in critical care nursing? Yes [ ] No [ ]

If no, specify…...

Q11.Have you undertaken any resuscitation course in the last 2 years? Yes [ ] No [ ]

Q 12. Are there resuscitation guidelines in your institution? : Yes [ ] No [ ]

If Yes to Q3 above please name the guideline used _____________________________

____

PART B: VIEWS AND EXPERIENCES OF NURSES ON QUALITY CARE AND SUPPORT DURING RESUSCITATION

Q1. How often do you perform resuscitation? Never performed [ ] Daily [ ]

Weekly [ ] Annually[ ]

Q4. Are there any guidelines to debriefing after a resuscitation for the nurses?

Yes [ ] No [ ]

Q5. Resuscitation causes excessive workloads and increases nurses' stress levels

Yes [ ] No [ ]

Q6. Nurses are taken through debriefing immediately after resuscitation

Yes [ ] No[ ]

Q7. There is a specific individual allocated to debrief nurses immediately after the resuscitation

Yes[ ] No [ ]

Q8. There is hardly adequate time for debriefing immediately after a resuscitation

Yes [ ] No [ ]

Q9. Nurses are at a high risk of Post Traumatic Stress Disorders secondary to resuscitations

Yes [ ] No [ ]

Q10. Nurses fail to respond to resuscitations due to the stress associated with resuscitation outcomes

True [ ] False [ ]

APPENDIX II: IN DEPTH INTERVIEW GUIDE FOR NURSES

1. What kind of care and support were you offered during the resuscitation process?
    - Have you ever informed family members of an ongoing resuscitation? Describe how you went about it
    - In your own opinion, should family members be present during resuscitation? Elaborate your response
    - Have you ever attended a debriefing session, elaborate your response
    - Have you done any counseling course
    - What were your experiences during the resuscitation process?
2. In your own view, do you feel taken care of emotionally or psychologically or in any other way after a resuscitation
3. What aspects of resuscitation in KNH CCU would you wish to be improved? Please explain
4. Are there any cultural factors that affect the way you were cared for during resuscitation? Please elaborate your response, traditions, beliefs, myths and misconceptions
5. In your view, does the patient's age influence the quality of care and support given during resuscitation?
6. Does the patients' diagnosis and or prognosis affect the way you handled resuscitation? Please explain for each
7. What other patient related factors may influence the quality care and support during resuscitation?

APPENDIX III: IN DEPTH INTERVIEW GUIDE FOR FAMILY MEMBERS

Introduction

I am ____ carrying out a research study on "*Family Members and Nurses' Experiences on Care and Support During Resuscitation at Kenyatta National Hospital's Critical Care Unit*", in partial fulfillment for the award of Degree of Master of Science in Nursing , University of Nairobi. The information provided in this interview will be used for academic purposes only and confidentiality will be highly upheld.

Thank you.

Instructions

I. **The following interview will be audio taped**
II. **Please try to answer all the questions asked**
III. **Please ask for clarification in case you don't understand a question asked**

PART A: DEMOGRAPHIC INFORMATION

Q1. Gender: Male [ ] Female [ ]

Q2. Age in years: ________________

Q3. Marital status: Single [ ] Married [ ] Divorced [ ]

Widowed Separated Others [ ]

Q4. Religion: None [ ] Christian [ ]

Muslim [ ] Others [ ]

Q5. Highest level of Education completed:

None [ ] Primary [ ] Secondary[ ]

College [ ] University [ ] Others [ ]

PART B. INDEPTH INTERVIEW GUIDE FOR FAMILY MEMBERS

1. How did you learn about your relatives resuscitation, how was the news relayed, what was the environment, who relayed, what information was broken, where were you when the information was broken to you?
2. Were you informed immediately when they were trying to revive the patient or after?
3. How did you feel about the way information was relayed to you?
4. In your view do you feel your presence influenced the quality of care and support offered to the patient during resuscitation?
5. What kind of care and support were you offered during the resuscitation
6. What would be your recommendations based on the experiences had, please explain.
7. Do you have any cultural barriers (traditional beliefs ,religion, misconceptions) towards resuscitation ?
8. Would the patient diagnosis/prognosis/severity influence the care and support during resuscitation? please explain
9. Is there any other patient related factors that you feel influenced the care and support you received during resuscitation?

