ADDIS ABABA UNIVERSITYCOLLEGE OF HEALTH SCIENCES

SCHOOL OF MEDICINE

DEPARTMENT OF ANESTHESIA

ASSESSMENT OF AWARENESS AND ATTITUDE OF PREGNANT WOMEN TOWARDS ANESTHESIA TECHNIQUES FOR CESAREAN SECTION AND ASSOCIATED FACTORS AT SELECTED PUBLIC HOSPITAL OF ADDIS ABABA ETHIOPIA, 2021

BY

GUDETA TEKU (MSC. STUDENT)

JUNE, 2021

ADDIS ABEBA, ETHIOPIA

ADDIS ABABA UNIVERSITY COLLEGE OF HEALTH SCIENCES

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A THESIS SUBMITTED TO THE DEPARTMENT OF ANESTHESIA, COLLEGE OF HEALTH SCIENCE, ADDIS ABEBA UNIVERSITY FOR PARTIAL FULFILLMENT OF THE REQUIREMENT OF THE MASTER DEGREE IN ADVANCED CLINICAL ANESTHESIA.

BY

GUDETA TEKU (MSC. STUDENT)

ADVISORS: DAWIT TAFESSE (BSC, MSC IN ANESTHESIA)

SYRET T TESFAYE (BSC, MSC IN ANESTHESIA)

JUNE 2021

ADDIS ABEBA, ETHIOPIA

CERTIFICATION

The undersigned certifies that the research entitled "awareness and attitude of pregnant women toward anesthesia techniques for cesarean section in selected public Hospital of Addis Ababa" is my original work. Any help, citation, or idea taken from previous studies have been fully acknowledged

Author

Name:……Signature----------Date ----------

Approval of the Board of Examiners

1. Advisor

   Name: ……. Signature ----------Date----------

2. Internal Examiner

Name----------Signature----------Date----------

Acknowledgment

I would like to express my heart full gratitude to my advisors Mr. Dawit Tafesse and Mrs. Siryet Tesfaye for their invaluable support and comments.

I also would like to thank the anesthesia department for all the supports and add the research program in the curriculum that lay the foundation for my future career development and academic engagement in research.

Last but not least I would like to thank, those authors and researchers of articles, and online information for the valuable works I have read and cited.

Table of Contents

List of Tables

List of Figure

Abstract

Background *There is a lack of public awareness of anesthesia as a medical specialty. Obstetric women's decisions to have a cesarean section are influenced by a lack of awareness about anesthesia and anesthesia techniques.*

Objective*: To assess awareness and attitude of pregnant women's towards anesthesia techniques for cesarean section among women attending ANC at selected public Hospital of Addis Ababa, 2021*

Method: *Prospective cross-section study design was employed among 332 pregnant women who were attended ANC at selected public hospitals of Addis Ababa, Ethiopia. A systematic random sampling technique was used for selecting participants. The data was collected by using a pretest structured questionnaire and entered into Epi Data for cleaning. Then it was exported to SPSS version 26 for analysis. Both binary and multivariate logistic regressions were used to measure the association between the factors and outcomes at 95% CI and P-value <0.05 was considered as statistically significant*

Results: *The finding of the study reflected that from total study participants, 206(62%) were heard about anesthesia. In this study, 116(56.3) of participants had a good awareness of anesthesia techniques .Level of education and number of parity were significantly associated with awareness of anesthesia techniques. Respondents who were completed secondary school had a good awareness of anesthesia techniques[AOR=6.785; 95% CI (1.01- 45.170)] and women with para three had good awareness than null parity [AOR=6.453; 95% CI (1.612-25.825)].The study found, 146(70.9%) of respondents had a positive attitude towards anesthesia techniques but the previous type of anesthesia and absence of anesthesia-related complication had no significant association with the parturient's attitude towards anesthesia techniques. Among 43 respondents who previously received GA, 13 respondents preferred again GA whereas out of 66 respondents who received SA, 48 participants preferred spinal anesthesia.*

Conclusion: *Overall our parturients' awareness about anesthesia and anesthesia techniques for cesarean section is low. Out of the total participant, 126(38%) were even not heard about anesthesia*

Keywords*: Cesarean section, Anesthesia techniques, Awareness, and Attitude.*

Acronyms

AAU: Addis Ababa University

EAA: Ethiopian Anesthetist Association

GA: General Anesthesia

SA: Spinal anesthesia

CS: Cesarean section

ANC: Antenatal care

1. Introduction

1.1. Background

Anesthesia is defined as loss of feeling or awareness deliberately produced in a patient by administering an anesthetic agent before surgery, in which he or she can feel no pain, either in a part or in the whole of the body (1,2)

Anesthesia has a long history dating back to 1846 when it was first used to make the surgery go smoothly. It is important for several types of specialty procedures, but it has not gained public awareness as independent (3)

There are two types of anesthesia: general anesthesia and regional anesthesia. The American Society of Anesthesiologists defines general anesthesia as a drug-induced loss of consciousness in which patients are not arousable, even by painful stimulation, and traditionally includes the triad of hypnosis/amnesia, analgesia, and immobility in reaction to noxious stimuli. Regional anesthesia, which includes peripheral nerve blocks, plexus blocks, and neuraxial anesthesia(spinal, epidural, or caudal), is the use of local anesthetic drugs to induce greater areas of anesthesia (4)

Obstetric anesthesia includes all anesthesia services provided to a pregnant woman for surgical operations performed for various reasons, such as labor analgesia and post-operative pain management using one or more techniques. Because anesthetists deal with two lives and the consequences of pregnancy-induced alterations to all systems, obstetric anesthesia differs from other anesthesia specializations(5)

General anesthesia was once the primary anesthetic treatment for both emergent and elective cesarean- section. However, the use of regional anesthetic for cesarean section has increased, while the use of general anesthetic has decreased. The rationale for this transition is that general anesthesia has several consequences that cause maternal morbidity and mortality. Airway management issues, such as difficult intubation, aspiration risk, and hypoxia are the most common.(6)

Cesarean section is the commonest obstetric procedure and 80% to 90% of the cases are performed under regional anesthesia. Drugs onset, duration of action, simplicity of technique, and the effect they had on both mothers and fetus are determinant factors for the preference of regional anesthesia for cesarean section(7)

Techniques of anesthesia for cesarean section are under the influence of many factors that arise from the nature of the procedure, patient's medical condition, patient's preference, anesthesia providers' experience, and availability of the resources. Along with the mentioned reasons, anesthesia technique for cesarean section is affected by the time anesthesiologist/anesthetist stay with patients during pre-anesthetic evaluation and the communication of anesthesia provider with parturient about the advantage and disadvantages of each anesthesia technique on the maternal and fetal outcome(8,9)

.

Patients having surgical procedures have varying levels of awareness about anesthesia and anesthesia techniques. According to a study conducted on awareness of anesthesia and concern among patients undergoing surgical procedures, 63% of patients were unaware of anesthesia techniques. Another study on patient awareness of anesthesia found that 48.1% of patients were aware of different types of anesthesia techniques(3,10)

Different factors influence the attitude of parturients towards anesthesia techniques for cesarean section. According to the finding of a study done on predictors of the attitude of parturients towards spinal anesthesia, nausea and vomiting(27%), fear of pain(34%), and fear of needle puncture (15%) were the most important predictors(11)

1.2 Statement of problems

As the number of cesarean sections rises, so does the demand for obstetric anesthetic. However, there is an awareness gap about anesthesia and anesthesia techniques for cesarean section A study of patients' knowledge and attitudes toward anesthesia done in Hong Kong reveals a lack of public awareness of anesthesia(12,13).

Lack of awareness about anesthesia and anesthesia techniques influences obstetric women's decision to have a cesarean section. The parturients start to get fear when they are advised that surgery is required.

