ADDIS ABABA UNIVERSITY

COLLEGE OF MEDICINE AND HEALTH SCIENCE

SCHOOL OF ANESTHESIA

ASSESSING THE ANESTHETIST INVOLVEMENT IN TRAUMA CARE MANAGEMENT AT TRAUMA SET UPS AND EMERGENCY ROOMS AND AFFECTING FACTORS IN ADDIS ABABA PUBLIC HOSPITALS.

BY: TEAME TEKLEAB (BSC)

THESIS SUBMITTED TO ADDIS ABABAUNIVERSITY COLLEGE OF HEALTH SCIENCES DEPARTMENT OF ANESTHESIA FOR PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE MASTERS OF DEGREE IN ANESTHESIA

JUNE, 2017

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Abstract

Back Ground: Trauma care involves the entire spectrum of care from the first responder through rehabilitation. The original aim of the trauma team is to reduce the second peak of the trimodal distribution of death following trauma, by appropriately managing correctable disturbances to the airway, breathing and circulation, if well implemented, is predicted to reduce preventable deaths by 42%. The initial responsibility is airway management; securing a compromised airway with a definitive airway device may be a priority, usually requiring intubation with rapid sequence induction of anesthesia with manual in-line stabilization of the cervical spine, provision of analgesia and resuscitation both inside and outside the hospital. Anesthetists practice in a variety of settings and one of the most challenging is the trauma set ups and emergency rooms and the setting in which the anesthetists practice may influence the skills needed because of many factors.

Objectives: -Assessing the anesthetists involvement in trauma care management at trauma set ups and emergency rooms and affecting factors at Public Hospitals in Addis Ababa.

Methods-institutional based cross sectional study was conducted on all eligible Anesthetists working at six randomly selected Public Hospitals in Addis Ababa from Jan 1, to Mar 30, 2017 GC. Data was collected using structured questionnaire and data entry and analysis was done with SPSS version 20.

Result- A total of 57 respondents were surveyed with response rate of 100%. Of the respondents (n = 57), 16 (28.1%) of were involved in trauma set ups and ER, 41 (71.9%) were not. Of the 16 respondents involved in trauma set ups and ER 7(43.8%) were involve daily, 6(37.5%) weekly and about 3 (18.8%) reported involved at least once per month. Among the 16 respondents involved 10(62.5%) were participating in airway management, 5(31.3%) were in sedation and 1(6.2%) in peripheral nerve block. Concerning those who were not involved (n=41), 14(34.1%) were due to inadequate resources supply in their setups,8(19.5%) poor teamwork communication and coordination between the staffs,8(19.5%) lack of knowledge , 7(17.1%) shortage of manpower and 4(9.8%) was because of administrative problems.

Conclusion and recommendations- The results indicated that 71.9% of the anesthetists remain unable to involve in trauma care management at trauma set ups and emergency rooms. Inadequate resources supply (34.1%); poor teamwork communication and coordination between the staffs, shortage of manpower and to some extent administrative problems were among the most affecting factors for involvement in trauma set ups in this research finding. we suggest to the concerned bodies to fulfill necessary materials to the hospitals and open opportunity for educational development and refresher training for the anesthesia professionals.

ACRONYMS

AAU-Addis Ababa University

ASA - American Society of Anesthesiologists

ER-Emergency Room

MDG- Millennium Development Goals

MOE-Ministry of Education

MOH-Ministry of Health

OR-Operation Room

1. INTRODUCTION

1.1 Back ground

Worldwide, trauma resulted in 4.8 million deaths in 2013, an increase of 11.0 % since 1990 (1). Most of these deaths occurred in low- and middle-income countries, with the World Health Organization estimating that injury is responsible for more deaths than HIV, malaria, and tuberculosis combined (2,3). The cost of trauma related injury remains exorbitant, both in terms of the economic consequences for society, as well as the fact that they account for 11 % of estimated disability adjusted life years for those living with the sequel of injury (4, 5). These squeal disproportionately affect low -income countries due to inadequate surgical and anesthesiology services and poor rehabilitation system (2, 6).

It is estimated, that patients that die of trauma related injuries in low -income countries, roughly 80.0 % die in the pre-hospital setting (4). Reductions in trauma-associated morbidity and mortality have been linked to a variety of factors including adequate pre-hospital care, decreased transportation time to definitive care, and improved trauma surveillance (4, 5). Moreover, the addition of basic surgical services could avert approximately 21.0 % of the injury burden of low -income countries. As such, new attention and efforts are being made to prioritize both essential surgical and anesthesia care in the post-2015 international agenda that will build on momentum and successes of the Millennium Development Goals (MDG) (6).

