



# Assessment of Knowledge, Attitude and Practice Women of Reproductive Age Group Towards Abortion Care at Gambella Health Facilities, South West of Ethiopia

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## To cite this article:

Ataguadil Mekonnen, Zemnu Awoke. Assessment of Knowledge, Attitude and Practice Women of Reproductive Age Group Towards Abortion Care at Gambella Health Facilities, South West of Ethiopia. *International Journal of Biomedical Engineering and Clinical Science*. Vol. 6, No. 2, 2020, pp. 29-40. doi: 10.11648/j.ijbecs.20200602.12

**Received:** December 19, 2019; **Accepted:** February 4, 2020; **Published:** June 4, 2020

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**Abstract:** Abortion is an important cause of bleeding during pregnancy. It is one of the five Leading causes of maternal death in the developing world. Moreover, in developing country, abortion is the major cause of maternal mortality, which in Ethiopia safe abortion accounts 60% considering the huge number of maternal deaths due to abortion. The aim of this study is to Assessment of KAP Women of Reproductive Age Group towards Abortion Care at Gambella health facilities. An institutional based cross-sectional study will be conducted at 4 Health facilities in Gambella town from August 15 to September 30, 2019. A total of 412 pregnant women will be selected by systematic random sampling technique. Data will be coded and entered into Epi-info version 3.1 and exported to SPSS V-20 for cleaning and analysis. At bivariate logistic regression analysis, independent variables with cut off P-value<0.25 was included. In the multivariable binary logistic regression analyses were used to assess the independent effect of various explanatory variables on the dependent and to control potential confounder. P values <0.05 were considered to identify the significant factors associated with the dependent variable. Out of 422 sampled women of reproductive age group (15-49 years of age), 412 were interviewed making up a response rate of 97.6%. The majority of 39.1% participants had knowledge about legal abortion service and 69.5% of women in reproductive age group had inadequate knowledge towards safe abortion and who think about abortion, 174 (42.2%) were said that it is Sin against God, 52 (12.5%) were said that it is good, 67 (16.2%) were said that it is harm full practice and 40 (9.6%) were they don't knew. Attitude towards safe abortion about, One hundred Eight two (29.9%) women of reproductive age group have positive attitude towards safe abortion to be legal and accessible under any circumstance. The majority of 322 (78.1%), of them knew at least one type of abortion complication. From the total respondents 405 (98.3%) of them had sexual intercourse at least once. Only 66 (16.3%) of respondents had induced abortion before. Conclusion and Recommendation: More than 30.5%, 29.9% of the respondents were inadequate knowledge and lacking knowledge and had negative attitude towards induced abortion respectively. Therefore, it would be better to disseminate health education to increase awareness and knowledge, Practice regarding induced abortion and also strengthening family planning implementation.

**Keywords:** Knowledge, Attitude, Practices, Women of Reproductive Age Group, Abortion Care, Gambella

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## 1. Background

Abortion can be defined as termination of pregnancy (spontaneous, therapeutic or induced) before the fetus has

become viable outside the uterus or before the fetus is capable to have a life outside of the womb [1]. Spontaneous abortion refers to a natural biological process by which some pregnancies end with no known cause and usually referred as

miscarriage and an induced abortion takes place when a pregnancy is terminated by the deliberate removal of the fetus from the uterus by the use of external methods as a result of an unwanted pregnancy [1, 2]. Elective abortion is the voluntary termination of pregnancy performed either surgically or medically. A therapeutic abortion takes place when a pregnancy is terminated by the removal of the fetus from the uterus by the use of external methods, however, unlike an induced abortion, therapeutic abortion is performed to either to save the life of a pregnant woman or when a woman's physical or mental health is in jeopardy or savior fetal congenital disorder or to selectively decrease the number of fetuses to reduce health risks linked with multiple pregnancies [3].

Changing maternal mortality will be achievable if unsafe abortion will be replaced by medical abortion since thousands of lives could be saved each year by implementing medication abortion [4]. Medical abortion is the commonly performed safe abortion technology which uses medications in place of traditional surgical interventions for terminating an early unintended pregnancy [5].