According to the finding reported by Bheemanna et al.2017, the most common concern is pain during surgery, which accounts for 50% of all fears. This issue arises due to a lack of awareness about anesthesia and the availability of various anesthetic techniques(14)

Patients who are unaware of anesthesia may display distressing behaviors such as anxiety, tachycardia, crying out, tension, being confused, not follow the instruction and sometimes even they refuse to give informed consent. It is also difficult for them to differentiate the risk and benefits of anesthesia type and they leave the decision for anesthesia provider(15)

.The result of the study reported by Eyelade et al.2019 on patient perception and knowledge of anesthesia and anesthetists showed that 78.2% of patients said they would agree with the type of anesthesia selected to them by the anesthetist(16)

There is a gap of awareness and misconception regarding preferring anesthesia type during surgery. Some patients prefer general anesthesia without understanding the risk with the techniques and they consider general anesthesia carries no or less risk whereas others preferred due to fear of seeing things during surgery. The study reported by Bacha et al.on patient awareness about spinal anesthesia showed that 70%of patients prefer general anesthesia over spinal due to misconception about regional anesthesia and fear of chronic back pain(17)

A study done in Pakistan shows that obstetric women frequently refuse regional anesthesia for many reasons such as cultural difference, lack of awareness, and false belief towards regional anesthesia (18)

The study conducted in southwestern Ethiopia showed that the majority of pregnant women, (77%)were preferred general anesthesia over spinal anesthesia due to the fear of seeing things during the procedure. This is due to a lack of awareness about the

advantage of spinal anesthesia over general anesthesia for parturients undergoing cesarean section(19)

1.3. Justification of the study

To deliver safe anesthesia for cesarean section, we must investigate our obstetric women's awareness of anesthesia and attitudes toward anesthetic techniques.

The findings of the study will aid anesthetists in determining the level of awareness of the parturient and discussing anesthesia, method options, and clarifying any misconceptions they may have about anesthesia during the pre-anesthetic evaluation. They will be considerably calmer, cooperative, and willing to give informed consent as a result of this, and they will be able to choose any anesthetic approach they wish.

In addition, it will play a role in raising anesthetic service awareness and encouraging women to give birth in a health facility without fear of pain throughout the procedure. Despite various studies on the rate of cesarean section and the association between anesthesia and the procedure, there are only a few studies on pregnant women's awareness and attitudes toward anesthesia in our country.

The findings of that study may not reflect current levels of women's anesthesia awareness, as the profession continues to evolve by offering a variety of services and employing a large number of educated anesthesia professionals..

The study's findings will eventually help to identify areas of weakness, and based on the findings, measures to impr**ove** obstetrics women's awareness and attitude can be developed and evaluated to lessen the problems that come from the awareness gap.

2. Literature reviews

2.1 Awareness towards anesthesia techniques

Awareness of obstetric women about anesthesia options for cesarean section varies between developed and less developed countries for several factors. There is data that showed women's level of awareness about anesthesia for a cesarean section from different world countries. In the study done in Turkey, 58.4% of women stated that they had no awareness of different anesthesia options(20)

The study done in Pakistan shows that 82.4% of obstetric women had awareness about the existence of various anesthesia techniques for cesarean section. Women's awareness about anesthesia and its techniques option for cesarean section is affected by the level of education. The study done in India shows that 89% of graduated women were well aware regarding anesthesia for cesarean section(21)

The study done in Riyadh, Saudi Arabia on women's awareness and attitude towards epidural analgesia shows a good level of awareness in which 42% of women reported that they know about epidural analgesia from family members and friends, 18% from media or reading,13% from previous delivery experience and 8% from the antenatal clinic(22)

The study conducted in southwestern Ethiopia on perception, knowledge, and attitude of pregnant women about anesthesia techniques for cesarean Section shows that only 31.3% of obstetric women aware of anesthesia and anesthesia techniques for cesarean section(19)

2.2Attitude towards anesthesia technique

Obstetrics women who had awareness about anesthesia techniques had different attitudes and perceptions towards anesthesia options. The study done in Tabriz, Iran shows that the most important predictors that influence women's attitude were, nausea and

vomiting(27%),fear of pain(34%), fear of needle puncture(15%), and discomfort during the return of a sensory and motor function(6%)(11)

Patients prefer one type of anesthesia over the other for several reasons. The study was done in Jinnah Postgraduate Medical Centre, Karachi shows that the patients refuse regional anesthesia for needle pricks pain (20.1%), post-spinal backache (39%), paralysis(8.8%), peri-operative pain (15.1%), and awareness during operation (17%) patients(23)

According to the result of the study done in Pakistan, 48.3% of women choose general anesthesia, 33.4%preferred regional anesthesia while 18.3% were not sure of the selection. The previous experience of general anesthesia, fear, and hearing noise during surgery were the main reasons for choosing general anesthesia while fear of prolonged unconsciousness, sore throat, and possible side effect of drugs on the newborn were the commonest reasons for refuse general anesthesia(18)

A study done in Nigeria shows that regional anesthesia is more popular than general anesthesia. The pregnant women's preference of regional anesthesia for cesarean section was 73.0%. The main reasons for their preference were the safety of technique (44.3%), fear of death (41.2%), and the desire for being awake during the procedure (14.5%). Among participants, 33.5% strongly preferred their opinion toward the type of anesthesia they choose for cesarean section, 63.5%preferred their opinion and 3.0% had no idea about their opinion(24)

The other study also indicates that 64.2% of pregnant women prefer general anesthesia over regional anesthesia for cesarean section. Out of participants who had general anesthesia experience, 68.7% were preferred general anesthesia again while76% of pregnant women who had regional anesthesia experience was preferred regional anesthesia. Pregnant women who had both the anesthesia techniques experience were preferred regional anesthesia (66.7%) to general anesthesia(33.3%)(25)

There is another data from the study done in the university of Maiduguri teaching hospital and medical center, north-eastern Nigeria which shows a high rate of general

anesthesia preference by pregnant women attending antenatal care. According to the result of the study, 70.1% of respondents were preferred general anesthesia for fear of awake during the procedure while 76(29.9%) preferred regional anesthesia to know what will happen during the surgery(26)

Data from a study done in University College Hospital, Ibadan, Nigeria indicated that 34.1% of patients reported that an anesthetist had visited them before the operation. Out of patients who had not been visited, 66.2% of them wanted to know who would be anesthetizing them. From study participants, 78.2% of them said they would agree with the type of anesthesia suggested to them by the anesthetists, while 155 (67.7%) reported their desire to have some information about anesthesia before the day of surgery(16)

2.3 Associated factors with awareness and attitude of pregnant women towards anesthesia techniques

A study done in India demonstrated that education level had no association with awareness of anesthesia but the history of previously anesthesia exposure associated with patients awareness regarding types of anesthesia and routes of 'general anesthesia administration' but it failed to show the difference in other aspect(27)

According to the finding of the study conducted in Pakistan, awareness about anesthesia for cesarean section had a significant association with occupational status and previous history of anesthesia exposure. The women's age and occupational status had a significant association with knowledge of anesthesia techniques. Health care professionals were found well aware as compared to housewives. Women with a previous history of anesthesia experience were found more knowledgeable as compared to those without previous anesthesia experience(18)

A study done in Turkey showed that level of education and previous anesthesia experience had a significant effect on awareness about anesthesia. Also, the study conducted in southwestern Ethiopian found a significant association between knowledge of anesthesia technique and occupation, age, previous experience, income, and parity(19,28)

2.4 Conceptual framework

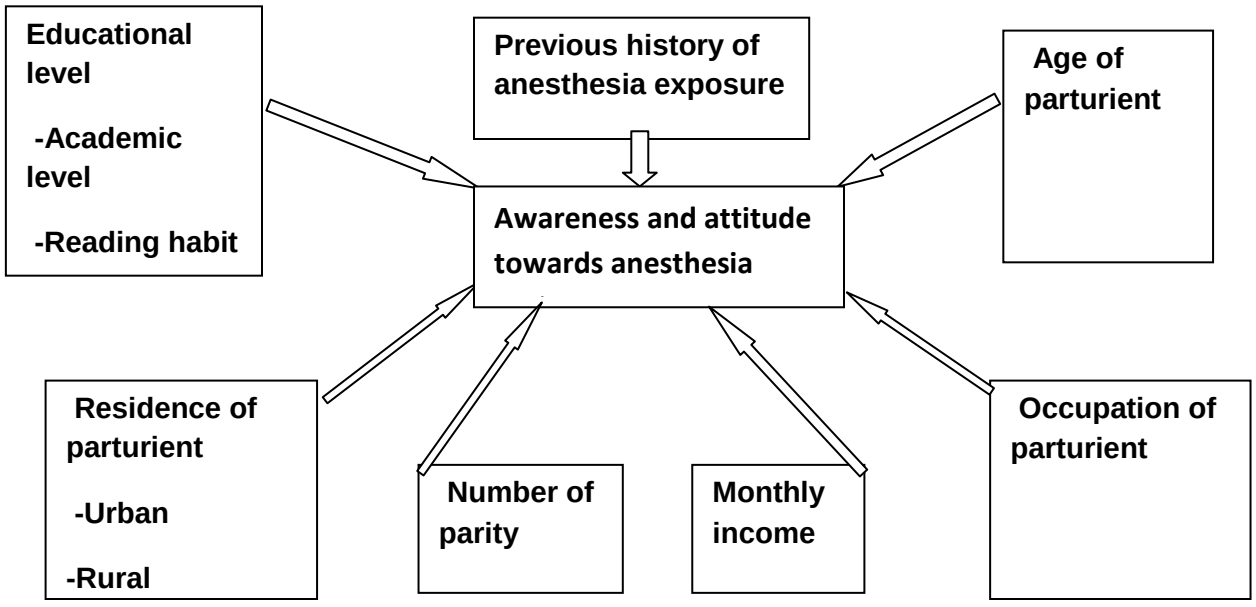

Figure 1 conceptual framework of this study Adopted by Investigator from Different Literature