In Ethiopia, like other developing countries, trauma is common but little attention is being given to this problem (7). Trauma constitute around a half of all surgical emergencies(8), and were the major reason for an emergency room visit in Addis Ababa during 1999 (9), more than a quarter of all surgical admissions(10-14) and 62% of orthopedic admissions in Black Lion hospital . Data compiled by the ministry of health in 2000/2001 showed that injuries ranked fourth and fifth as a leading cause of admission and death respectively accounting for 6.2% and 1.6%(15). Ethiopia hosts an annual road traffic fatality of 114 deaths per 10,000.Vehicles and a property loss of over 56 million US dollars every year (16).

The current model of civilian trauma system was first in the USA with the adoption in the American Congress of the Emergency Medical Systems Act, Public Law 93–154, on November 1, 1973. The intention was to set up an area-wide emergency medical

system (17). The rationale for this was failure to provide sufficient specialized care in an early phase of major trauma had been demonstrated to be a major shortcoming in the management of seriously injured patients (18). One of the Improvements in trauma care that resulted from this law was the introduction of multidisciplinary trauma teams. A trauma team aims to rapidly resuscitate and stabilize the patient, and to reduce the time to diagnosis and treatment with the overall objective of improving survival rates. Cowley (19) was among the first to conclude that having different specialties in a trauma centre is a necessity to reduce mortality.

The importance of interdisciplinary teams in ensuring effective primary trauma care was recognized as far back as 1978 by the World Health Organization (WHO) (20). Over a decade ago, two separate reports, each published by the Institute of Medicine (IOM), focused on the importance of collaborative practice and interdisciplinary involvement in trauma care management. The book crossing the Quality Chasm: A New health System for the 21st Century (21) emphasized the importance of collaboration and interdisciplinary training in the effective coordination of care. Patient safety and collaboration across disciplines was highlighted in a further book, Building a Safer trauma care (22). Interprofessional teamwork is achieved through interactive effort between all the professionals involved, with good communication and respect for and understanding of the roles of other team members (23). Everyone involved in the process takes the contribution of everyone else into consideration (24).

The trauma team usually comprises a multidisciplinary group of individuals drawn from the specialties of anesthesia, emergency medicine, surgery, nursing and support staff, each of whom provide simultaneous inputs into the assessment and management of the trauma patient, their actions being coordinated by a team leader. The primary aims of the team are to rapidly resuscitate and stabilize the patient, prioritize and determine the nature and extent of the trauma and prepare the patient for transport to the site of definitive care (24).

Anesthesia being an essential part of health care services, now not merely limited to operating room but also involves the services related to emergency room, intensive care unit, angiography-catheterization laboratory, magnetic resonance imaging suite, pain clinics, resuscitative rooms, electroconvulsive therapy rooms and other life-saving services.

1.2. Statement of the problem

Trauma remains a major cause of hospitalization, morbidity, and mortality. Trauma systems and trauma set ups with multidisciplinary trauma teams have become a well-recognized entity in the management of patients with traumatic injury. This organizational structure has led to decreased mortality and improved functional outcomes. Anesthetists work synergistically with surgeons and other imperative healthcare providers to provide expert management of patients who have sustained traumatic injuries. The pervasiveness of trauma and its impact both nationally and globally demands the attentive focus of the specialty of anesthesia so that anesthetists, along with other medical specialties, may continue to mitigate the burden of traumatic injury on the individual patient and society at large (25).

In the emergency department predictable airway emergencies include trauma intubations, inhaled foreign bodies and other causes of airway obstruction.The rate of difficult intubation in the emergency department as high as 8.5% and the need for an emergency surgical airway as high as 1.5% (25-27). Knowledge of likely scenarios should drive preparedness of personnel, equipment, communication channels and policies. Emergency airway management outside the operating theatre is known to be associated with more frequent problems than routine anesthesia. Patients with major trauma, present to emergency departments with little or no warning and have acknowledged airway difficulties due to direct airway trauma, hemorrhage into the airway, lung injury limiting pre-oxygenation, physiological compromise and requirement to immobilize the neck due to possible cervical spine injury, which is known to increase the incidence of Cormack and Lehane grade 3 and 4 views of the larynx, making intubation even more difficult (29).

Pain is one of the leading post major trauma outcomes causing patient distress (35) Research suggests that 3 of 4 major trauma patients receive less than adequate pain relief. (36) Inadequate pain control can lead to a prolonged hospital stay (37) as well as an increased incidence of unscheduled post management admissions (38).Pain management in the trauma patient faces a number of challenges. During resuscitation of the critically injured patient, analgesia is clearly not the highest priority. Recent studies have shown that untreated pain leads to a higher incidence of conditions, such as chronic pain and post-traumatic stress disorder.

