ASSESSMENT OF KNOWLEDGE AND ATTITUDE OF ATLS AMONG INTERNS OF THREE DIFFERENT MEDICAL SHOOLS OF ETHIOPIA

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LIST OF ABBREVIATIONS

AAU	Addis Ababa University
ATLS	advanced traumatic life support
ED	emergency department
EM	emergency medicine
EMD	emergency medicine department
SPSS	Statistical Package for Social Science
TASH	TikurAnbessa Specialized Hospital
SPHMMC	Saint Paul hospital millennium medical college
ABCDE	airway, breathing, circulation, disability, exposure
UK	United Kingdom
ETAC	emergency trauma assesment and care

ABSTRACT

Back ground: Trauma is a leading cause of death and disability all over the world. Management of injured patients in many circumstances involves a team effort that allows medical personnel with special skills and expertise to provide care simultaneously with surgical leadership of the process. Trauma management can be improved by implementing a trauma system that includes injury prevention, education and hospital care. In order to deliver timely organized and effective care to the patient physicians who are competent, efficient are needed.

OBJECTIVE: The aim of this study is to assess the knowledge and attitude of interns of three different medical school to ATLS from February1/2019 to July 31/2019.

Methodology: Cross-sectional study method is conducted in selected medical schools: Addis Ababa University, St. Paul millennium medical college and Arsi University College of health sciences. Data was collected from February 1/2019 to July 31/2018 by the principal investigator and delegate person using structured questionnaires. The data is analyzed by using SPSS 22.0.

Results: 172 out of 212 respondents filled and returned the quetionare.106 from AAU,40 from SPHMMC,26 from Arsi University. Of the respondents, 112 (65.1%) were male the rest 60(34.9) were female. Among the participants 12 (7%) has very good knowledge, 71(41.3%) has good knowledge, 45(26.2%) has fair knowledge, 26(15.1%) has low knowledge, 18(10.5%) has very low knowledge about ATLS.98.8% of the participant interns have positive attitude towards ATLS .and most(85.5%) believe that it genuinely improves the management of trauma patient.

Conclusion: Doctors should be trained in ATLS before employment, or as early as possible in their service lives. Most interns view ATLS positively and believe that it saves life and provides genuine practical benefit for patients

CHAPTER ONE

INTRODUCTION

Trauma is one of the leading causes of mortality in developing countries.[3] According to the most current information from the World Health Organization (WHO) and the Centers for Disease Control (CDC), more than nine people die every minute from injuries or violence, and 5.8 million people of all ages and economic groups die every year from unintentional injuries and violence. [3]

The burden of injury is even more significant, accounting for 18% of the world's total diseases. [3] Motor vehicle crashes (referred to as road traffic injuries in alone cause more than 1 million deaths annually and an estimated 20 million to 50 million significant injuries; they are the leading cause of death due to injury worldwide. Improvements in injury control efforts are having an impact in most developed countries, where trauma remains the leading cause of death in persons 1 through 44 years of age. Significantly, more than 90% of motor vehicle crashes occur in the developing world. [3]

Injury-related deaths are expected to rise dramatically by 2020, and deaths due to motor vehicle crashes are projected to increase by 80% from current rates in lowland middle-income countries.

Advanced trauma life support (ATLS) is a protocol for management of acute trauma victims. [5,12] It was devised in 1976 by an American Orthopedic surgeon, James Styner and in 1980 it was adopted by the American College of Surgeons Committee on Trauma.[5,12] It is now widely accepted as the standard protocol for initial assessment and treatment of acute trauma victims.[1,3,4]

ATLS is based on the idea that the greatest threat to life should be treated first; the lack of a definitive diagnosis should never prevent the application of an indicated treatment and

a detailed history is not essential to begin the evaluation and treatment of a patient with acute injuries.[3]

1.2 STATEMENT OF THE PROBLEM

Emergency medicine (EM) as a separate and distinct discipline is a recent development in the history of medical practice. It originated four decades back in the USA and Canada. And only, nine years have been counted since it is established in our country, Ethiopia.

In order to deliver timely organized and effective care to the patient physicians who are competent, efficient are needed. To facilitate that there is a need to distribute the system that allows timely managing critically ill patients and diminishing the occurrence of preventable morbidities and mortalities .This research will assess the knowledge and attitude of interns to ATLS who are working at three different teaching hospital of Ethiopia.