3. OBJECTIVE

3.1 General objectives

-To assess awareness and attitude of pregnant women's towards anesthesia techniques for cesarean section at selected public Hospitals from January 20 to March 20, 2021 G.C

3.2 Specific objective

-To assess pregnant women's awareness of anesthesia for cesarean section.

-To assess pregnant women attitudes towards anesthesia techniques for cesarean section

-To determine factors that associated with parturients awareness and attitude towards anesthesia techniques.

4. Methods and Materials

4.1 Study Area and period

The study was conducted in a selected public Hospital of Addis Ababa, the capital city of Ethiopia. Addis Ababa is located at the center of the country and covering an area of 210 km^2 with a population of 3,384,569 according to the 2014 census. The city has 11 sub-cities with 13 public Hospitals. Simple random sampling was used to select Gandhi memorial Hospital, Zawditu memorial Hospital, Yekatit Hospital, and Ras Desta memorial Hospital. The study was conducted from January 20 to March 20, 2021, GC.

4.2 Study design

A prospective cross-sectional study design was employed to assess awareness and attitude of pregnant women towards anesthesia techniques for cesarean section

4.3 Population

4.3.1 Source Population

All pregnant women who had antenatal care in Gandhi memorial Hospital, Zawditu memorial Hospital, Yekatit 12 Hospital and, Ras Desta memorial public Hospitals of Addis Ababa from January 20 to March 20, 2021.

4.3.2 Study Population

All pregnant women who had antenatal care and fulfill inclusion criteria at selected public Hospitals of Addis Ababa from January 20 to March 20, 2021 G.C

4.3.3Eligibility criteria

4.3.4Inclusion criteria

All pregnant women attended antenatal care in selected public Hospitals from January 20 to March 20, 2021 G.C

4.3.5Exclusion criteria

Women who had the difficulty of communicating (naturally difficulty of hearing, speaking)

The sick mothers who were unable to give the response

4.4 Sample Size Determination and sampling technique

4.4.1. Sample size determination

The sample size was determined by using single population proportion formula

For specific objective one

The prevalence of awareness about anesthesia for cesarean section is taken from a previous study in southwestern Ethiopia that was 31%. By taking p =0.31,

$n= (Z\alpha/2)^2 \times p \times q/d^2 = (1.96)2 \times 0.31 \times 0.69/ (0.05)^2 = 328$

Where

n= number of sample size

Z= 1.96, Desired 95% confidence

P= 0.31, from the prevalence of the previous study done at Southwestern Ethiopia

q=1-p

d= Margin of sample error tolerated (5%

Final sample size calculated by using correction formula for the finite population, since the proportion of calculated sample size to total population is larger than 5% or 0.05

$nf = \frac{n}{1+(n-1)/N} = \frac{328}{1+(328-1)/1405} = 266$

Where:

n= is number of sample size,

nf=final sample size =266

N = Total number of pregnant women who were attending antenatal care at selected Hospitals within two Months study period during similar months last year.

By adding 10% contingency, the final sample size was 293

For specific objective two

No report shows the parturient's attitudes towards anesthesia techniques from previous studies. A 50% proportion was assumed to be the greatest sample size for the study.

P =50% and q value will be 1-p which is 50% and 95% confidence interval, 5% margin of error.

$n= (Z\alpha/2)^2\ p\times q/d^2= (1.96)2\times 0.5\ \times 0.5/\ (0.05)^2=384$

Where

n= number of sample size

Z= 1.96, Desired 95% confidence

Final sample size calculated by using correction formula for the finite population since proportion of calculated sample size to total population is larger than 5% or 0.05

$nf= \frac{n}{1+(n-1)/N}=\frac{384}{1+(384-1)/1405}$ =302

Where:

n= is number of sample size,

nf=final sample size =302

N = Total number of pregnant women who were attending antenatal care at selected Hospitals within two Months study period during similar months last year.

By adding 10% contingency, the final sample size will be 332.

The largest calculated sample size was used for the study.

According to the Health Management Information Systems (HMIS) data of situational analysis done before the actual data collection, 1405 pregnant women (Gandhi memorial Hospital =448, Zawditu memorial Hospital =332, Yekatit Hospital=321, Ras Desta memorial Hospital = 304) attended antenatal within two Months study period during similar months last year.

4.4.2. Sampling technique

The systematic random sampling technique was used to select individual at a fixed interval(every k^{th}) from pregnant women those attended antenatal care at Gandhi memorial Hospital, Yekatit 12 Hospital, Ras Desta memorial Hospital and Zawditu memorial Hospital that selected by simple random sampling

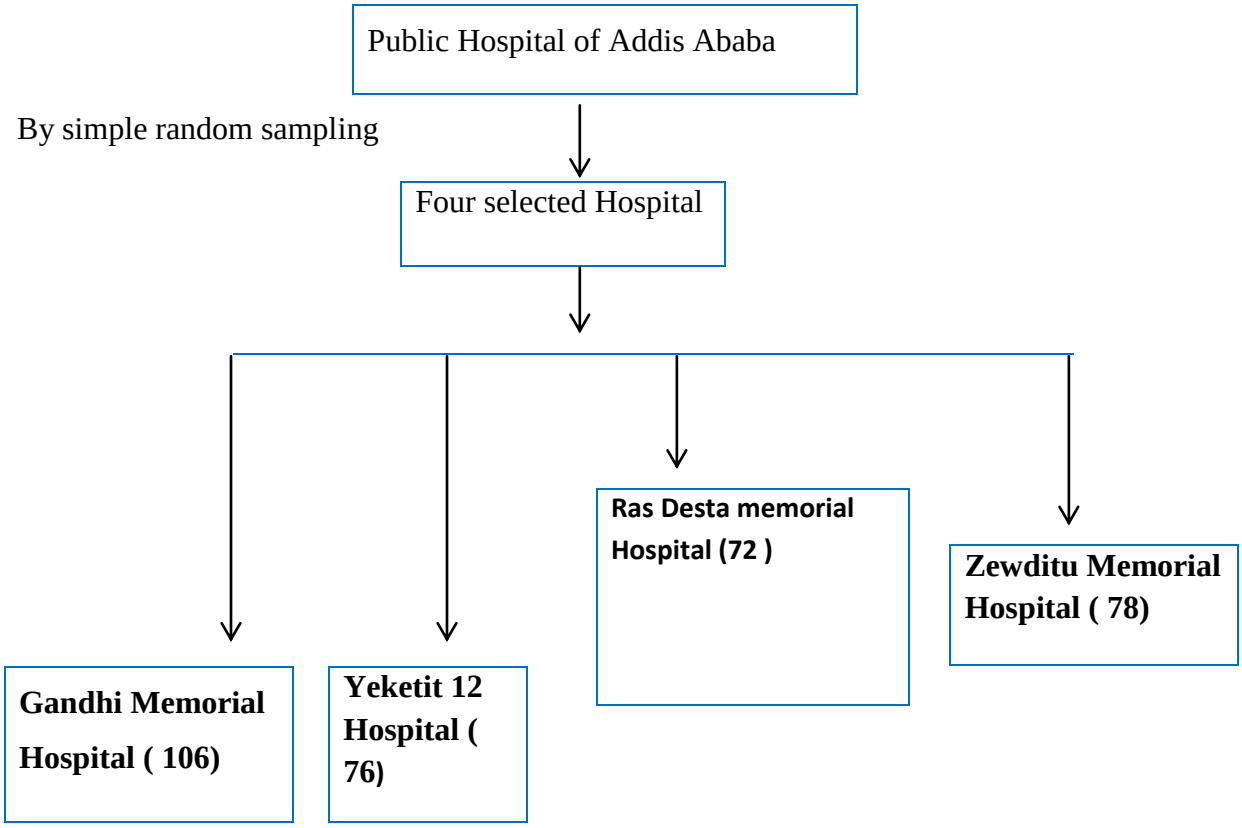

Figure.2.Schematic presentation of the sampling procedure in selected public Hospital of Addis, Ababa, Ethiopia, 2021