1.3 Significance of the study

Trauma may affect anyone, regardless of age or socioeconomic factors. Trauma is predicted to become the third largest contributor to the global burden of disease by 2020. Currently, the estimated economic burden, including both healthcare costs and lost productivity, in the United States is $406 billion per year. Approximately 85,000 patients hospitalized with traumatic brain injury subsequently live with long-term disability (2).

The Prevalence of trauma admission and death appears to be very high in our country like other many low income countries (8) .so early intervention of anesthetists with other health professional team members in the trauma care management at trauma set ups and emergency rooms may have a substantial impact on future morbidity and mortality of the patients. A research examining about anesthetist involvement in trauma care in public hospitals in their trauma set ups and ER will be essential to prove this notion or idea.

In my knowledge there is no study done in this area before .So the purpose of this study will try to assess the anesthetists involvement in trauma care management at trauma set ups and emergency rooms and affecting factors in Public Hospitals and results of this study may benefit patients who will sustain trauma, for policy makers, administrator of the hospitals, involved health professionals and trauma center organizers. Also the study is anticipated to come up with baseline data for future studies with larger sample size & national studies.

2. LITERATURE REVIEW

Airway management by anesthetists is the recognized practice for most trauma intubations in trauma set ups in South Africa. Two recent studies (39, 40) report that emergency department anesthetists perform airway management around 56%. These cases tend to include anticipated problematic airways, which are not a rarity in trauma, as demonstrated in this study; at least 6 patients were intubated for threatened airway obstruction. This study also indicated that because of high incidence of airway problem in the emergency room training is always given to all emergency department anesthetists to equip them with the skills and experience to manage even difficult airways in the emergency department. (41)

A questionnaire-based survey was done in Ugandan anesthetists; approximately two-third (77%) of the anesthetists was not participating in trauma care. The authors identified significant shortages of adequately trained personnel, anesthetic drugs, and equipments are the main challenges in the hospital set ups. According to the study merely 23% of the anesthetists had the facilities to deliver safe anesthesia in their set ups properly (42).

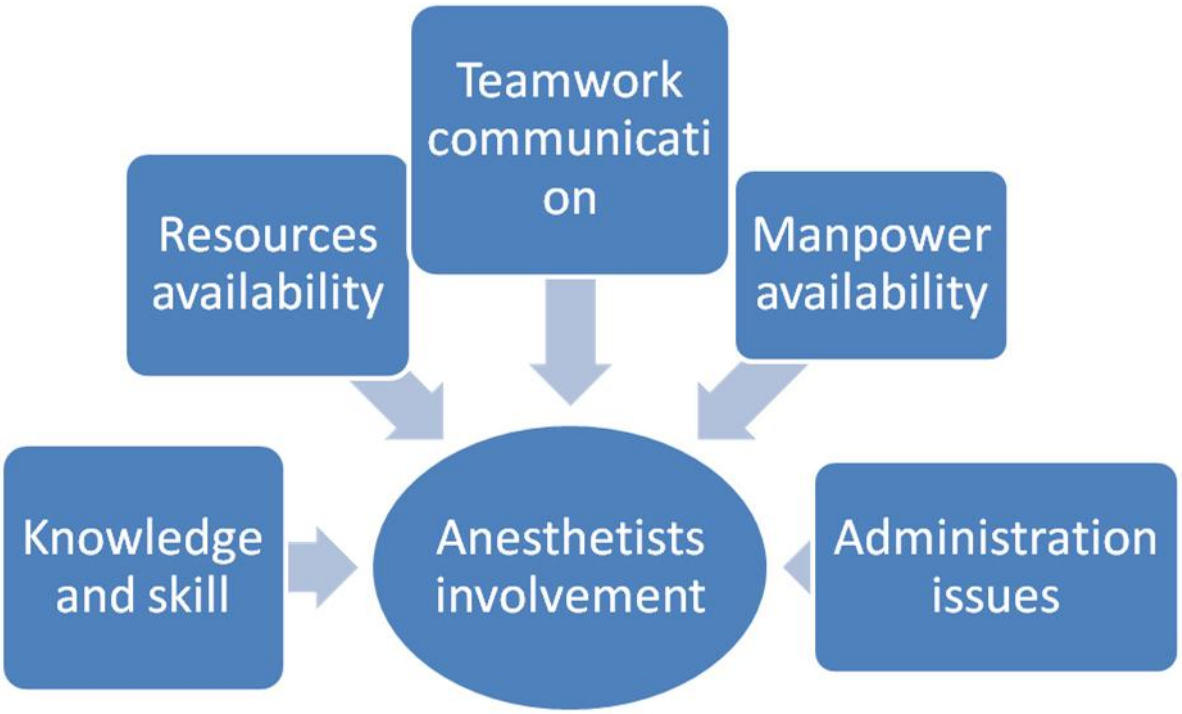
Study conducted in Jeddah and Riyadh hospital revealed that the practice of regional anesthesia is frequently performed on daily and weekly basis among 88.2% of the respondent anesthetists in the Saudi Kingdom (43).