1.3 SIGNIFICANCE OF THE STUDY

Nationally injury is one of the leading causes of morbidity and mortality. In order to deliver organized, fast and lifesaving resuscitation to the injured patient, physician who have the knowledge and knows the impact of early and appropriate intervention are required.

Interns are the junior physician who is going to be distributed to different part of the country to serve the community after completing their training .They have to know the systemic and organized approach to manage the trauma patient they will face at their vicinity. Assessing their knowledge and attitude towards ATLS is crucial to set and organize the undergraduate training system in different medical school of Ethiopia.

To our knowledge there is no previous study that asses the knowledge and attitude of interns to ATLS in Ethiopia .This research will feel this gap and will be used as a reference for future study.

CHAPTER TWO

LITERATURE REVIEW

Trauma is a leading cause of death and disability all over the world. [3,5] Trauma management can be improved by implementing a trauma system that includes injury prevention, education, pre-hospital care, transportation, hospital care, and rehabilitation [1]. If properly implemented, trauma systems can reduce mortality of severe trauma patients by at least 15% [2]. Training physicians to manage multiple trauma patients is an essential part of developing proper trauma systems. [2,3]The primary endpoint of any clinical educational activity is its impact on improving health care. [3]

The concept behind the ATLS course has remained simple. [3] Historically, the approach to treating injured patients, as taught in medical schools, was the same as that for patients with a previously undiagnosed medical condition: an extensive history including past medical history, a physical examination starting at the top of the head and progressing down the body, the development of a differential diagnosis, and a list of adjuncts to confirm the diagnosis [3]. Although this approach was adequate for a patient with diabetes mellitus and many acute surgical illnesses, it did not satisfy the needs of patients suffering life-threatening injuries [3]. The approach required change. [3]Three underlying concepts of the ATLS Program were initially difficult to accept: this includes

1. Treat the greatest threat to life first.
2. Never allow the lack of definitive diagnosis to impede the application of an indicated treatment.
3. A detailed history is not essential to begin the evaluation of a patient with acute injuries.

The result was the development of the ABCDE approach to evaluating and treating injured patients [3].These concepts also align with the observation that the care of injured patients in many circumstances is a team effort that allows medical personnel with special skills and expertise to provide care simultaneously with surgical leadership of the process .[3]

The ATLS course emphasizes that injury kills in certain reproducible time frames [3]. For example, the loss of an airway kills more quickly than does loss of the ability to breathe. The latter kills more quickly than loss of circulating blood volume. The presence of an
Expanding intracranial mass lesion is the next most lethal problem. Thus, the mnemonic ABCDE defines the specific, ordered evaluations and interventions that should be followed in all injured patients:

Airway with restriction of cervical spine motion

Breathing

Circulation, stop the bleeding

Disability or neurologic status

Exposure (undress) and **E**nvironment (temperature control)

The ATLS course emphasizes the rapid initial assessment and primary treatment of injured patients, starting at the time of injury and continuing through initial assessment, lifesaving intervention, reevaluation, stabilization, and, when needed, transfer to a trauma center. [3] The course consists of precourse and postcourse tests, core content, interactive discussions, scenario-driven skill stations, lectures, interactive case presentations, discussions, development of lifesaving skills, practical laboratory experiences, and final performance proficiency
Evaluation. [3].

The golden hour is credited to the late Dr R Adams Cowley. It was derived from the French World War 1 data which showed an increasing mortality with the passage of time following trauma.[3,5] However, the golden hour currently refers to the time period lasting about one to four hours following traumatic injury sustained by a casualty during which there is the highest likelihood that prompt medical emergency treatment will prevent death. This period matches the second peak of the trimodal death distribution following trauma and is the target period of ATLS. [3,5]

Organized ATLS trainings are adopted in many countries as a condition for the employment of surgical residents or doctors into the trauma units. These trainings provide consistently high standard of improvement in knowledge and therefore, care of the injured [6].

In our nation, this is not the case. Until recent years Doctors are employed with no extra training in ATLS or any other trauma-care course. Meanwhile, it has been documented that the basic training in medical schools is not enough and does not prepare clinicians adequately for emergencies.[11]

ATLS training in a developing country has resulted in a decrease in injury mortality [3]. Lower per capita rates of deaths from injuries are observed in areas where providers have ATLS training. [3] In one study, a small trauma team led by a doctor with ATLS experience had equivalent patient survival when compared with a larger team with more doctors in an urban setting. In addition, there were more unexpected survivors than fatalities [3].