Legal abortion like medication abortion can be performed if the life of the woman will be jeopardized by the pregnancy and unsafe abortion will usually occurs where abortion is illegal. Unsafe abortion is defined by WHO as a procedure for terminating an unwanted pregnancy either by persons lacking the necessary skills or in an environment lacking the minimal medical standards, or both [1, 3, 6]. When the pregnancy is resulted from rape or incest, the woman's or fetus lives are threatened, the fetus has severe abnormalities, the woman has physical or mental disabilities and when a minor is physically or psychologically unprepared to raise a child. According to the new law there is no need of proof for age or whether the pregnancy is resulted from rape or incest [7]. Unwanted pregnancies and unsafe abortion are commonly neglected reproductive health care problems in developing countries and pose major health risks to women in the reproductive age group [8].

Access to medication abortion is commonly restricted, not only by the law, but also by other barriers like Social, religious, cultural impediments, lack awareness, maternal perception towards abortion also contribute to delays in seeking abortion to a time beyond the limit set by the law and thus when faced with an unintended pregnancy, women seek abortion and self-induce it or find providers, irrespective of the law and Unsafe abortions present a critical public health and human rights challenge of the present time [9, 10].

Ethiopia is the 5th in maternal mortality according to the WHO 2005 report and unsafe abortion accounts for 32% of the causes of maternal death. It is also one of the top 10 reasons for mothers to seek hospital admission in Ethiopia [1, 3].

Unsafe abortion can be prevented and reduced by expanding and improving family planning services and choice. Many married women in developing countries do not have the access to the contraceptive methods of their choice. Besides maternal mortality, unsafe abortion causes other serious complications like hemorrhage, sepsis, uterine

perforation, lower genital tract trauma disseminated intra vascular coagulation, shock, renal and cardiac failure which may result in permanent disability and incapacitating condition like infertility and psychological problem [1, 3, 6].

Ethiopia has a high maternal mortality ratio, 412 deaths per 100,000 live births for the period 2009-2016 [3, 6] and reproductive health experts in the country believe that the proportion due to abortion complications is also excessive which is an estimated 1.9 million (38%) Ethiopian women have unintended of 4.9 million (62%) total pregnancies and 620,300 induced abortions (13%) were performed in 2014 [14-16]. Between 2008 and 2014, the proportion of abortions occurring in facilities raise from 27% to 53%, nonetheless, an estimated 294,100 abortions occurred outside of health facilities in 2014 (15). The number of women receiving treatment for complications from induced abortion nearly doubled which is 52,600 to 103,600 [6, 13].

The finding of this study help to know the knowledge, attitude and practice of reproductive age groups towards abortion care and to determine what methods are more appropriate to educate reproductive age groups about abortion care. Future researchers will also use this finding for further study. Furthermore, policy makers in sexual and reproductive health clinics, religious and community stakeholders will also use the evidence of this finding to improve strategies, and program policies to tackle the root causes. Therefore, The main aim of this study was to assess knowledge, attitude and practice towards to abortion care among reproductive age group women in selected sexual and reproductive health clinics of Gambella, Ethiopia.

## **2. Methods and Materials**

### **2.1. Study Setting**

The study will be conducted at Gambella hospital which is found in Gambella region. The region has an elevation ranging from 400 to 600 meters above the sea level and largely hot climatic zone. It covers a total area of 23,127 square kilometer. The capital city of the region is Gambella town which is located at 768 km from the capital city of Ethiopia, Addis Ababa to Southwest direction. The study was conducted from August 15 to September 30, 2019.

### **2.2. Study Design**

An institutional based Cross-sectional study design was employed at at Gambella Health facility. The source populations for this study were All reproductive age women attending in sexual and reproductive health clinics at Gambella Health facility.

### **2.3. Study Population**

The study populations for this study was those All reproductive age women who were visited sexual and reproductive health clinics at Gambella Health facility during data collection period and fulfilling the eligibility criteria.