Based on the sampling fraction, Skip interval of k=$\frac{N}{n}$ =$\frac{1405}{332}$ = 4

Where:

N=Total study population

n=total sample size

k= skip interval

The first study participant (random start) was selected by a lottery system from daily pregnant women who attended antenatal care. Then every 4^{th}case from pregnant women was included in the study

4.4.3. Data collection technique

The questioner was prepared after reviewing related literature in English then translated to Amharic. Data was collected from selected study participants using a pretested questionnaire from January, 20 to March 20, 2021G.C.The data collection was done by the midwife after training provided and understood the questionnaire. The completeness of the data was checked daily by the principal investigator

4.5. Study variables

4.5.1. Dependent Variables

-Awareness about anesthesia and anesthesia techniques for cesarean section

-Attitude towards anesthesia technique

4.5.2. Independent variable

-Socio-demographic variable; Age, Religion, Residence area, Educational level, Income, Occupation and, number of parity

- Source of information

-History of previous anesthesia exposure

Type of previous anesthesia exposure

4.6. Operational definition

Good awareness; If participant scored mean and above mean from total awareness related question

Positive attitude; If participant scores mean and above mean from total attitude question that measured by Likert scale.

Anesthesia: loss of feeling or awareness produced by administering drugs to prevent pain during surgery

Cesarean section: Operations did to deliver the baby through incisions in the abdominal and uterine walls under general or regional anesthesia.

4.7. Data Processing and Analysis

4.7.1 Data Quality Control and Assurance

The questionnaire that was prepared in English was translated to Amharic by a language expert and translated back to English by other language experts to increase understanding with the respondents. To assure the quality of data, training on the objectives and relevance of the study was given for data collectors and also brief orientation on the assessment tools was provided

The pre-test was done on 5% of the total sample size at a hospital other than the study hospital before actual data collection to check the accuracy of response, language clarity, and logical sequence, and skip pattern of the questioner. During data collection, each questioner was revised by the investigator for being completed and appropriate.

4.7.2 Data analysis

Data were coded and then entered into Epidata for cleaning. Then it was exported to SPSS version 26 for analysis. Using SPSS basic descriptive statistics like frequency was done for socio-demographic variables.

Awareness of parturient was measured by mean score of awareness data. Each correct answers have one point and incorrect and do not know responses have zero points. The composite score was dichotomized into two based on the mean score from the data. Individuals who had scored mean and above the mean were categorized as having good awareness and those who had scored below the mean were identified as having poor awareness

The attitude of parturient also assessed by using five scale Likert data, ranging from strongly disagree to strongly agree. Individuals who had scored mean and greater than the mean score of Likert data were categorized as having a positive attitude and those who had scored below mean were categorized as having negative attitude Bivariate logistic regression analysis was carried out to examine the predictors of the outcome variable. The crude odds ratio was calculated to evaluate the association between a single independent variable and the dependent variable On binary logistic regression analysis, a variable with a P-value of <0.2 was used as a candidate for multiple logistic regression analysis.

Multiple logistic regression analysis was performed to identify independently associated factors for awareness and attitude. An adjusted odds ratio was used to determine the strength of association at 95% CI and to decide the presence of statically significant association. Significance was determined at P-value <0.05. The result was presented by using text, tables, charts, and graphs.

4.8. Ethical Considerations

Ethical clearance and approval were obtained from the ethical review committee, Anesthesia Department, Addis Ababa University. Permission to conduct the study was obtained from the medical director of the selected Hospitals. Informed verbal consent was secured from every study participant. Privacy and confidentiality were maintained throughout the study period; each questionnaire was coded without any personal identification.

4.9. Result dissemination plan

The result of the study will be submitted in the form of the thesis to the college of health science, Addis Ababa University, Gandhi memorial Hospital Yekatit 12 Hospital, Ras Desta memorial Hospital, Zawditu memorial Hospital, Ethiopian Anesthetist Association, and other responsible bodies. The result will be presented at the college of health science in different seminars, meetings, conferences, and workshops. Moreover, efforts will be

done to publish the findings of the study and disseminated them through different journals and scientific publications.

5. RESULTS

5.1 Socio-demographic characteristics of respondents

The study comprised a total of 332 pregnant women who were seen for antenatal care at four selected public hospitals of Addis Ababa, with a 100% response rate. The majority of the participants were between the ages of 30-34, 148 (44.6%) were Orthodox Christians, 274 (82.6%) lived in Addis Ababa, 108 (32.5%) had completed secondary education, 84 (25.3%) had no monthly income, 157 (47.3%) were active in independent business, and 109 (32.8%) were para one. (**Table.1**)

Table1. Socio-demographic characteristics of respondents in selected public Hospital of Addis Ababa from January 20 to March 20, 20

Variables	**Frequency N=332**	**Percent (%)**
<25	84	25.3
25-29	94	28.3
30-34	104	31.3
35-39	43	13
>40	7	2.1
Religion		
Orthodox	148	44.6
Muslim	109	32.8
Protestant	75	22.6
Residence		
Addis Ababa	274	82.5
Major regional city	31	9.8
Rural area	27	8.1

Level of education		
Not educated	26	7.8
Able to read and write	43	13
Primary school	73	22
Secondary school	108	32.5
Graduated	64	19.3
Post graduated	18	5.4
Monthly income		
No income	84	25.3
<1000ETB	18	5.4
1000-2000ETB	65	19.6
2001-3000ETB	74	22.3
>3000ETB	91	27.4
Occupation		
Housewife	95	28.6
Government employer	80	24.1
Independent business	157	47.3
No of parity		
Null parity	106	31.9
Para 1	109	32.8
Para 2	67	20.2
Para 3	34	10.2
Para 4	16	4.8

5.2. Respondents awareness and related information about anesthesia and anesthesia techniques

Out of study participants, 206 (62%), had heard about anesthesia, and more than half of them, 110 (53.4%), mentioned experience as a source of information (Fig.3) Among the women who had heard about anesthesia, 119 (57.8%) had previously been exposed to anesthesia for various surgical procedures, with cesarean section accounting for 66.38% **(Table 2)**. From those who had previously been exposed to anesthesia, 66 (55.5%) had undergone spinal anesthesia, whereas 43 (36.1%) and 10 (7.4%) had received general anesthesia and both type of anesthesia respectively. Among the women who had heard about anesthesia, 119 (57.8%) had previously been exposed to anesthesia for various surgical procedures, with cesarean section accounting for 66.38%. From those who had previously been exposed to anesthesia, 50 participants mentioned anesthesia related complications (**Table 3**)