There is abundant evidence that ATLS training improves the knowledge base, the psychomotor skills and their use in resuscitation, and the confidence and performance of doctors who have taken part in the program[3]. The organization and procedural skills taught in the course ascertained by course participants for at least 6 years, which may be the most significant impact of all. [3]

According to one research ,which was done 20 years back in UK to asses trainee thinking to ATLS, most participant has positive feeling towards ATLS and they were taking this course to genuinely improve patients care rather than to enhance their curriculum vitae.[4]

CHAPTER THREE

OBJECTIVE

GENERAL OBJECTIVE

To assess the knowledge and attitude of interns of three different medical schools to ATLS

SPECIFIC OBJECTIVES

1. To assess the knowledge of interns to ATLS
2. To assess the attitude of interns to ATLS
3. To compare knowledge and attitude of ATLS among interns from the three medical schools.

CHAPTER FOUR

MATERIALS AND METHODS

This is a descriptive cross-sectional study conducted among interns of three medical schools of Ethiopia from February 1 to July 31 2019.These are Addis Ababa University College of health sciences(AAU), Saint Paul Hospital Millennium Medical College (SPHMMC) and Arsi University College of health sciences (Arsi).

Internship is the final year of medical education where interns will have 13 weeks attachment in each of the four departments' i.e internal medicine, surgery, pediatrics and obstetrics and gynecology.

There are no other established and organized trainings on trauma care in our environment for us to compare them with the ATLS. We designed a questionnaire which consists of parts of sociodemography, knowledge and attitude.

The knowledge part is obtained from emergency trauma assessment and care (ETAC) of Lebanon. It consists of 20 multiple choice questions which asses their knowledge of different parameters of ATLS and graded out of 20. The assessment grading of the level of knowledge is as follows (Table 1).It is taken from grading system of AAU with the interns who scored less than 50% as very low,50-59.9% low,60-69.9 as fair,70 -84.9%as good and 85and above as very good. The attitude part is obtained from Bruce Campbell, Department of Surgery, Royal Devon and Exeter Hospital, Exeter, UK.

Very low	Interns who answered below 10 out of 20
Low	Interns who answered 10 -12 out of 20
Fair	Interns who answered 12-13 out of 20
Good	Interns who answered 14-16 out of 20
Very good	Interns who answered 17 and above

Table 1: criteria for rating the level of knowledge of ATLS, at AAU, SPHMMC and Arsi from Feb to July 2019

The sample size was determined using confidence level of 95%.using the following formula

- ✓ $n = n_{0*N/n0+N-1} = 384*470/384+470-1 = 211.5 = 212$
  - ❖ where n— the corrected sample size for the population
  - ❖ n0 – the sample size for infinite popu lation

- N--- the total number of the population

Minimum sample size determined was 212.Two hundred and twelve questioners was printed and distributed to the three medical schools. The questions also prepared to be filled online with a link but not successful.

The Inclusion Criteria:

All Voluntary interns practicing in the above teaching hospitals.

The ExclusionCriteria

1. Interns who are not willing or unable to participate for different reasons will be excluded
2. Interns on leave during the study period

Independent variables: gender, place of practice of internship, training of ATLS Course, their thinking about the importance of ATLS for their career.

Dependent variables: knowledge and attitude of interns towards ATLS will be studied.

The questionnaires that were properly filled and returned were then analyzed by SPSS version 22 to determine the sex, age and place of practice of the respondents, their level of training, their attitudes and their level of knowledge of the parameters involved in ETAC.

As the data are collected by the data collectors, completeness and validity is checked meanwhile by them and principal investigator.

Ethical clearance was obtained from Addis Ababa University, college of health sciences and department of Emergency Medicine and Critical care and permission was obtained from each participant prior to participant enrollment in to the study.

The report of this study will be disseminated through hospital administrator and Addis Ababa University stake holder. It will be an asset for those who design policies regarding the provision of ATLS course to the country.

CHAPTER FIVE

RESULTS

5.1 Response rate and sociodemography

A total of 172 completed questionnaires were returned by interns, among them 106 from AAU, 40 from SPHMMC, 26 from Arsi University - a response rate of 81 %. Of the respondents, 112 (65.1%) were male the rest 60(34.9) were female.