Study conducted in Nigeria hospitals on regional anesthesia particularly on peripheral nerve block, Rukewe and Fatiregun reveals a high percentage of respondents (52.9%) had performed a nerve block and 31.4% had used a nerve stimulator technique throughout their practice in trauma care management (45).

Study done in UK, over the past decade and, more recently, the well-documented benefits of interprofessional collaborative practice, communication failure between healthcare team members remains a frequent cause of team disorganization and coordination. It is estimated that approximately 70 to 80% of healthcare errors are due to poor team communication and understanding in all health services and these lead to negative health outcomes, and reduced quality and safety of care. High-risk environments such as the trauma setting and emergency departments, which involves the management of complex patients by specialized teams in a dynamic environment, and where communication, cooperation and coordination are vital for effective care, is where the vast majority of these poor communication and coordination occur. Within the UK, communication, cooperation and coordination problems have been found 10%

over the past 5 years. Teams were found to be primarily ad hoc in nature (46). The changing dynamics of a team was seen to influence its adaptive capacity. For example, high turnover and short-term involvement of team members hindered team performance. Ability to anticipate team members' needs, adaptive capacity, ability of the team leader to create a good working environment, work space, team familiarity with procedures (47), and the right mix of technical competency were all factors identified as important for effective team working. Administration problems and Organizational processes had a potentially negative influence on teamwork. Valued commodities (including technical skills and knowledge, equipment, clinical territory) were identified as forming the basis of negotiation or exchange in interprofessional interactions and facilitating collaboration (47).

2.1 CONCEPTUAL FRAMEWORK



3. OBJECTIVES

3.1. General Objective:

To assess the anesthetists involvement in trauma care management at trauma set ups and emergency rooms and affecting factors in Public Hospitals in Addis Ababa from Jan 1,to Mar 30,2017 GC.

3.2. Specific objective

To assess the level of anesthetists involvement in trauma care management at trauma set ups and emergency rooms in Public Hospitals in Addis Ababa

To identify factors affecting the involvement of anesthetists in trauma care management at trauma set ups and Emergency rooms in Public Hospitals in Addis Ababa

4. METHODS AND MATERIAL

4.1. Study area:

The study was conducted in Addis Ababa, the capital city of Ethiopia. The city has a total population of 3,475,952 according to the 2007 population census with annual growth rate of 2.7%. Its area is estimated to be 530 Km2 with altitudes ranging from 2200 to 3000 m above sea level, average temperature of 22.8°C and average rainfall of 1,180.4 mm. Addis Ababa has 40 hospitals (12 public and 28 NGO and private), 29 health centers, 122 health stations, 37 health posts and 382 modern private clinics. The estimated anesthetists in the hospitals are around 250.

4.2. Study period:

The study was conducted from Jan 1, to Mar 30, 2017 GC.

4.3. Study Design:

Institutional based cross sectional study was employed in Public Hospitals in Addis Ababa from Jan 1, to Mar 30, 2017 GC.

4.4 populations:

4.4.1 Source population:

Anesthetists working in all public Hospitals in Addis Ababa

4.4.2 Study population:

Anesthetists working in selected Public Hospitals in Addis Ababa

4.4.3 Inclusion criteria:

Currently on clinical practice in Public Hospitals in Addis Ababa during the study period

4.5 Sample size and sampling technique:

The study was conducted on all eligible anesthetists in six public hospitals in Addis Ababa. There are twelve public hospitals in the city. Six of them were selected by simple random using lottery method and these are Army hospital, ALERT hospital, Minillik II hospital, Yekatit 12 hospital, St Paulo's and Abet hospital.

4.6 Study variables:

4.6.1 Dependent variable

Anesthetist involvement in trauma set ups and ERs –YES, NO

4.6.2 Independent variables

Age, sex, qualification, years of experience, lack of equipments, lack of Knowledge ,lack of communication and co-ordination, administration problems, inadequate resources and shortage of manpower

4.7 Operational Definitions:

Difficult airway: is defined as the clinical situation in which a conventionally trained anesthetist experiences difficulty with face mask ventilation of the upper airway, difficulty with tracheal intubation, or both.