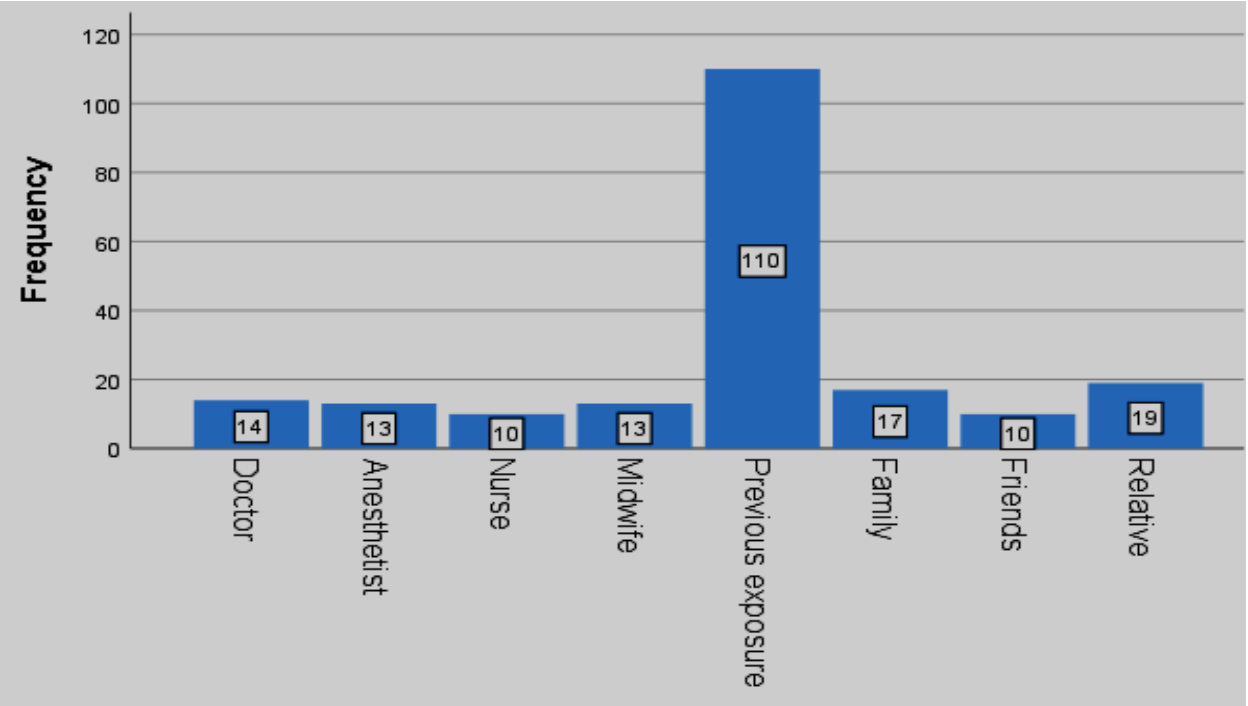

Figure.3.Pregnant women's source of information about anesthesia in selected public Hospital of Addis Ababa from January 20 to March 20, 2021

.**Table.2.Surgical procedure for respondents previously exposed to anesthesia**

Type of procedure	**Frequency N=119**	**Percent (%)**
Cesarean section	79	66.38
Cholecystectomy	10	8.4
Appendectomy	15	12.6
Laparotomy for ectopic pregnancy	10	8.4
Cesarean section and appendectomy	3	2.52
Cesarean section and cholecystectomy	2	1.68
Total	119	**100**

Table.3.Anesthesia-related complication from the previous operation that mentioned by respondents during the study period at selected public Hospital of Addis Ababa from January 20 to March 20, 2021

Complication	**Frequency (N=50)**	**Percent (%)**
Delay awake	20	40
Nausea and vomiting	7	14
Headache	9	18
Back pain	14	28
Total	**50**	**100**

All of the participants who had heard of anesthesia and anesthesia techniques were aware that anesthesia may prevent or relieve pain during the procedure and 204(99%) were aware of the importance of anesthesia for cesarean section. Regarding anesthesia techniques for cesarean section, 169(82%) respondents were aware of the existence of two techniques of anesthesia, and 104(50.5%) were aware of the advantage of spinal anesthesia for parturients during cesarean section. On the other hand, 130(63.1%) of respondents were aware of who is in charge of administering anesthesia administration. However, just 51(24.6%) were aware that anesthetists are responsible for patients' recovery from anesthesia Based on the mean awareness score of respondents who had heard about anesthesia, 116 (56.3%) had a good awareness of anesthesia techniques for cesarean section.

5.4. Association between socio-demographic characteristics and respondent's awareness

The association between independent variables and awareness of pregnant women about anesthesia and anesthesia techniques for cesarean section was carried out by cross-tabulation and logistic regression analysis. Education level with P-value <0.048, monthly in came with P-values < 0.007and number of parity with p-values <0.008 had a significant association with awareness of respondents

The findings showed that those who were completed secondary education were more likely to have good awareness about anesthesia and anesthesia techniques than those who were not educated [AOR=6.785; 95% CI (1.01- 45.170)]. Comparing with null parity, para one respondents were more likely to have good awareness about anesthesia and anesthesia techniques for cesarean. [AOR=3.819; 95% CI (1.379-10.573)].Similarly, women with para three were more likely to have good awareness than null parity [AOR=6.453; 95% CI (1.612-25.825]

Table.4. Associations of socio-demographic characteristics with pregnant women's awareness of anesthesia and anesthesia techniques in selected public Hospital of Addis Ababa from January 20 to March 20, 2021 (N=206)

Variables	Awareness		COR, CI 95%	p-value	AOR, CI 95%	P-value
	Poor awarene	Good awarenes				
Residence						
Rural area	7	4	1		1	
Addis Ababa	78	107	2.401(0.679- 8.486)	0.174*	1.734(0.281-10.692)	0.553
Major regional city	5	5	1.75(0.306- 10.022)	0.530	5.495(0.445-67.903)	0.184
Education level						
No formal education	10	3	1		1	
Able to read& write	12	4	1.111(0.200- 6.181)	0.904	0.555(0.062-4.999)	0.599
Primary school	24	10	1.389(0.314- 6.139)	0.665	0.749(0.112-5.011)	0.766
Secondary school	22	48	7.273(1.820- 29.064)	0.005*	6.785(1.019- 45.170)	0.048**
Graduate	17	39	7.647(1.866- 31.333)	0.005*	5.188(0.698-38.547)	0.108
Post graduate	5	12	8(1.522- 42.042)	0.014*	3.669(0.375- 35.712)	0.263
Monthly in came						
No income	12	18	1		1	
<1000 ETB	3	7	1.556(0.334- 7.235)	0.573	2.316(0.303- 17.719)	0.418
1000-2000ETB	21	13	0.413(0.151- 1.129)	0.085*	0.444(0.110-1.791)	0.254
2001-3000ETB	30	21	0.467(0.186- 1.170)	0.104*	0.146(0.03--0.587)	0.007**
>3000ETB	24	57	1.583(0.662- 3.788)	0.302	0.814(0.207- 3.203)	0.768
No of parity						
Null parity	34	19	1		1	
Para 1	22	45	3.660(1.715- 7.814)	0.001*	3.819(1.379- 10.573)	0.010**
Para 2	20	26	2.326(1.036- 5.226)	0.041*	1.706(0.595-4.895)	0.321
Para 3	7	12	5.624(2.030-15.583)	0.001*	6.453(1.612-25.825)	0.008**
Para 4	7	4	1.023(0.265-3.947)	0.974	1.654(0.2861-9.572)	0.574
Source of information						
Relative	16	3	1		1	
Doctors	8	6	4(0.788- 20.316)	0.095*	1.525(0.216-10.771)	0.672
Anesthetists	6	7	6.222(1.2- 32.272)	0.030*	3.234(0.451- 23.164)	0.243
Nurse	6	4	3.556(0.608-20.805)	0.159*	5.503(0.597- 50.709)	0.132
Midwifes	5	8	8.533(1.616- 45.061)	0.012*	6.502(0.864-48.921)	0.069
Exposure	30	80	14.222(3.866-52.319)	0.00*	3.055(0.353- 26.418)	0.310
Family	11	6	2.909(0.597- 14.185)	0.186*	2.009(0.415-12.830)	0.461
Friends	8	2	1.333(0.184- 9.660)	0.776	0.403(0.42- 3.830)	0.429
Anesthesia exposure						
No	55	32	1		1	
Yes	35	84	4.125(2.292- 7.424)	0.00*	2.568(0.526- 12.546)	0.244

NB:* statistically significant for p-value<0.2 and ** for p-value < 0.05

5.3 Respondent's attitude towards anesthesia techniques and related information

Out of respondents who heard about anesthesia, 156(75.7%) were agreed to meet and discuss about anesthesia before surgery with a professional who will provide anesthesia for them. However, only three people (1.5%) disagreed with this view point.It was discovered that 130 (63.1%) of respondents agreed on an anesthetist's explanation of what will happen to them during anesthesia and that 181 (87.9%) respondents agreed on hearing about any anesthesia-related complications that may occur during the procedure, regardless of how serious they are.

On the other side, 59 (28.8%) respondents agreed to ask the anesthetist how the anesthesia went after the procedure, while 123 (59.7%) respondents were neutral. In terms of anesthesia techniques, 99 (48.1%) respondents agreed that having more information about the type of anesthesia for a cesarean section is important, while 68 (33.3%) respondents were neutral. Furthermore, 47 (22.8%) of participants disagreed about being more concerned about the type of anesthesia than the surgery, while 130 (63.1%) were neutral.