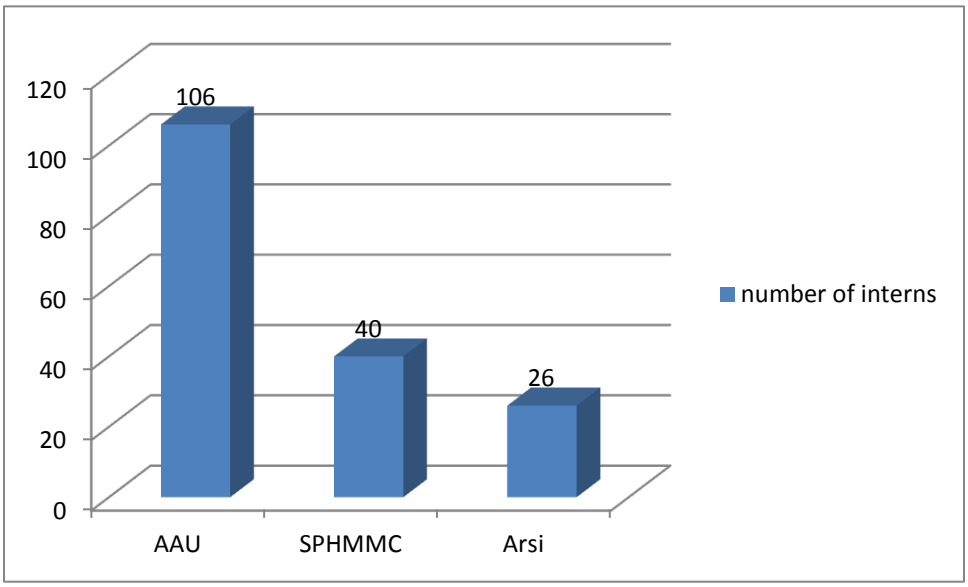

Figure I – the graphic representation of the number of interns who participated on the study with the place where they are practicing, at AAU, SPHMMC and Arsi from Feb to July 2019

	Where are you Practicing your internship			
	AAU	SPHMMC	Arsi	Total
Male	67	26	19	65.1%
female	39	14	7	34.9%
total	106	40	26	100%

Table 2- the proportion of each sex in the the different medical schools, at AAU, SPHMMC and Arsi from Feb to July 2019

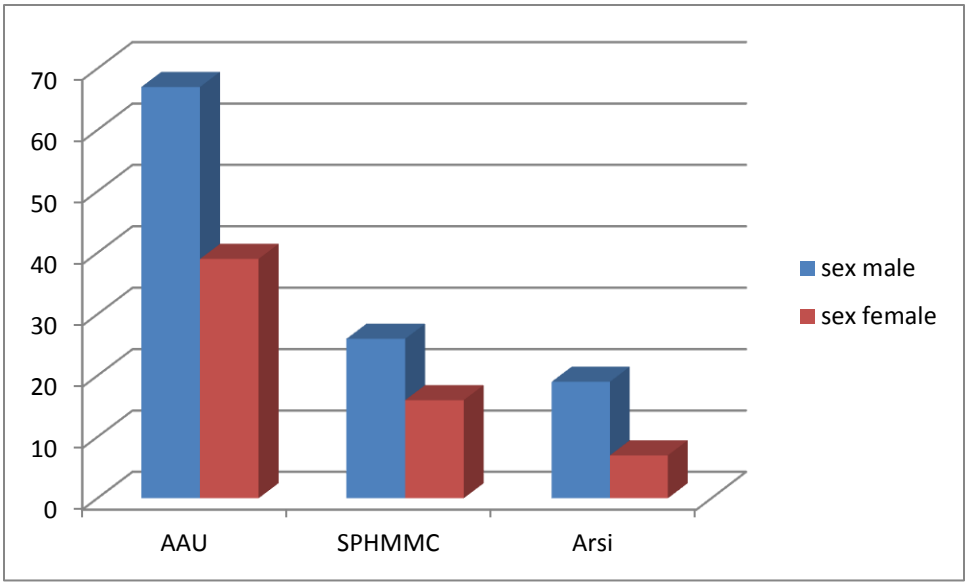

Figure II – shows the number and sex composition of interns in the three different medical schools, at AAU, SPHMMC and Arsi from Feb to July 2019

5.2 The level of knowledge of the participants

Among the participants 12 (7%) has very good knowledge, 71(41.3%) has good knowledge, 45(26.2%) has fair knowledge, 26(15.1) has low knowledge, 18(10.5%) has very low knowledge about ATLS. From 60 females 27(45%) has good and very good knowledge about ATLS. On the other hand from 112 male interns 50 % has good and very good knowledge about ATLS.

5.3 The level of knowledge in place practicing internship

Among 106 participants interns of AAU 58 (54.7%) has good and very good knowledge ,SPHMMC 16 (40%) out of 40 participant interns has good and very good knowledge ,from Arsi University medical college 9(34.6) has good and very good knowledge about ATLS .