Thank you for your participation in the interview. The information provided will be kept safe and remain confidential. Thank you

APPENDIX IV: PROJECT TIME PLAN

ACTIVITY	Nov. 2017	Dec. 2017	Jan. 2018	Feb. 2018	Marc. 2018	Apr. 2018	May. 2018	Jun. 2018	Jul. 2018	Aug. 2018	Sept. 2018	Oct 2018	Nov 2018
Proposal Writing													
Presentation for correction and approval													
Submission of proposal to ethical committee & approval													
Pre-testing													
Analysis and evaluation of pre-test													
Field data collection													
Data cleaning													
Data analysis and report writing													
Defense of project report													
Dissemination; submission and publication													

APPENDIX V: STUDY BUDGET

SOURCE: SELF SPONSORSHIP

ITEM	NO. OF UNITS	COST PER UNIT (KSHS)	TOTAL COST (KSHS.)
A. STATIONERY			
Pens	20	10	200
Pencils	10	10	100
Rubbers	4	15	60
Folders	4	75	300
Flash disc	1	1500	1500
Sub Total			**2,160**
B. **SERVICES**			
Internet subscription	4 months	3000	12000
Proposal printing	50 pages x 1	5	250
Proposal Photocopying	50 pages*10	2	1000
Proposal binding	3 copies	100	300
Report printing	100 pagesx6	5	3000
Report binding	5 copies	500	2500
Questionnaire printing	5 pages	5	25
Questionnaire copies	5 pages*200	2	2000
KNH Central Registry statistics fee	Once	500	500
KNH Central Registry Search and Retrieval of files fee	Once	1500	1500
Ethics Committee Fee	1	2000	2000
Bio Statistician fee	1	30,000	30,000
Publishing fee	Journal	50,000	50,000
Sub Total			**105,075**
Cumulative Sub total			**107,235**
Contingencies (10% of the unseen total cost)			**12,723**
GRAND TOTAL			**119,958**

APPENDIX VI: INFORMED CONSENT FOR NURSES

a) **FOR THE QUANTITATIVE STUDY**

TITLE: Family members and nurses experiences on care and support during resuscitation

PRINCIPLE INVESTIGATOR: JOAN NDIRANGU

You are invited to participate in this study because you are a qualified nurse currently working in the critical care unit. The main objective of this study is to explore your experiences on care and support given to you during resuscitation in critical care unit Kenyatta national hospital. The specific objectives are to gather your views and experiences on care and support during resuscitation, factors that determine care and support given during resuscitation. You should understand the general principles which apply to all participants in a medical research: i) Your decision to participate is entirely voluntary ii) You may withdraw from the study at any time without necessarily giving a reason for your withdrawal iii) Refusal to participate in the research will not affect your job in this facility. We will give you a copy of this form for your records.

May I continue? YES / NO

WHAT IS THIS STUDY ABOUT?

The researchers listed above are interviewing nurses working in the main adult critical care units and family members whose relatives have been resuscitated at any point during their stay at the critical care unit. The purpose of the interview is to find out your experiences on care and support during resuscitation. Participants in this research study will be asked questions about their experiences

WHAT WILL HAPPEN IF YOU DECIDE TO BE IN THIS RESEARCH STUDY?

If you agree to participate in this study, the following things will happen: You will be given a questionnaire to fill by the researcher in a private area where you feel comfortable answering questions. This will last approximately 20 minutes.

ARE THERE ANY RISKS, HARMS DISCOMFORTS ASSOCIATED WITH THIS STUDY?

Medical research has the potential to introduce psychological, social, emotional and physical risks. Effort should always be put in place to minimize the risks. One potential risk of being in the study is loss of privacy. We will keep everything you tell us as confidential as possible. We will use a code number to identify you in a password-protected computer database and will keep all of our paper records in a locked file cabinet.

BENEFITS

There will be no benefits at an individual level or even compensation. However, the results of this study will be used by the hospital management so that interventions can be designed to help to improve the care and support given to nurses and family members during resuscitation

CONFIDENTIALITY

You will not be identified and no information you give will make it possible for anyone to identify you. All the information will be kept under lock and key and electronic information will be under a password.

WHAT IF YOU HAVE QUESTIONS IN FUTURE?

If you have further questions or concerns about participating in this study, please call or send a text message to the study staff at the number provided at the bottom of this page.

For any information about this study please you can contact the research Joan Muthoni on Telephone number 0715218281 or the supervisors Professor Anna Karani: 0721850910 or
Miss Hannah Inyama:0723065246.

For more information about your rights as a research participant you may contact the Secretary/Chairperson, Kenyatta National Hospital-University of Nairobi Ethics and Research Committee Telephone No. 2726300 Ext. 44102 email: uonknh_erc@uonbi.ac.ke.

WHAT ARE YOUR OTHER CHOICES?

Your decision to participate in research is voluntary. You are free to decline participation in the study and you can withdraw from the study at any time without injustice or loss of any benefits.