When came to choose of anesthesia, 21 (10.2%) respondents preferred general anesthetic, 91 (44.2%) preferred spinal anesthesia, 50 (24.3%) were undecided, and 44 (21.4%) left it to the anesthetist **Fig. 4)**

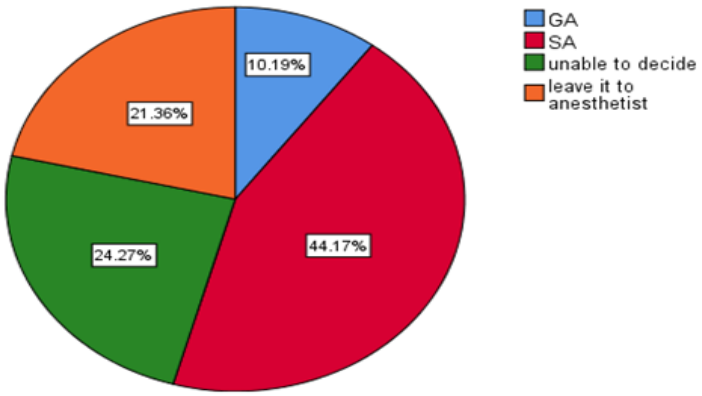

Figure.4.Preference of Anesthesia type by pregnant women in selected public Hospital of Addis Ababa from January 20 to March20, 2021

Thirteen of the 43 respondents who had previously received GA preferred GA again, while 48 of the 66 respondents who had received SA preferred SA. In contrast, nine out of ten responders who had previously received both types of anesthesia preferred SA.

For various reasons, respondents preferred one anesthetic technique over the other. Fear of seeing things during the surgery and fear of feeling pain were the main reasons for choosing general anesthesia over spinal anesthesia, while the safety of technique or low risk with procedures and experience were the key reasons for choosing spinal anesthesia.

Table.5. Pregnant women's reasons for preferring type of anesthesia at selected public Hospital of Addis Ababa from January 20 to March 20, 2021

General anesthesia	**Frequency(N=21)**	**Percent (%)**
Reasons		
Experience	4	19
Not to see things	6	28.57
Not to feel pain	3	14.28
Fear of back pain	8	38
Spinal anesthesia	Frequency(N=91)	Percent (%)
Reasons		
Experience	19	20.87
Low risk	24	26.37
Early mobilization	14	15.38
Early breastfeeding	5	5.49
To be awake	17	18.68
To see the baby	12	13.18

The attitude of respondents was assessed using a Likert scale, and their level of attitude was also analyzed using the mean attitude score. Out of the participants who had heard about anesthesia, 146 (70.9%) had a positive attitude towards anesthesia techniques, while 60 (21.9%) had a negative attitude. Out of 43 participants who had general anesthesia experience, 32 parturients had a positive attitude towards anesthesia techniques for cesarean section. Similarly from 66 parturients who received spinal anesthesia, 49 participants had positive attitudes towards anesthesia techniques

Table 6.Association of socio-demographic characteristics with respondent's attitude towards anesthesia and anesthesia techniques in selected public Hospital of Addis Ababa from January 20 to March 20, 2021

Variables	Attitude		COR (CI) 95%	P-value	AOR (CI) 95%	P-value
	Negative attitude	Positive attitude				
Type of previous anesthesia						
GA	11	32	1		1	
SA	17	49	2.909(0.706-11.991)	0.139*	2.436(0.573-10.360)	0.228
Both GA and SA	5	5	2.882(0.742-11.195)	0.126*	2.711(0.685-10.723)	0.155
Anesthesia complication						
YES	18	32	1		1	
NO	15	54	2.025(0.898-4.565)	0.089*	1.949(0.845-4.493)	0.117

NB:* statistically significant for p-value<0.2

6. DISCUSSIONS

According to the findings of the studies, 206 (62%) respondents heard about anesthesia and anesthesia techniques for a cesarean section from various sources. Out of the participants who had heard about anesthesia and anesthesia techniques, 116 (56.3%) had a good awareness of anesthesia and anesthetic techniques for cesarean section

This is significantly lower than 82% observed in the study conducted in Pakistani on women's knowledge and attitudes concerning anesthesia techniques for Caesarean section(18)

This disparity could be related to the sample size, research area, and level of education of the majority of participants, as well as the fact that the study was conducted in a tertiary care center private hospital that provided services to patients who could afford the medical costs.

When compared to Rabiu et al,2019, finding of 68.8% on knowledge, attitude, and perception of pregnant women concerning anesthesia techniques for cesarean section at Aminu Kano Teaching Hospital, our finding is low(24)

However, our results are higher than the figure of 31% reported by Jemal et al 2016 on the Perception, Knowledge, and Attitude of Pregnant Women in Developing Countries regarding anesthesia for Cesarean Section(19). This may be due to differences in the study area, sample size, and duration between the two studies.

In terms of information sources, our findings contradict the Ahmad etal 2011research, which claims that anesthetists are the main source of information. But in line with a report by Jemal et al 2016 and Rabiu et al2019 in which experience was the main source of information(18,19,24)

This study determined the significant association between awareness about anesthesia techniques and educational level, monthly income, and the number of parity. This is similar to the result reported by Jemal et al 2016(19).

Among anesthesia-related complications experienced by parturients, delayed awake figure 20(40%),in this study is higher than the 29.7% reported in a Nigerian study. It might be due to the length of the surgery, as most parturients received GA for a surgical procedure other than a cesarean section. However, the rate of headache9(18%) is lower than their report (64.9%), which could be attributed to the type of spinal needle used or the anesthesia provider's experience. (24).

In terms of anesthesia type preference, the study found that 44.25% of respondents preferred SA, and 10.2% preferred GA.The fear of seeing things during surgery was the main reason for choosing general anesthesia. This is a similar rationale, but it contrasts strongly with the figures published by Jemal et al.,2016and Bukar et al.2010which reveal that general anesthesia was favored by 60.3 % and 70.1 % respectively.(19,26)

The main reason for preferring SA in this study was the perception of regional anesthesia as low risk or safe. The rationale is similar to Rabiu et al 2019,finding with different figures but differs from Bukar et al's2010 finding that the majority of individuals who preferred spinal anesthesia wanted to observe what was going on rather than the safety of the anesthesia techniques(24,26)

Despite the fact that there is no report on attitudes to compare with this study, our findings demonstrated the level of respondents' attitudes towards anesthesia techniques for cesarean section based on the mean score of liker scale data. Out of participants who heard of anesthesia (70.9%) were scored mean and above the mean and categorized as those who have positive

Out of 43 participants who had general anesthesia experience, 32 parturients had a positive attitude towards anesthesia techniques for cesarean section. Similarly from 66 parturients who received spinal anesthesia, 49 participants had positive attitudes towards anesthesia techniques

Thirteen of the 43 respondents who had previously received GA preferred GA again, while 48 of the 66 respondents who had received SA preferred SA. In contrast, nine out of ten responders who had previously received both types of anesthesia preferred SA

7. Strength and limitation of the study

7.1. Strength of the study

-The study was conducted at a multicenter includes four public Hospitals of Addis Ababa to get adequate samples with a participant from various geographic locations and to make the study representative of pregnant women at public hospitals of Addis Ababa

- During data collection high response rate was attained because data collectors were well trained and understood about the study and also they are the professional who provides antenatal care service

7.2. Limitation of the study

-There are few kinds of literature in the country to compare with our results

-Nature of cross-sectional study design which limits the degree of cause and effect association among variable

8. Conclusion

-From all participants 126(38%) had never heard about anesthesia

-Study revealed that from respondents who had heard about anesthesia, the majority of them had good awareness about anesthesia and anesthesia techniques for cesarean section. But overall the awareness of our pregnant women was low when compared with literature from other countries.

-In this study, previous exposure was the main source of information about anesthesia and anesthesia techniques for cesarean section

9. Recommendation

To health institutions: To enhance pregnant women's awareness of anesthesia and anesthesia techniques for cesarean section, health institutions should create awareness that increases pregnant women's knowledge of anesthesia and anesthesia techniques that make them confident to choose the anesthesia type they want

To anesthesia professional:-Anesthetist should be a source of information for obstetric women by raising awareness about anesthesia, techniques, and the benefits of spinal anesthesia,

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ANNEX I: Informed consent

My name is ----------I am here on behalf of Mr. Gudeta Teku (MSc anesthesia student at Addis Ababa University, collage of health science, Anesthesia department.