		Level of knowledge of the interns					P value
		Very low	low	fair	good	v.good	
Where are you practicing your internship?	AAU - 106	4.7%	10.4%	30.2%	46.2%	8.5%	0.003
	SPHMMC - 40	22.5%	27.5%	10%	35%	5%	
	Arsi-26	15.4%	15.4%	34.6%	30.8%	3.8%	

Table 3 the level of knowledge of the interns with the place where they are practicing their internship, at AAU, SPHMMC and Arsi from Feb to July 2019

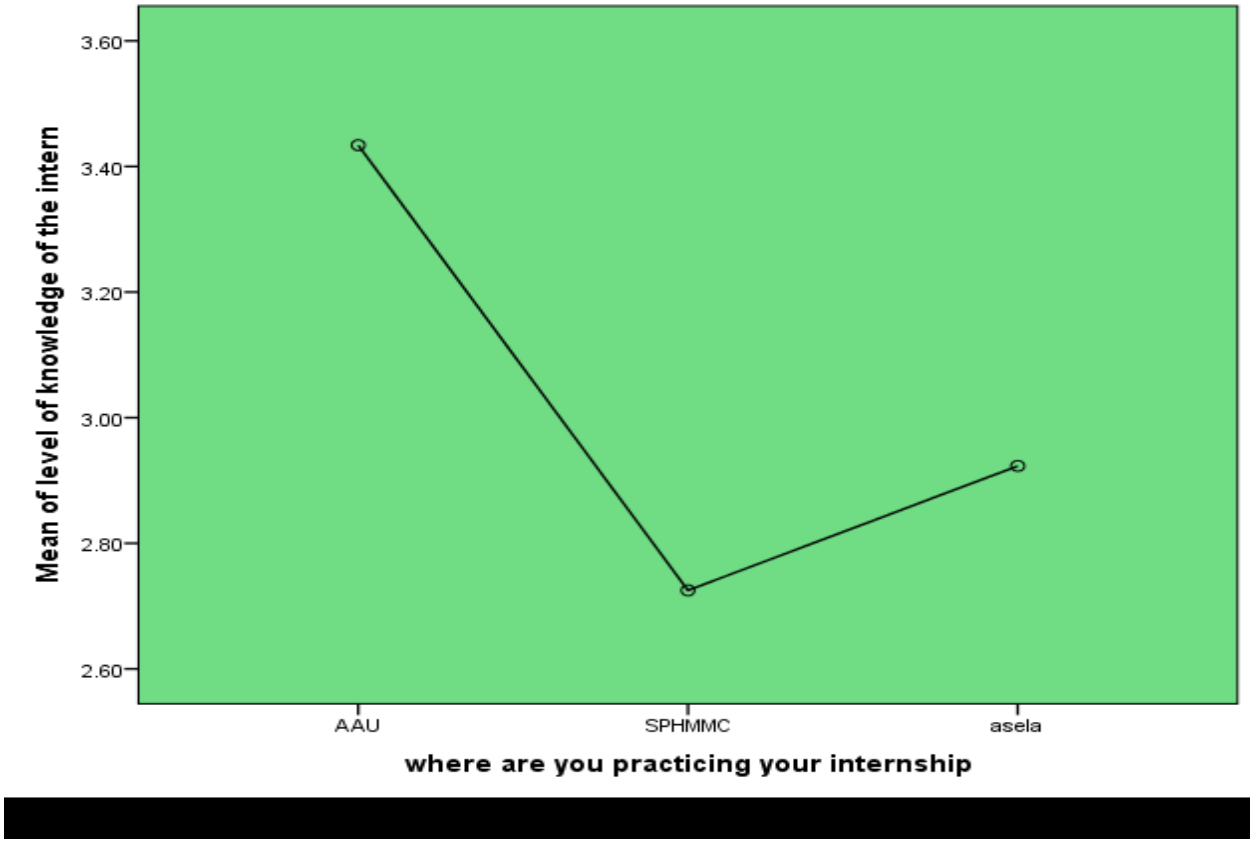

Figure 3 - Mean plot of level of knowledge of interns with the place of where they are practising at AAU, SPHMMC and Arsi from Feb to July 2019

5.4. Attitudes of the participants

Attitudes towards ATLS were either strongly positive (90.7%) or 'positive but with reservations' (8.1%) with only 0.6% 'negative, but it has some good points', and 0.6% 'strongly negative'. Attitudes to ATLS were positive or strongly positive among 98.6% of those who had done an ATLS provider course, and 100 % of those who had not done a course.