APPENDIX VII: INFORMED CONSENT FOR NURSES

b) **FOR THE QUALITATIVE STUDY**

TITLE: Family members and nurses experiences on care and support during resuscitation

PRINCIPLE INVESTIGATOR: JOAN NDIRANGU

You are invited to participate in this study because you are a qualified nurse currently working in the critical care unit. The main objective of this study is to explore your experiences on care and support given to you during resuscitation in critical care unit Kenyatta national hospital. The specific objectives is to gather your views and experiences on care and support during resuscitation, factors that determine care and support given during resuscitation. You should understand the general principles which apply to all participants in a medical research: i) Your decision to participate is entirely voluntary ii) You may withdraw from the study at any time without necessarily giving a reason for your withdrawal iii) Refusal to participate in the research will not affect your job in this facility. We will give you a copy of this form for your records.

May I continue? YES / NO

WHAT IS THIS STUDY ABOUT?

The researchers listed above are interviewing nurses working in the main adult critical care units and family members who witnessed their relatives being resuscitated at the critical care unit. The purpose of the interview is to find out your experiences on care and support during resuscitation. Participants in this research study will be asked questions about their experiences

WHAT WILL HAPPEN IF YOU DECIDE TO BE IN THIS RESEARCH STUDY?

You will be interviewed on a one to one by the researcher in a private room where a tape recorder shall be used to audiotape the conversation. There is no right or wrong answer, the aim is to understand experiences. This will take 20-30 minutes.

ARE THERE ANY RISKS, HARMS DISCOMFORTS ASSOCIATED WITH THIS STUDY?

Medical research has the potential to introduce psychological, social, emotional and physical risks. Effort should always be put in place to minimize the risks. One potential risk of being in the study is loss of privacy. We will keep everything you tell us as confidential as possible. We will use a code number to identify you in a password-protected computer database and will keep all of our paper records in a locked file cabinet.

BENEFITS

There will be no benefits at an individual level or even compensation. However, the results of this study will be used by the hospital management so that interventions can be designed to help to improve the care and support given to nurses and family members during resuscitation

CONFIDENTIALITY

You will not be identified and no information you give will make it possible for anyone to identify you. All the information will be kept under lock and key and electronic information will be under a password.

WHAT IF YOU HAVE QUESTIONS IN FUTURE?

If you have further questions or concerns about participating in this study, please call or send a text message to the study staff at the number provided at the bottom of this page.

For any information about this study please you can contact the research Joan Muthoni on Telephone number 0715218281 or the supervisors Professor Anna Karani: 0721850910 or
Miss Hannah Inyama:0723065246.

For more information about your rights as a research participant you may contact the Secretary/Chairperson, Kenyatta National Hospital-University of Nairobi Ethics and Research Committee Telephone No. 2726300 Ext. 44102 email: uonknh_erc@uonbi.ac.ke.

WHAT ARE YOUR OTHER CHOICES?

Your decision to participate in research is voluntary. You are free to decline participation in the study and you can withdraw from the study at any time without injustice or loss of any benefits. If you decline to be audio taped, you shall not participate in the study.

CONSENT FORM (STATEMENT OF CONSENT)

Participant’s statement

I have read this consent form or had the information read to me.

I have had the chance to discuss this research study with the researcher

I have had my questions answered in a language that I understand. The risks and benefits have been explained to me.

I understand that my participation in this study is voluntary and that I may choose to withdraw any time. I freely agree to participate in this research study.

I understand that all efforts will be made to keep information regarding my personal identity confidential.

By signing this consent form, I have not given up any of the legal rights that I have as a participant in a research study.

Participant printed name: ____

Participant signature / Thumb stamp ______________________ Date _________________

Researcher’s statement

I, the undersigned, have fully explained the relevant details of this research study to the participant named above and believe that the participant has understood and haswillingly and freely given his/her consent.

Researcher‘s Name: ____

Signature ____ **Date**: _______________

APPENDIX VIII: INFORMED CONSENT FOR FAMILY MEMBERS

TITLE: Family members and nurses experiences on care and support during resuscitation

PRINCIPLE INVESTIGATOR: JOAN NDIRANGU

You are invited to participate in this study because your family member was resuscitated in the ICU. The main objective of this study is to explore your experiences on care and support given to you during your patient's resuscitation in critical care unit Kenyatta national hospital. The specific objectives are to gather your views and experiences on care and support given during resuscitation, factors that determine care and support given during resuscitation. You should understand the general principles which apply to all participants in a medical research:

i) Your decision to participate is entirely voluntary

ii) You may withdraw from the study at any time without necessarily giving a reason for your withdrawal

iii) Refusal to participate in the research will not affect your relatives medical care/any assistance or the services you are entitled to in this health facility or other facilities. May I continue? YES / NO

WHAT IS THIS STUDY ABOUT?