He is researching the partial fulfillment of the degree of Master in advanced clinical anesthesia on awareness and attitude of pregnant women towards anesthesia technique for cesarean section at selected Hospital, Addis Ababa, Ethiopia.

The study will be conducted through an interviewee by structured questioner on pregnant women present for antenatal care. I would like to ask you to respond questions regarding to your awareness and attitude towards anesthesia for cesarean section. This Interview is not obligatory and the data will get be kept strictly confidential, and will not disclose to anyone other than a member of our survey team. Giving a response is voluntary, it is possible to withdraw and Jump a question which you are not interested in/leave to respond, I respect any of your decision. The findings of the study will provide information about anesthesia for cesarean section and clarify negative attitudes about anesthesia for obstetric womenwhich helps them to understand anesthesia and choice type of anesthesia they want to have for cesarean section. This study will not harm any study participants.

Hopefully, you will respond to this study since the response is very crucial.

Do you want to ask me anything about the study? 1. Yes 2.No (if No, stop)

Respondent signature ---------- Date of interviewer ----------

Place interview has done ---------- Name of Interviewer----------

If you have any suggestions you can call the principal investigator, Gudeta Teku.

0926521445/tekugudeta@gmail.co

ANNEX II: English version questionnaire

Part- I:Socio-Demographic characteristics

Qn No.	Question	Response	Skip pattern
Q101	Age	----------year	
Q102	What is your religion?	1. Orthodox 2. Muslim 3. Protestant 4. Catholic 5. No religion 6. Other (specify)----------	
Q103	**Where are you living?**	1 Addis Ababa 2.Major regional city 3.Rural area	
Q104	Educational Status	**1.** Not educated 2. Only manage to write and reading 3.Primary school 4.Secondary school 5.Graduated 6.Post graduated	
Q105	How much is your monthly average income (in ETB)	----------Birr	
Q106	What is your occupation	1.Housewife 2.Government employer 3.Students 4.Independent business 5. Other(specify)----------	
Q107	Number of parity	----------	

Part -II : Awareness of pregnant women about anesthesia and anesthesia techniques for cesarean section

Qn No.	Questions	Response	Skip pattern
Q201	Have you ever heard about anesthesia?	1.Yes 2.No	If no, you complete it Thank you
Q202	If yes, for Q 201, what was your source of information?	----------	
Q203	Do you think anesthesia prevents or relieves pain during surgery?	1.Yes 2.No 3.I don't know	
Q204	Is anesthesia needed if the operation has to be required for delivery	1.Yes 2.No 3.I don't know	
Q205	During operation, there are two options of anesthesia for cesarean	1.Yes 2.No 3.I don't know	
Q206	Is anesthesia administered to all patients in the same way?	1.Yes 2.No 3.I don't know	
Q207	Do you think spinal anesthesia has an advantage for a mother undergoing an operation?	1.Yes 2.No	
Q208	Do you think the anesthetist provided anesthesia during surgery?	1.Yes 2.No 3.I don't know	
Q209	Do you know the role of anesthetist during surgery?	1.Yes 2.No	
Q210	Do you think the anesthetist responsible for the	1.Yes	

	recovery of the patient?	2.No 3.I don't know	
Q211	Have you ever been applied anesthesia?	1.Yes 2.No	If no, skip to Q301
Q212	If yes,for what reason you applied anesthesia?	a) ---------- b) ---------- c)---------- d)----------	
Q214	Do you face complications during previous anesthesia?	1.Yes 2.No	If no, skip to Q301
Q215	If yes, for Q215, what was the complication?	a) ---------- b) ---------- c)---------- d) ----------	

Part-III; Attitude of pregnant women's toward anesthesia and anesthesia techniques for cesarean section

QnNo.	Questions	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Q301	I would like to meet the anesthetist before my operation	1	2	3	4	5
Q302	Anesthetists do not take time to explain what is going to happen to you	1	2	3	4	5
Q303	Anesthetists should tell you what all complications of anesthetic are, no matter how serious	1	2	3	4	5
Q304	I would like to see the anesthetist after the operation to find out how the anesthetic went.	1	2	3	4	5
Q305	It is better if I know less about the type of anesthesia for my operation.	1	2	3	4	5
Q306	I am more nervous about the anesthesia technique than the surgery itself	1	2	3	4	5

Part-IV: Choice of anesthesia by pregnant women and reason for preference

Qn No.	Questions	Response	
Q401	Which type of anesthesia will you prefer, if you will have the operation for this pregnancy?	1. General 2.Spinal 3.Unable to decide 4.I leave it to the anesthetist	
Q402	If general anesthesia, what is the reason for preference	a)---------- b)---------- C)----------	
Q403	If spinal anesthesia, what is the reason for preference?	a)---------- b)---------- c)---------- d)----------	

ANNEX III. AMHARIC VERSION QUESTIONNAIRE

አዲስ አበባ ዩኒቨርሲቲ

ህክምናና ጤና ሳይንስ ኮሌጅ

የአንስቴዝያ ትምህርት ክፍል

ከቃለ መጠይቅ በፊት የፈቃደኝነት መጠየቅ ቅጽ

ጤና ይስጥልኝ እኔ _____ እባላለሁ። በአዲስ አበባ ዩኒቨርሲቲ ህክምናና ጤና ሳይንስ ኮሌጅ የአንስቴዝያ ትምህርት ክፍል ድህረ ምረቃ ሁለተኛ አመት ተማሪ የሆነው ጉደታ ተኩን ወክዬ ነው እነዚህ የምገኘው። እሱም የድህረ ምረቃ ጥናት የሚያጠናው ለቅድመ ወሊድ ክትትል የሚመጡ እናቶች ላይ ሲሆን የጥናት ፍሬ ሀሳብ እናቶች በወሊድ ጊዜ የሚሰጥ አንስቴዝያ ወይም የማደንዘዣ መድሐኒት እና አይነቱን ምን ያህል ግንዛቤ እንዳላቸው ማወቅ ነው። ጥናቱ የሚከናወነው አራት የመንግስት ሆስፒታሎች ውስጥ ሲሆን ለቃለ ምልልሱ በተዘጋጁ ጥያቄዎች መሰረት ነው።

በቀዶ ጥገና ወሊድ ጊዜ የሚሰጥ አንስቴዝያ (የማደንዘዣ መድሐኒት) አይነት እና ለመደንዘዣ ያሎትን አመለካከት ከተዘጋጀ ጥያቄ መሰረት ለምንጠይቆት ጥያቄ መልስ እንድትሰጡኝ በአክብሮት እጠይቃለሁ።

ይህ ቃለ መጠይቅ ግዴታ አይደለም።

ከእናንተ የሚወሰደው መረጃ በሚስጢር የሚያዝና ከጥናት ቡድኑ አባላት ውጪ ለሌላ አካላት አይተላለፍም። መልስ መስጠት ፍላጎት ላይ የተመሰረተ ነው። ያልፈለጉት ጥያቄ መተው ወይም መዝለል ይችላሉ። የናንተ ውሳኔ እንደተጠበቀ ነው። የጥናቱ ውጤት ነፍሰጡር እናቶች ስለ አንስቴዝያ እና አይነቱ ምን ያህል ግንዛቤ እንዳላቸው የሚያሳይ ነው። እንዲሁም ለአንስቴዝያ አይነት ስላላቸው መጥፎ አመለካከት በማስቀረት ረገድ፡- የተለያየ አንስቴዝያ አይነት መሆኑሩና የፈለጉትን አንስቴዝያ አይነት መምረጥና የጎንዮሽ ጉዳቶችን ለመረዳት ይረዳችኋል።

ለጥያቄዎች መልስ እንደሚሰጡ ተስፋ አረጋለሁ።

ስለጥናት የምትጠይቁኝ ጥያቄ አለዎት? ሀ. አዎ ለ. የለንም

_____ ፊርማ

ቃለ መጠይቅ የተካሄደበት ቦታ _____የቃለ መጠይቅ ቀን _____

_____

የጠያቂ ስም _____

ማንኛውም ሃሳብ ካላችሁ የጥናት ባለቤቱን ጉደታ ተኩን በ0911952663 ደውላችሁ ማግኘት ትችላላችሁ።።

እኚህ መጠይቅ የሚሞሉት ለቅድመ ወሊድ ክትትል ለሚመጡ እናቶች ነው።። ልነግራችሁ የምፈልገው ለመሳተፍ ፈቃደኛ ያልሆነ አይገደድም።። ስለትብብራችሁ አመሰግናለሁ።።