Over all 157 interns think that ATLS is essential,7 thinks that it has major help,5 thinks that it h as some help for practicing their proposed spatiality, while 3 thinks that it is completely unnecessary for practicing their proposed spatiality. Similarly 120 participant interns say that it is

essential for advancement of their career, only 4 interns say that it has no advantage on career advancement.

In general , the most important reason for doing an ATLS course was judged by 147(85.5%) to be that ATLS 'genuinely improves the management of trauma patients and, in concert with this, 99.4% (171 of 172 responses) thought that ATLS saves lives.

The structured approaches of ATLS were considered desirable by 87.8% although 17.9% saw some disadvantages: 3 % considered the structured approach thoroughly undesirable, while the remaining 9.3% thought it undesirable but understandable.

In general, is your attitude towards ATLS				
Factors		Positive	Negative	P-value
Sex	Male 112	98.2%	1.8%	0.271
	Female 60	100%	0	
Place of practicing internship	AAU-106	98.2%	1.8%	0.445
	SPHMMC-40	100%	0	
	Arsi – 26	100%	0	
Have you done ATLS provider course?	Yes-146	98.5%	1.5%	0.290
	No -26	100%	0	
For advancement of your career, do you think ATLS is?	**Major advantage - 163**	**99.4%**	**0.6%**	**0.007**
	No advantage-9	**88.9%**	**11.1%**	
Level of knowledge of the interns	Good and above - 83	100%	0	0.907
	Fair – 45	97.7%	2.3%	
	Low and Very low - 44	97.7%	2.3%	

Table 4 – shows the relation and proportion of attitude toward ATLS with different variables (sex, place of practicing internship, whether interns have done the course, the advantage of ATLS for their career, their level of knowledge.) at AAU, SPHMMC and Arsi from Feb to July 2019

Among the participants 98.2% of male and all females has positive attitude towards ATLS.98.5 %of interns who have done ATLS provider course has positive attitude towards ATLS whereas 100 %of interns who have not done ATLS provider course has positive attitude towards ATLS .All participant interns who have good and very good knowledge has positive attitude towards ATLS .It is 88.9% of interns who have fair and low knowledge has positive attitude towards ATLS .99.4%of interns who think ATLS has major advantage for advancement of their career has positive attitude it is 88.9 % in those who think it has no advantage which shows significant relationship with the P value of 0.007.

Of the respondents, 92.4% thought that all existing consultants dealing with trauma patients should have done an ATLS course (AAU 95.3%, SPHMMC 95 %, and Arsi 77 %), while 76.2% thought it essential for doctors whose specialty would not involve regular trauma management , 19.2% thought ATLS training offered major advantages for them ,4.2% unnecessary but has some advantage, 0.6% thought completely unnecessary

CHAPTER SIX

Discussions

ATLS was introduced with the main aim of improving the trauma management skills of doctors in community hospitals in the US, where they were seldom confronted with major trauma. These were its success and perceived advantages that it has been introduced to many other countries throughout the world, and it has been given for medical students of AAU and later to medical students of SPHMMC during their attachment to emergency and critical care.

To our knowledge, this is the first study to investigate the knowledge and attitudes of interns of three medical schools of Ethiopia most of the participants were males and from AAU.

When we see the level of knowledge of interns who are practicing in the institution giving the course of ATLS has better knowledge than the other institutions.

In this research the level of knowledge of the interns has shown statically significant relation ship with the place where they are practicing their internship with the p value of p(0.003). Even though the numbers of participants are small and random it signifies the importance of teaching ATLS in increasing their knowledge of ATLS.This agree with Abuzidan etal which states that ATLS training significantly increased knowledge, and improved practical skills and the critical decision making process in managing multiple trauma patients.

There are many researches that showed ATLS courses enhance the abilities of trainees, [4,7,8] although proving a beneficial effect on trauma outcomes is more difficult [4,9].but most interns (99.4%) who participated in this research believes that ATLS saves lives.

The overall attitude to ATLS in this research is overwhelmingly positive, but this invites consideration of the response rate, and of the fact that the non responders might have comprised many interns who had not done ATLS courses, or who might have constituted a more negative group. This result agree with the the previous research which was done by Bruce cam bell and his associates, at royal deven and exterhospital United Kingdom.