Trauma system: is an organized, coordinated effort in a defined geographic area that delivers the full range of care to all injured patients and is integrated with the local medical and public health systems

Trauma Center or set up: is a key element in a trauma system and the focal point for trauma care.

4.8 Data collection technique:

4.8.1. Data collection:

Data was collected by using structured questionnaire to assess the degree of anesthetist's involvement in trauma care management at trauma settings and ERs and affecting factors in selected Public Hospitals in Addis Ababa.

4.8.2 Pre testing the questioner:

Before the actual data collection, the questionnaire was tested on 5% of the estimated population.

4.8.3 Data compilation and analysis:

The data was cleaned and checked for completeness. It was compiled and analyzed using SPSS version 20.Descriptive statistics was used to analyze the data. Percentage, mean, and standard deviation were used to describe the findings. Tables and different graphs were used to assist data presentation

4.8.4 Ethical consideration:

An institutional review board (IRB) approval was obtained from anesthesia department, college of health science, AAU**.** After the permission from IRB, Official letter was submitted to the selected Public Hospitals in Addis Ababa then, the purposes and the importance of the study was explained and verbal consent was secured from each participant. Confidentiality was maintained at all levels of the study.

4.8.5 Presentation and dissemination plan:

The result of the study will be presented using tables and figures. The copies of final results will be disseminated to AAU department of anesthesia, Ethiopian anesthetists association, Minister of health and ministry of education. It will also present on workshops and different seminars.

5. RESULTS

A total of 57 respondents, were studied with response rate of 100%. When studying the distribution of respondents on the basis of age groups it was found that most of the respondents 21(36.8%) were aged between 20 and 30years, 16(28.1%) were between 31 and 40 years, 12(21.1%) were aged between 41 and 50 years and 8(14%) were aged between 51and 60 years, mean age was 35.7 ± (SD) (16.4) years (table 1). Depending on gender distribution, there was male predominance 33 (57.9%) and 24 (42.1%) female.

Table1- Socio demographic analysis of the study participants in Addis Ababa Public Hospitals from Jan 1 to Mar 30, 2017 GC.

Variables		frequency	percent
Age group	20-30	21	36.8
	31-40	16	28.1
	41-50	12	21.1
	51-60	8	14
Gender	Male	33	57.9
	Female	24	42.1
Marital status	Married	21	36.8
	Single	36	63.2
Qualification	Diploma	5	8.8
	BSC	48	84.2
	MSC	4	7
Experience	<1	4	7
	1-5	21	36.8
	6-10	18	31.6
	11-15	11	19.3
	>16	3	5.3

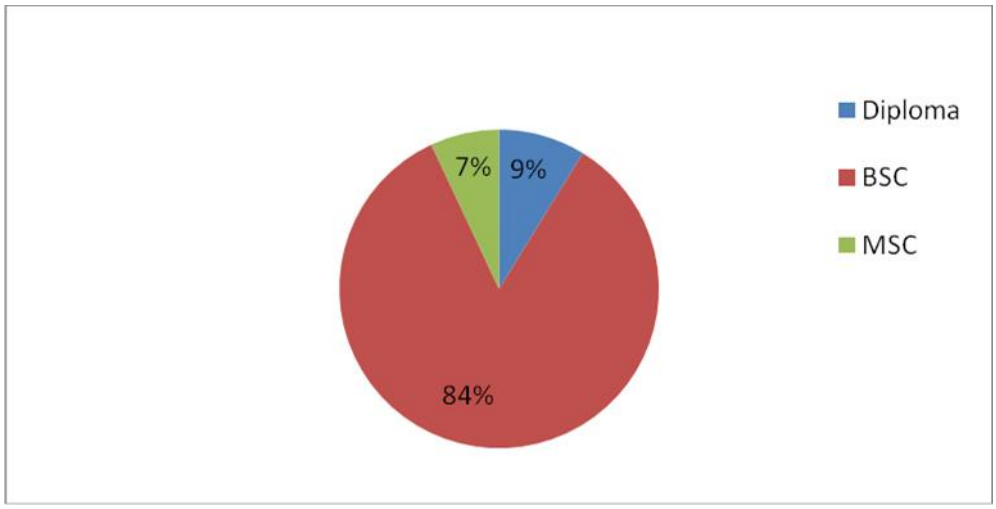


Figure 1-academic qualification of respondents in Addis Ababa Public Hospitals from Jan 1 to Mar 30, 2017 GC.

Among the 16 the respondents involved in trauma set ups 10(62.5%) were participating in airway management, 5(31.3%) were in sedation and 1(6.2%) in peripheral nerve block.

Concerning airway management, of the 10 participants 6(60%) were reported challenge from lack of airway equipments (difficult airway kit), 3(30%) fear of complications and 1(10%) was due to lack of skill.