#### 2.4. Eligibility Criteria

All reproductive age women who visit for service in selected SRH clinics during data collection period will be included, and only those who gave their consent to participate during the study period and volunteer to respond and hear will be eligible to the study. Reproductive age women who are seriously ill and/or difficulty to communicate, whose age less than 18 years will be excluded from the sample, and who willingly disclosed this information will be excluded from the study.

#### 2.5. Sampling Size Determination

The sample size was determined by using single population proportion formula considering the following assumption:  $P = P$  is anticipated proportion of women's knowledge, attitude and practice of medication abortion and it is assumed to be 50% taken to increase the sample size; and consider taking 5% marginal of error (absolute precision) at 95% confidence interval of certainty ( $\alpha = 0.05$ ). The formula for calculating the sample size is:  $n = \frac{Z^2 a / 2xp(1-p)}{d^2}$  where,  $n$  = the desired sample size,  $P = 0.50$ ,  $q = 1 - p = 1 - 0.50 = 0.50$ ,  $Z_{\alpha/2} = 1.96$  critical value 95% confidence interval,  $d = 0.05$ .

$n = \frac{(1.96 \times 1.96) \times (0.50 \times 0.50)}{0.05 \times 0.05} = 384$  and by taking 10% contingency for non-response rate, the final sample size would become:  $384 + 38 = 422$ .

#### 2.6. Sampling Technique and Procedure

Two Public health institutions (Gambella Hospital and Gambella health center) and three Private Clinics will be selected by using simple random sampling because it was a public health institution which was physically accessible, located in town where all representative ethnic groups of the region reside, and its environs seek health care services from this health facility. A systematic random sampling technique will be employed to select the study participants. In order to get sampling interval ( $K$ ), the total population was divided by the sample size required.  $K = Nt/nf = 1266/422 = \sim 3$ . Of the first three subjects, one woman will be randomly selected from first day list by lottery method, and then taking every 3<sup>rd</sup> other Reproductive age women will be selected to participate in the study until the desired sample sizes of 422 Reproductive age women will be obtained. To avoid redundancy the client card number will be used and after data will be collected code was given to the client chart.

#### 2.7. Data Collection Technique and Procedures

Data were collected using structured and pretested questionnaire for the quantitative data. For the qualitative, FGD was used as a method, which used guidelines/checklists for data collection. All individuals sayings were tape recorded, using cassettes and manually documented. Data collection was done by four data collectors who were University students. Supervisors were

students who were doing their second degree. For the Qualitative part, participants of FGDs were grouped by sex in order to establish homogeneity within the group that affects group interaction. The discussion was moderated by principal investigator with the assistance of tape-recorder and trained note-taker, which is responsible for observing and noticing all nonverbal responses of the participants (smiles face impressions, movements, head nodding, and Gestures). Discussions were ended after no more information was elicited. Prior to discussion, informed consent was obtained orally from each participant. A questionnaire was developed after reviewing of different literatures of similar studies. It was prepared first in English language and then translated into Amharic and Agnua language and then was translated back to English to check its simplicity and consistency. A total of Four (two midwives and two laboratory technical) trained data collectors and two BSc Nurse supervisors with a minimum of one year work experience including the principal investigator was involved in the data collection.

#### 2.8. Data Quality Assurance

Appropriate study design and sampling technique was used and well-structured data collection tools were developed. The questionnaire was translated to local language and back translated to English to check for their consistency. For effective and quality data, one week prior to the actual data collection period the four data collectors (two midwifery and two laboratory technicians) and two supervisors was trained on the objective, relevance of the study, confidentiality of information, respondent's right, informed consent, techniques of interview and measurement for two days. Moreover, class room practical demonstration of the interview was carried out. Pre-test of questionnaires was done in 10% of the total sample size in a similar population at Gambella woreda health center before the actual data collection. During the pre-testing data collectors, supervisors and investigator were participated in the evaluation of the tool.