The results do not support the notion that many interns of different level of knowledge do ATLS primarily to enhance their curriculum vitae and for the advantage of their career prospects A larger percentage of interns judged ATLS as a major help (or essential) for practicing their proposed career than for their CV,.

Participant interns thought that all existing consultants dealing with trauma patients should have done an ATLS course: This contradicts the view that ATLS is inappropriate for experienced and senior doctors.[10]

Most interns of different level of knowledge thought the rigid structure of the course desirable, although many had understandable reservation about this. This agrees with the previous research done at United Kingdom.[(4)]

Limitations of the study; include

1. The high non responder rate
2. Difficulty to include other medical schools of the country.
3. Unavailability of previous similar research on the topic over the country
4. The sampling method

CHAPTER SEVEN

CONCLUSIONS

The study demonstrated interns who are from the institutions who is providing ATLS has better knowledge to that of other institution who does not provide that. Further trainings are therefore required to improve the level of knowledge of ATLS in this group as medical personnel who do not appreciate the priorities in treatment of the injured will have poor patient outcome.

Doctors should be trained in ATLS before employment, or as early as possible in their service life, especially if they will be involved in caring for trauma victims. This will increase knowledge and reduce panic among doctors involved in trauma care. The regional health bureaus who are employing the doctors could arrange for the trainings to ease the cost burden and also bring it closer to those interested.

This research has shown that most interns view ATLS positively. They believe that it saves life and provides genuine practical benefit for patients, and very few regard ATLS primarily as a career advantage or mandate.

CHAPTER EIGHT

RECOMMENDATIONS

We recommend to do further research in different medical schools of the country taking this as an entry point. And also to provide ATLS course to all interns because they are the one who will be distributed to different part of the country after they completed their training and managing trauma patient initially.

CHAPTER NINE

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CHAPTER TEN

ANNEXES

8.1 Questionnaire

Socio demographic characteristics of interns enrolled to study

1, Age (years)

2, sex

A, male B, Female

3 From which medical school are you from?

A, AAU B, SPHMMC C, Hawassa university D,HAYAT medical school

Questions to assess the knowledge of the participants

1.You have a patient who suffered facial and inhalation burns. After performing a surgical cricothyroidotomy your patient only has breath sounds on the right side.This is probably due to:

a. Right main stem bronchus intubation
b. Left main stem bronchus intubation
c. Right side pneumothorax
d. Tension pneumothorax

2. Before you attempt to start an IV for fluid resuscitation, your priority should be to:

a. Stop the bleeding
b. Prepare fluid
c. Sterilize the IV site
d. Ensure adequate blood pressure

3. When casualties become hypothermic secondary to blood loss, changes occur in their blood that will prevent it from:

a. Clotting
b. Fighting infections
c. Carrying oxygen
d. Carrying nutrients

4. When performing a needle chest decompression, we insert the needle over the top of the rib to avoid damage to the _____, which runs along the bottom of the rib

a. Cartilage bridge
b. Intercostals muscle
c. Neurovascular bundle
d. Parietal pleura

5. The best guide for adequate fluid resuscitation of the burn patient is

a. Adequate urinary output.
b. Reversal of systemic acidosis.
c. Normalization of the heart rate.
d. Four ml/kg/percent body burn/24 hours.

6. The first maneuver to improve oxygenation after chest injury is

a. Intubate the patient.

b. Assess arterial blood gases.
c. Administer supplemental oxygen.
d. Ascertain the need for a chest tube.

7. The most important, immediate step in the management of an open pneumothorax is

a. Operation to close the wound.
b. Placing a chest tube through the chest wound.
c. Placement of an occlusive dressing over the wound.
d. Initiation of two, large-caliber IVs with Ringer's Lactate.

8. Hemorrhage of 20% of the patient's blood volume is associated usually with

a. Oliguria.
b. Confusion.
c. Hypotension.
d. Tachycardia.

9. Which one of the following statements concerning intraosseous infusion in children is TRUE?

a. Only crystalloid solutions may be safely infused through the needle.
b. Aspiration of bone marrow confirms appropriate positioning of the needle.
c. Intraosseous infusion may be utilized indefinitely in the management of injured children.
d. Swelling in the soft tissue around the intraosseous site is not a reason to discontinue infusion.