ክፍል-1 የጥናቱ ተሳታፊዎች የጥናት መለያና ስነህዝባዊ መረጃ

ተ.ቁ	መጠይቅ	መልስ	ዝለል
101	እድሜዎ ስንት ነው;	---------- ዓመት	
102	የሚከተለት ሃይማኖት ምንድን ነው?	1.ኦርቶዶክስ 2. ሙስሊም 3. ፕሮቴስታንት 4. ካቶሊክ 5.ሌላ……	
103	አድራሻዎ የትነዉ?	1.አዲስ አበባ 2.የክልሎች ከተማ 3.ገጠራማ ቦታ 4. ሌላ	
104	የትምህርት ዝግጅት	1.ያልተማሩ 2.መፃፍና ማንበብ የሚችሉ 3.1ኛ ደረጃ 4.2ኛ ደረጃ 5.ቅድመ ምረቃ የተመረቁ 6.ድህረ ምረቃ የተመረቁ 7.ሌላ ----------	
105	ወርሃዊ ገቢ	----------የኢ/ት-ብር	

106	የእርስዎ የስራ ሁኔታ እንዳት ነዉ?	1.የቤት እመቤት 2. የመንግስት ደሞዝተኛ 3.ተማሪ 4.የግል ስራ 5. ሌላ----------	
107	ከዚህ በፊት ስንት ወለዱ?	----------	

ክፍል-2 ነፍሰጡር እናቶች ስለአንስቴዝያ እና አይነቱ ምን ያህል ግንዛቤ እንዳላቸው ለማወቅ የሚረዱ መጠይቆች

ተ.ቁ	መጠይቅ	መልስ	ዝለል
201	ስለ አንስቴዝያ (ማደንዘዣ) ሰምተው ያውቃሉ?	1.አዎ 2.አልሰማሁም	አልሰማሁም ካሉ ጨርሷልና አመሰግናለሁ
202	በተራ ቁጥር 201 ጥያቄ ላይ አዎ ከሆነ ከማን ነው የሰሙት	---------- --	
203	በኦፕራሲዮን ጊዜ አንስቴዝያ /ማደንዘዣ/ ህመምን ይከለክላል ብለው ያስባሉ?	1.አዎ 2.አይደለም 3.አላውቅም	
204	ለወሊድ ቀዶህክምና ካስፈለገ አንስቴዝያ(ማደንዘዣ) ያስፈልጋል?	1.አዎ 2.አይደለም 3.አላውቅም	
205	ወሊድ ቀዶ ህክምና ጊዜ የሚሰጥ የአንስቴዝያ ወይም ማደንዘዣ ሁለት አይነት አለ	1.አዎ 2.አይደለም 3.አላውቅም	

206	አንስቴዝያ(ማደንዘዣ) ለሁሉም ሰው የሚሰጠው በአንድ መንገድ ነው?	1.አዎ 2.አይደለም 3.አላውቅም	
207	በቀዶ ህክምና ወሊድ ጊዜ ከሙሉ አንስቴዝያ(ማደንዘዣ) ይልቅ ከወገብ በታች ማደንዘዣ ለእናቶች ጥቅም አለው ?	1.አዎ 2.አይደለም 3.አላውቅም	
208	አንስቴዝያ /ማደንዘዣ/ የሚሰጠው በአንስቴቲስት ነው	1.አዎ 2.አይደለም 3.አላውቅም	
209	የአንስቴትስት ስራ ድርሻ በኦፕራሲዮን ጊዜ የታካሚ ደም ግፊት የልብ ትርታ እና ደም ውስጥ ያለው የኦክስጅን መጠን መቆጣጠር ነው፡፡	1.አዎ 2.አይደለም 3.አላውቅም	
210	ታካሚው ከኦፕሬሽን በፊት ወደነበረበት የመመለስ ኃላፊነቱ የአንስቴስት ነው	1.አዎ 2.አይደለም 3.አላውቅም	
211	ከዚህ በፊት አንስቴዝያ(ማደንዘዣ) ተሰጥቶት ያውቃል?	1.አዎ 2.አይደለም	አሊዉቅም ካሉ ወደ ጥያቄ ቁጥር 301 ይዝለሉ
212	ከላይ ለተራ ቁጥር 211 መልስዎ አዎ ከሆነ ለምን ነበር?	ሀ)---------- ለ)---------- ሐ)---------- መ)----------	
213	የትኛው አንስቴዝያ(ማደንዘዣ) ዓይነት----------	1.ሙሉአንስቴዝያ(ማደንዘዣ) 2.ከወገብበታች	

		3.ሁለቱም	
214	ከዚህ በፊት የወሰዱት አንስቴዚያ(ማደንዘዣ) ጋር ተያይዞ የተፈጠረ ችግር ነበረ ?	1.አዎ 2.አይደለም	አይደለም ካሉ ወደ ተራቁጥር 301 ይዝለሉ
215	ለተራ ቁጥር 214 መልሱ አዎ ከሆነ ችግሩ ምን ነበር?	ሀ) ---------- ለ) ---------- ሐ)---------- መ) ----------	

ክፍል-3ስለአንስቴዚያ (ማደንዘዣ)እና አይነቱ ግንዛቤ ያላቸው እናቶች ስለአንስቴዚያ(ማደንዘዣ) አይነት ያላቸው አመለካከት ለማወቅ የሚረዱ መጠይቆች

	መጠይቅ	በጣም አልስማማም	አልስማማም	አላውቅም	እስማማለሁ	በጣም እስማማለሁ
301	ከኦፕሬሽንበፊት አንስቴዝያ(ማደንዘዣ) መድሀኒት የሚሰጠኝ ባለሙያ ማግኘትና ማወቅ እፈልጋለሁ	1	2	3	4	5
302	የአንስቴዝያ(ማደንዘዣ) ባለሙያ ጊዜ ወስዶ ከአንስቴዝያ(ማደንዘዣ) በኃላ የሚፈጠሩትን ነገሮች ለእርስዎ ገለፃ ማድረግ የለበትም	1	2	3	4	5

303	የአንስቴዝያ(ማደንዘዣ)ባለሙያ ከአንስቴዝያ(ማደንዘዣ) መድሀኒት ጋር ተያይዞ የሚፈጠሩ ችግሮችን በጣም የከፋ ቢሆንም መናገር አለበት/አለባት	1	2	3	4	5
304	ከኦፕሬሽን በኃላ የአንስቴዝያ (ማደንዘዣ) ባለሙ አግኝቼ ስለ አንስቴዝያ(ማደንዘዣ) በኦፕሬሽን ጊዜእንዴት አንደነበርመጠየቅ እፈልጋለሁ	1	2	3	4	5
305	በቅድመ ህክምና ጊዜ ስለሚሰጠን አንስቴዝያ(ማደንዘዣ) አይነት ትንሽ ብቻ ማወቅ በቂ ነው	1	2	3	4	5
306	ከቀዶ ህክምና ይልቅ ስለሚሰጠኝ አንስቴዝያ(ማደንዘዣ) ዓይነት እጨነቃለሁ	1	2	3	4	5

ክፍል-4 የአኔስቴዝያ አይነት የመምረጥና ምክንያቶች

	መጠይቅ	መልስ	
401	ለዚህ እርግዝና ኦፕሬሽን ካስፈለግዎት የትኛው የአንስቴዝያ (ማደንዘዣ) አይነት ይመርጣሉ?	1.ሙሉአንስቴዝያ(ማደንዘዣ) 2.የወገብ በታች 3.መወሰን አልችም 4.ለባለሙያ እተዋለሁ	
402	ሙሉ አንስቴዝያ (ማደንዘዣ) ከመረጡ ምክንያትዎ ምንድን ነው?	ሀ.---------- ለ.---------- ሐ.---------- መ.	
403	የወገብ በታችን አንስቴዝያ (ማደንዘዣ) ከመረጡ ምክንያትዎ ምንድን ነው?	ሀ)---------- ለ)---------- ሐ)---------- መ)----------	