#### 2.9. Data Analysis

The descriptive statistics show the distribution of respondents by the key variables. Continuous variables were checked for normality using scatter plots. Descriptive statistics such as frequencies and percentages for Categorical variables and the mean ( $\pm$ SD) values for continuous variables were computed. Descriptive summaries such as frequency tables, graphs, and percentage and mean values were used to present the study results. A bivariate logistic regression analysis was used to see the crude relationships exist between dependent variable and independent variables. Candidate variables from bivariate analysis were selected and transferred to multivariable binary logistic regression by using pre-set  $p$ -value of  $< 0.25$ . In multivariable binary logistic regression analyses, stepwise (backward LR) method standard regression model building technique was used to

assess the independent effect of various explanatory variables on the dependent and to control potential confounders. The multi-collinearity was checked by using Variance Inflation Factor (VIF) cut-off point of 10. Hosmer and Lemeshow goodness-of-fit test was used to assess the model goodness, it was not significant (P-value >0.05), indicating the model fits the data well. Finally, significance was obtained at odds ratio (OR) with 95% CI and p-value < 0.05.

**2.10. Operational Definitions**

1. Induced abortion: interference with provable concepts with the aim of termination of pregnancy
2. Unsafe abortion: abortion technique that lack or inadequate skill of provider, hazardous technique and unsanitary conditions.
3. Knowledge: what a woman knows about abortion (meaning, place where it is done, drugs used for medication abortion and gestational age medication abortion is used).
4. Attitude: the predisposition to respond in a favorable or unfavorable manner towards abortion, medication abortion and related issues such as advising colleague to have abortion or for oneself in case of unplanned pregnancy, which type of abortion is preferable.
5. Practice: is the overt health behavior, habit or customs of a woman related to abortion or those who have experienced or practiced abortion at least once in past.
6. Knowledge scores: in this study “good knowledge” represents that respondents who answered 70% and above of the statement on knowledge questions, while “poor knowledge” represents those who answered below 70% of the statement on knowledge questions
7. Attitude scores: in this study “favorable (positive)” attitude was for those who answer 70% and above of the statement on attitude, whereas “unfavorable (negie)” attitude was for those who answer below 70% of the statement on attitude.

**3. Results**

Out of 422 sampled women of reproductive age group (15-49 years of age), 412 were interviewed making up a response rate of 97.6%. Two hundred seventy neigh (67.8%) of the study participants were urban dwellers. Slightly more than one third, 162 (39.3%) of the study participants were in the age group (20-24 years), whereas, a small proportion 34 (8.2%) of them were 35 and above years of age. The mean ages of mothers were 26.88 years (SD± 5.698 years) standard division (SD) with a range of 27 years (15, 44 years). Nearly half, 179 (43.4%) of them were protestant in religion [Table 1].

*Table 1. Socio demographic and economic characteristics of the study participants in attending sexual and reproductive health clinics at Gambella town health facilities, Southwest Ethiopia, September 2019. (n=412).*

Background characteristics	Frequency (N)	Percentage (%)
Age of years		

Background characteristics	Frequency (N)	Percentage (%)
15-19	81	19.7
20-24	162	39.3
30-34	135	32.8
35-45	34	8.2
Mean ± SD of age in years	26.88 (± 5.69) <sup>1</sup>	
Religion		
Orthodox	155	37.6
Protestant	179	43.4
Muslim	47	11.4
Catholic	31	7.6
Agnua	89	21.5
Amhara	87	21.1
Oromo	77	18.7
Nuer	70	16.9
Others**	90	21.8
Marital status*		
Single	15	3.5
Married (living with a partner)	375	91.2
Divorced	12	2.9
Widowed	10	2.4
Residence		
Urban	279	67.8
Rural	133	32.2
Education status		
Illiterate	94	22.8
Can write and read	38	9.3
Primary education (1-8)	139	33.7
Secondary education. (9-12)	72	17.5
Higher education****	69	16.7
Occupation		
House wife	194	47.2
Governmental employed	60	14.6
Farmer	45	11
Merchant	42	10.2
Self-employed	27	6.4
Others *****	44	10.6
Family size		
≤3	112	27.2
4-5	170	41.3
≥6	130	31.5
Family monthly income		
≤1000 Ethiopian birr	151	36.6
1001-2000 Ethiopian birr	158	38.3
≥2001 Ethiopian birr	103	25.1

\*\*Opo/kemo/Tigray/Kemba/Wolayita/Gurage/Kafa, \*\*\*Single/Divorced/Widowed, \*\*\*\*College /University, \*\*\*\*\*Day laborer/student, \* the variables cannot be computed in statistical analysis as some of their categories are <5%.