Table2-study of participants involvement in trauma set ups and ER in Addis Ababa Public Hospitals from Jan 1 to Mar 30, 2017 GC.

VARIABLES	FREQUENCY	PERCENT
Involvement in trauma set up and ER (N=57)		
Yes	16	28.1
No	41	71.9
Frequency of Involvement in trauma set up and ER(N=16)		
Daily	7	43.8
Weekly	6	37.5
Monthly	3	18.8
Procedures performed in trauma set up and ER(N=16)		
Airway management	10	62.5
Peripheral nerve block	1	6.2
Sedation during procedure	5	31.3
Methods for nerve location during PNB		
Anatomical location	1	100
challenges in peripheral block in trauma set up		
Lack of equipment(peripheral nerve block kit)	1	100
	6	60
challenges in Airway management in trauma set up(N=10)	1	10
Lack of equipments (for difficult airway)	3	30
Lack of practical skills		
Fear of complications		

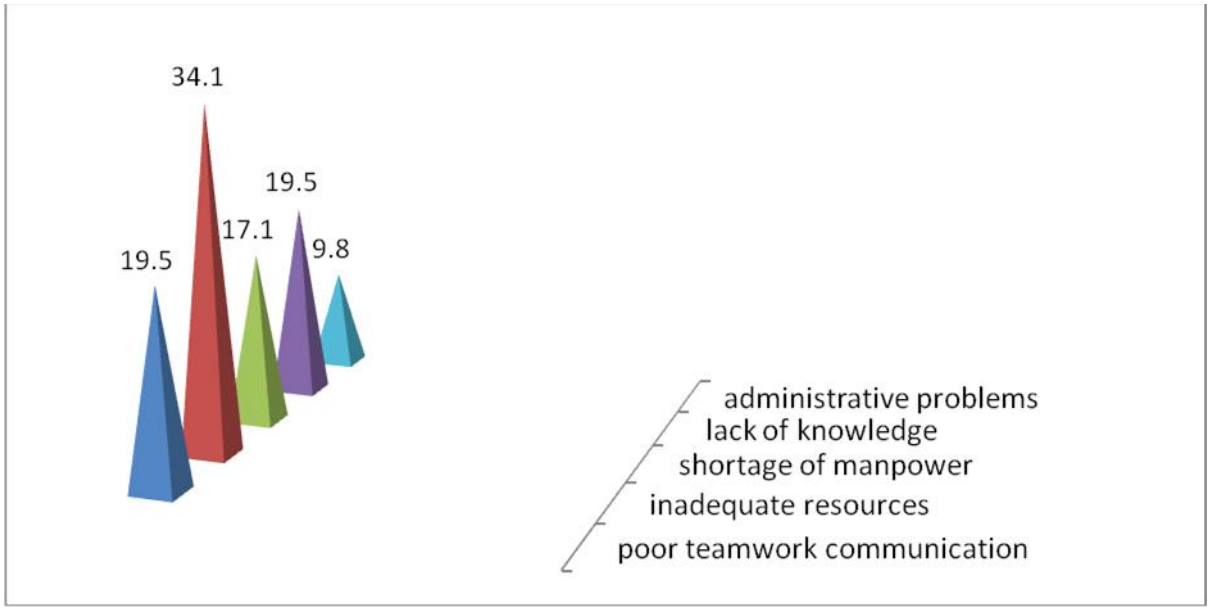


FIGURE 2- factors affecting the study participants to involve in trauma set up and ER in Addis Ababa Public Hospitals from Jan 1 to Mar 30, 2017

5. DISCUSSION

From this study finding among the respondents (n =57) only 16 (28.1%) had been involving in trauma care management service, most of them; 10 (62.5%) have been participated in airway management in the trauma set up within the past three months and almost comparable with the study done in Tygerberg Academic Hospital in South Africa which is around 56%(40,41),but lower compared to the study conducted in Jeddah and Riyadh hospital, revealed that the practice of airway management in the trauma set up and ER is frequently performed on daily and weekly basis by 88% of the respondent anesthetists in the Saudi Kingdom(43).As the result showed that lack of equipment for difficult airway management(60%)and fear of complication(30%) were among the major challenges during airway involvement at trauma set up and ER in this study. Lack of skill and knowledge also mentioned with less percentage.

In our study result the anesthetist participating in trauma set up for peripheral nerve block was (6.2%) and using nerve stimulator or ultrasound guide was nil, they simply used anatomical location. Study conducted in Nigeria hospitals, Rukewe and Fatiregun reveals a high percentage of respondents (52.9%) had performed a nerve block and 31.4% had used a nerve stimulator technique (45) This much difference was come from equipments for peripheral nerve blocks such as nerve stimulators, ultrasound, and block needles are expensive for the hospitals, the techniques are complex to learn and fear of complication were among the challenges in the trauma setting.