The researcher listed above is interviewing family members (next of kin) whose patient has been resuscitated at any point during their stay at the critical care unit. The purpose of the interview is to find out family members experiences on care and support during resuscitation. Participants in this research study will be asked questions about their experiences

WHAT WILL HAPPEN IF YOU DECIDE TO BE IN THIS RESEARCH STUDY?

If you agree to participate in this study, the following things will happen: You will be interviewed by the researcher in a private area where you feel comfortable answering questions. You will be interviewed on a one to one by the researcher in a private room where a tape recorder shall be used to audiotape the conversation. This will take 20-30 minutes.

ARE THERE ANY RISKS, HARMS DISCOMFORTS ASSOCIATED WITH THIS STUDY?

Medical research has the potential to introduce psychological, social, emotional and physical risks. Effort should always be put in place to minimize the risks. One potential risk of being in the study is loss of privacy. We will keep everything you tell us as confidential as possible. We will use a code number to identify you in a password-protected computer database and will keep all of our paper records in a locked file cabinet.

BENEFITS

There will be no benefits at an individual level or even compensation. However, the results of this study will be used by the hospital management so that interventions can be designed to help to improve the care and support given to nurses and family members during resuscitation

CONFIDENTIALITY

You will not be identified and no information you give will make it possible for anyone to identify you. All the information will be kept under lock and key and electronic information will be under a password.

WHAT IF YOU HAVE QUESTIONS IN FUTURE?

If you have further questions or concerns about participating in this study, please call or send a text message to the study staff at the number provided at the bottom of this page.

For any information about this study please you can contact the research Joan Muthoni on Telephone number 0715218281 or the supervisors Professor Anna Karani: 0721850910 or
Miss Hannah Inyama:0723065246.

For more information about your rights as a research participant you may contact the Secretary/Chairperson, Kenyatta National Hospital-University of Nairobi Ethics and Research Committee Telephone No. 2726300 Ext. 44102 email uonknh_erc@uonbi.ac.ke.

WHAT ARE YOUR OTHER CHOICES?

Your decision to participate in research is voluntary. In this interview, the researcher will use an audiotape to record the information given. If you are uncomfortable you can decline continue without any injustice or punishment. The discussion might bring up difficult memories, you are allowed to decline answering the questions and you can request to stop at any time. You are free to decline participation in the study and you can withdraw from the study at any time without

injustice or loss of any benefits. If you decline to be audio taped you shall not participate in the study.

CONSENT FORM (STATEMENT OF CONSENT)

Participant's statement

I have read this consent form or had the information read to me.

I have had the chance to discuss this research study with the researcher

I have had my questions answered in a language that I understand. The risks and benefits have been explained to me.

I understand that my participation in this study is voluntary and that I may choose to withdraw any time. I freely agree to participate in this research study.

I understand that all efforts will be made to keep information regarding my personal identity confidential.

By signing this consent form, I have not given up any of the legal rights that I have as a participant in a research study.

Participant printed name: ____

Participant signature / Thumb stamp ______________________ Date _________________

Researcher's statement

I, the undersigned, have fully explained the relevant details of this research study to the participant named above and believe that the participant has understood and has willingly and freely given his/her consent.

Researcher's Name: ____

Signature ____ **Date**: _______________

APPENDIX IX: MODEL BUILDING FOR THE QUALITY OF CARE

Source	SS	df	MS
Model	1.25370528	11	.113973207
Residual	2.43256923	39	.06237357
Total	3.68627451	50	.07372549

Number of obs = 51
F(11, 39) = 1.83
Prob > F = 0.0823
R-squared = 0.3401
Adj R-squared = 0.1540
Root MSE = .24975

quality	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
_Igender_2	.1892161	.0834089	2.27	0.029	.0205056	.3579266
_Iage2_2	.0706817	.1050976	0.67	0.505	-.1418984	.2832617
_Imarried_2	-.0339914	.1083621	-0.31	0.755	-.2531745	.1851916
_Ireli_2	-.0829405	.082885	-1.00	0.323	-.2505913	.0847102
_Iedu_2	-.0977992	.0813657	-1.20	0.237	-.2623769	.0667784
_Irank_2	-.0602209	.1288145	-0.47	0.643	-.3207729	.2003311
_Iexperien_2	-.2519106	.0973113	-2.59	0.013	-.4487413	-.05508
_Ispeciali_2	-.0163998	.1152067	-0.14	0.888	-.2494275	.2166278
_Iresuscou_2	.0495281	.0926271	0.53	0.596	-.1378278	.2368841
_Iresustra_2	-.0648185	.1088169	-0.60	0.555	-.2849215	.1552845
_Iresusgui_2	-.0017218	.0766218	-0.02	0.982	-.1567041	.1532605
_cons	.2126325	.100052	2.13	0.040	.0102582	.4150069