**3.1. Reproductive Health Related Characteristics of the Study Participants**

A round 93 (22.6%), of participants had first pregnancy at a time of data collection. Of all respondents, 112 (36.1%) of

the study participants had a parity of 1 to 2 (Table 2).

**Table 2.** Reproductive health and health care related characteristics of the study participants in attending sexual and reproductive health clinics at Gambella town health facilities, Southwest Ethiopia, September 2019. (n=412).

Characteristics	Frequency (n)	Percentage (%)
Current marital status (Married)		
Yes	375	91.2
No	37	7.8
Age at time of your first marriage		
<19	92	24.5
20-24	153	40.8
25-34	112	29.9
35-49	18	4.8
History of Gravidity (Pregnancy)		
Yes	311	75.5
No	101	24.5
Age at time of first pregnancy		
<19	81	26.2
20-24	98	31.5
25-34	120	38.5
35-49	12	3.9
Parity		
0	101	24.5
1-2	112	36.1
3-4	138	44.4
≥5	61	19.6
Birth interval		
0 (no birth)	101	24.5
6-23 months	121	29.4
≥24 months	190	46.1
Alive children		
1	56	18
≤3	121	38
6-Apr	99	31.8
>6	35	11.2
History miscarried/abortion		
Yes	87	21.1
No	325	78.9
Trimester (GA) of miscarriage/abortion		
1 <sup>st</sup> Trimester (0-12wk)	62	71.3
2 <sup>nd</sup> (13-28wk)	15	17.2
3 <sup>rd</sup> (28-40wk)	10	11.5
Pregnant now		
Yes	93	22.6
No	319	77.4

### 3.2. Knowledge of the Study Participants on Induced Abortion

Out of the 412 study participants, 295 (71.6%) of them responded that they had ever heard about safe abortion service, the remaining 28.4% were did not. Of those who heard about safe abortion, nearly half 124 (42%) of them heard from health professional and only fifty seven 57

(19.5%) of them heard from mass media (Table 3) & (Figure 1).

**Table 3.** Distribution of Knowledge about induced abortion of the study participants in attending sexual and reproductive health clinics at Gambella town health facilities, Southwest Ethiopia, September 2019. (n=412).

Characteristics	Frequency (n)	Percentage (%)
Heard about method of abortion		
Yes	295	71.6
No	117	28.4
Source of information regarding to induced abortion		
Mass media (Radio, Television)	57	19.5
Health professional	124	42
Relatives (Friends), Parents (family members)	48	16.2
School/Teachers	66	22.3
Know place of safe abortion conducted		
Yes	199	48.2
No	213	51.8
Place of safe abortion conducted		
Hospital	86	43.3
Health center	37	18.3
Private clinic	58	29.2
Home	18	9.2
Don't know	213	51.8
Know who attends safe abortion		
Medical Doctor	47	23.3
Midwifery	36	18.3
Any health professional	98	49.2
traditional healer	18	9.2
Don't know	213	51.8
Know preferable time to perform Induced abortion		
1 <sup>st</sup> Trimester (0-12wk)	106	53.3
2 <sup>nd</sup> Trimester (13-28wk)	32	16
3 <sup>rd</sup> Trimester (28-40wk)	22	11.2
At any time during pregnancy	39	19.5
Don't know	213	51.8
Ethiopia has abortion law		
Yes	67	16.3
No	345	83.7
Today unsafe abortion considered major problem		
Yes	322	78.1
No	90	21.9
Know the possible complication of unsafe abortion		
Yes	204	49.6
No	208	50.4

Knowledge of the study participants on induced abortion legislation

From all the respondents, 164 (39.8%) of them know that the law in Ethiopia allows for legal abortion under certain circumstances (Table 4).