From this study, 41(71.9%) were not involved at all in the trauma set ups and ERs in the hospitals and the finding was almost comparable (77.1%) with study done on anesthetists practicing in Uganda hospitals (42). According to this result inadequate resources (34.1%) ,poor teamwork sprit or communication, shortage of manpower, lack of knowledge and to some extent administration problems were among the most affecting factors for those who were not involving in trauma care management service procedures within the last three months of the study in their hospitals .

Study done in UK, over the past decade and, more recently, the well-documented benefits of interprofessional collaborative practice, communication failure between healthcare team members remains a frequent cause of disorganization and coordination. It is estimated that approximately 70 to 80% of healthcare errors are due to poor team communication and understanding in all health services and these errors can lead to negative health outcomes, and reduced quality and safety of care. High-risk environments such as the trauma setting and emergency departments, which involves

the management of complex patients by specialized teams in a dynamic environment, and where communication, cooperation and coordination are vital for effective care, is where the vast majority of these poor communication and coordination occur. Within the UK, communication, cooperation and coordination problems have been found 10% over the past 5 years in trauma set ups (46). In this study the result of poor teamwork and coordination (19.5%) is high when it compares with UK. This can be the changing dynamics of teams, like high turnover and short-term involvement of team members that hindered team communication and coordination, ability to anticipate team members' needs, adaptive capacity, ability of the team leader to create a good working environment, team familiarity with procedures and the right mix of technical competency all those were among the major affecting factors mentioned by the participants for effective team work in trauma set up.

Administration problems and Organizational processes had a potentially negative influence on teamwork activities in trauma set ups and ER (47) and 9.8% was in our study result

6.1 Limitation of the study

Limited references (particularly researches done in Ethiopia)

This research is done on small group of participants and selected public hospitals and cannot be representative of the whole anesthetists and public hospitals of the country.

7. CONCLUSION

The results indicated that 71.9% of the anesthetists remain unable to involve in trauma care management at trauma set ups and emergency rooms .inadequate resources supply (34.1%), poor teamwork communication and coordination between the staffs, shortage of manpower and to some extent administrative problems were among the most affecting factors for involvement. 28.1% the anesthetist were involved in trauma set ups and ERs in this study but limited to airway management, sedation and rarely to peripheral nerve block.

The anesthetists practice of peripheral nerve block(6.2%) in trauma care management at trauma set up and ER in this study was underutilized due to lack of equipment (peripheral nerve block kit)**.**

8. RECOMMENDATIONS

By taking this results and analysis of this study into account the following recommendations are forwarded.

To ministry of Health (MOH):

Responsible bodies in MOH should give a meticulous attention on how to continuously supply resources like medical equipments related to anesthesia service to the hospitals.

MOH and MOE should work together on how to retain anesthetists in their profession and increase the number of anesthetists to solve the shortage of manpower in public hospitals.

To hospital administrators:

Hospital administrations should arrange continuous training and workshop programs for the anesthetists to update their knowledge and skill and needs to create conducive environment in the work area for the anesthesia professionals.

To concerned NGOs:

There is need of training for anesthetists which are working in public hospitals at trauma set ups and the hospitals should support with medical supply (equipments like difficult airway kits, regional anesthesia kits)

To the researchers:

the assessment of anesthetist involvement in trauma care management at trauma set ups and ERs are key measures of quality care in anesthesia services ,so that similar studies with large sample size which includes all other anesthetic care is good to notice the gap behind anesthetist involvement, especially on factors associated with no involvement.

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10. DUMMY TABLES

TABLE 1- Socio demographic characteristics of the study participants in Addis Ababa Public Hospitals from Jan 1 to Mar 30, 2017 GC.

Variables		frequency	percent
Age group	20-30		
	31-40		
	41-50		
	51-60		
Gender	Male		
	Female		
Marital status	Married		
	Single		
Qualification	Diploma		
	BSC		
	MSC		
Experience	<1		
	1-5		
	6-10		
	11-15		
	>16		

TABLE2-The study of participants involvement in trauma set ups and ER in Addis Ababa Public Hospitals from Jan 1 to Mar 30, 2017 GC.