10. What is Sellick's maneuver?

a. A method allowing the rescuer to hold a mask on the face with both hands
b. A system used to calculate minute volume
c. Another name for Mallampati
b. Posteriorly directed pressure applied to the cricoid cartilage

11. A 34-year-old man has a gunshot wound to the right groin area. Arterial bleeding,which cannot be controlled with direct pressure, is coming from the wound. The patient appears confused, diaphoretic, and has weak peripheral pulses. What is the appropriate fluid resuscitation for this patient?

a. Intravenous fluid at a "Keep Open" rate
b. Apply a hemostatic agent and gain intravenous access given enough fluid to maintain peripheral pulses
c. Intravenous fluid at a Wide Open rate; give at least two liters, then reassess patient
d. No intravenous access should be established in this situation

12. Among the following, what is the most common cause of preventable trauma death in the injured adult patient?

a. Airway obstruction
b. Cardiac tamponade
c. Hemorrhagic shock
d. Spinal injury

13. Which of the following is an acceptable location to insert a needle when decompressing a tension pneumothorax?

a. Directly under the bottom of the second rib, midclavicular line
b. Directly under the bottom of the third rib, midclavicular line
c. Directly over the top of the fourth rib, midaxillary line

d. Directly over the top of the third rib, midclavicular line

14. Prior to passage of a urinary catheter in a man, it is essential to

a. Examine the abdomen.
b. Determine pelvic stability.
c. Examine the rectum and perineum.
d. Know the history and mechanism of injury.

15. When performed correctly, endotracheal intubation

a. Reduces the risk of aspiration.
b. Should be performed before defibrillation.
c. Should be accomplished in 40 seconds or less.
d. Can only be used in spontaneously breathing patients.

16. An adult patient has partial thickness burns of the chest, abdomen, perineum and the entire anterior surface of both legs. Using the Rule of Nines, how much of total body surface area has been burned?

a. 19%
b. 28%
c. 37%
d. 55%

17. A patient from a fire has severe respiratory distress, a hoarse voice, soot around the mouth and nares, respirations of 32 and stridor. Which of these is the best intervention for this patient?

a. Intubation
b. Fluid resuscitation
c. Ventilation by mouth to mask
d. Nebulized bronchodilator treatment

18. Which of these is the preferred site for intraosseous access on a pediatric patient?

a. Distal femur
b. Proximal tibia
c. Distal humerus
d. Proximal radius

19. When would one be most suspicious for a tension pneumothorax?

a. O2 Sat =95
b. Coughing is uncontrolled
c. Tracheal Deviation is noted
d. Weaning is unsuccessful

20. Which patient is the highest priority in a mass casualty situation?

a. Severe head injury with agonal respirations
b. Cardiac arrest
c. 96% 3rd degree burns
d. Blunt chest trauma with deviated tracheal and hypotension.

Questions to assess the attitude of intern's enrolled to study

1, where are you practicing your internship

A, AAU B, SPHMMC C, Arsi , HU E, HAYAT F, yekatit 12

3. Your intended specialty: (free text).

4. Have you done an ATLS provider course? Yes /No.

5. For practicing your proposed specialty, do you think that ATLS is:

A, completely unnecessary B, Not necessary but some help

C, Not essential but a major help D, Essential

TRAINEES THINK ABOUT ADVANCED TRAUMA LIFE SUPPORT (ATLS)?

6. For advancement of your career, do you think that ATLS is?

A, No advantage at all on your CV B, A minor advantage on your CV

C, A major advantage on your CV D, Essential for your CV

7. What do you see as the most important reason for doing an ATLS course?

A, It genuinely helps the management of trauma patients B, It is helpful for your CV and career purposes

C, It is mandatory for your proposed career D, It is worthwhile as general medical education

8. The ATLS course dictates a rigid structure and practice base. Do you regard this as:

A, thoroughly undesirable B, Undesirable but understandable

C, Desirable but with disadvantages D, Thoroughly desirable

9. For doctors whose intended specialty does not involve regular management of trauma patients, do you think ATLS is?

A, completely unnecessary B, Unnecessary, but some advantages

C, A major advantage D, Essential

10. In general, is your attitude towards ATLS:

A, strongly negative B, Negative, but it has some good points

C, Positive, but with reservations D, Strongly positive

13. Would you regard ATLS instructor status as a valuable adjunct on your CV? A, Yes B, No

14. Do you think that all existing consultants who deal with trauma patients should have done an ATLS course?

A Yes B. No

15. Do you think that ATLS saves lives? A, Yes B, No

16. If you have not done an ATLS provider course, which response best explains why not?

A, I am planning to do a course in the future B, I haven't heard about it

C, I do not like what I have heard about ATLS D, I can manage trauma patients well enough without ATLS

THANK YOU FOR YOUR COOPERATION!