	FREQUENCY	PERCENT
Involvement in trauma set up and ER		
Yes		
No		
Frequency of Involvement in trauma set up and ER		
Daily		
Weekly		
Monthly		
Procedures performed in trauma set up and ER		
Airway management		
Peripheral nerve block		
Sedation during procedure		
Methods for nerve location during PNB		
Anatomical location		
Nerve stimulator		
Ultrasound guide		
challenges in peripheral block in trauma set up		
Lack of equipment(peripheral nerve block kit)		
Lack of practical skill		
Lack of knowledge		
Fear of complication		
challenges in Airway management in trauma		
Lack of equipments (difficult airway kit)		
Lack of practical skills		
Fear of complications		

TABLE 3-factors affecting the study participants to involve in trauma set up and ER in Addis Ababa Public Hospitals from Jan 1 to Mar 30, 2017 GC

factors affecting the study participants to involve in trauma set up and ER	FREQUENCY	PERCENT
Poor teamwork communication and coordination Administrative problems Shortage of manpower Inadequate resources Lack of knowledge		

ANNEXII

ADDIS ABABA UNIVERSITY

COLLEGE OF HEALTH SCIENCE

DEPARTMENT OF ANESTHESIA

Questionnaire to assess the degree of anesthetists involvement in trauma care management and affecting factors at trauma set ups and ER.

General questions:

1.Code number_____

2.Date of interview __/__/__

3. Interviewer'sname_____signature……

4.Result of data collection

4.1 complete…….

4.2 Incomplete……

4.3 others

5. Checked by investigator Signature_____ Date __/__/__

Interviewer Introduce yourself to the client

Hel

lo, my Name is----------I am conducting a study to assess the degree of anesthetists involvement in trauma care management and affecting factors at trauma set ups and ER. As part of this, I would like to ask you some questions about your involvement in trauma care management and affecting factors at trauma set ups and ER. There is no risk if you agree to participate in the interview. All the information that you give to me will be kept confidential. This interview should take approximately 15 min to complete. Your participation is absolutely voluntary. You are free to ask any questions; you may refuse to take part in the interview; you may refuse to answer any question and you may stop responding at any point. Do you have any questions for me at this time about this survey? Yes_____ No___

Do you agree to participate in the study? Yes_____ No_

IF NO, THANK THE PARTICIPANT AND STOP

You can also contact principal investigator with address below:

Taeme97@gmail.com,+251913626464

Instruction: For each of the following questions, please circle the number of alternative(s) that fit the response or write on the space provided for specifying!

PART ONE .SOCIO DEMOGRAPHIC CHARACTERISTICS

101. Age----------

102. Gender

1) Male
2) Female

103-Marital status

1) Married
2) Single

104. Position (Qualification)

1) Diploma
2) BSC
3) MSC

105.Year of experience in anesthesia profession ----------

part two-anesthetist involvement in trauma set ups and emergency rooms

201) have you ever been involved in trauma care management in trauma set up and ER in your hospital?

1) Yes
2) No

202)If your answer for question No.1 is yes‘, How frequent?

1) Daily
2) Weekly
3) Once per month

203)If your answer for question No.1 is _yes‘, please indicate the procedure you have involved?

1) Airway management
2) Peripheral nerve block
3) Sedation during procedure
4) Other/specify……..

204) if you involve in Airway management is there any challenges in your set up?

1) Lack of equipment (difficult airway kit)
2) Lack of practical skills
3) Lack of drugs/medications

4) Lack of Knowledge

5) Fear of complications

6) Never

205) if you involve in peripheral nerve block what do you use for nerve location?

1) anatomical location

2) nerve stimulator

3) ultrasound guide

206) if you involve in peripheral nerve block is there any challenges?

1) Lack of equipments (peripheral nerve block kit)

2) Lack of skills

3) Lack of drugs/medications

4) Lack of Knowledge of the procedure

5) Fear of complications

6) Never

PART THERE –factors affecting for anesthetist involvement in trauma set up and ER

207) what do you think the factors affecting for the anesthetists not involved in trauma set up and ER in your hospital?

1) Poor teamwork communication and coordination

2) Administrative challenges

3) Shortage of manpower

4) Inadequate resources

5) Lack of Knowledge

6) other/specify……

208) what is your suggestion to improve anesthetist involvement in trauma care management at trauma set ups and ER ?

Declaration

I, the undersigned, declare that this thesis is my original work in partial fulfillment of the requirements for the degree of MSc in Advanced Clinical Anesthesia. I understand that plagiarism will not be tolerated and all directly quoted material has been appropriately referenced

Name: _____

Signature: _____

Submission to MSc Tutor, Dept. of Anesthesia, Addis Ababa University.

Date of Submission: _____

This thesis work has been submitted for examination with my/our approval as Advisors and Tutors on the MSc in Advanced Clinical Anesthesia course

	Name	Signature	Date
1.	Primary Advisor_____	_____	_____