Overall Knowledge score towards induced abortion:

Twelve (12) questions were prepared to assess overall knowledge of respondents towards induced abortion. Regarding the overall knowledge, more than half of the

Reproductive age women Group two-third, 286 (69.5%) have inadequate knowledge and the remaining 126 (30.5%) of them had adequate knowledge on induced safe abortion.

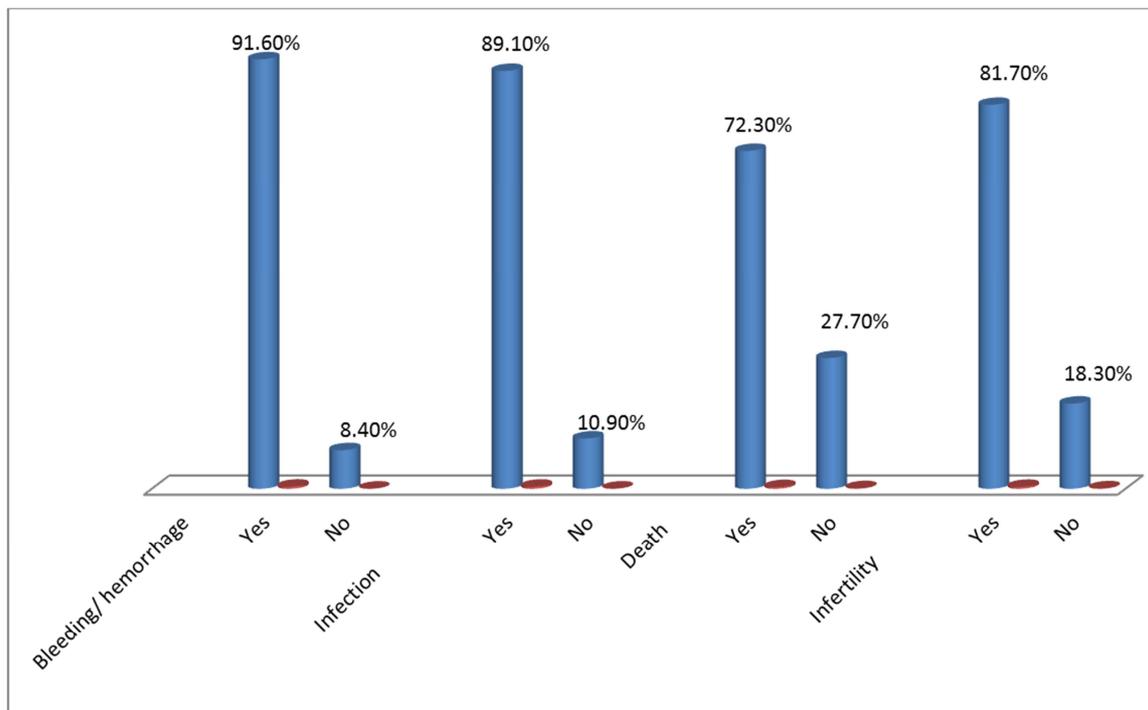


Figure 1. Knowledge on complication of unsafe abortion, Gambella health facilities, 2019.

Table 4. Percentage Distributions of Responses on Knowledge of the Abortion Legislation Under Different Circumstances in attending sexual and reproductive health clinics at Gambella town health facilities, Southwest Ethiopia, September 2019. (n=412).

S. N.	Ethiopia Law’s allows for legal abortion under certain circumstances	Knowledge on Legal status	
		Know N (%)	Don’t know N (%)
1	If the pregnancy is resulted from Rape	213 (51.8)	199 (48.2)
2	If the pregnancy is resulted from Incent	133 (32.3)	279 (67.7)
3	If the pregnancy has serious fetal deformity	180 (43.8)	232 (56.2)
4	If the pregnant woman is under 18 years,	113 (27.4)	299 (72.6)
5	If the Pregnancy endangers the life of the mother and Newborn	274 (66.6)	138 (33.4)
6	If the Pregnant mother has mental or physical disability	294 (71.3)	118 (28.7)

### 3.3. Attitudes of the Study Participants on Induced Abortion

Among the study participants 289 (70.1%) of respondent had positive attitude towards induced abortion and 61 (21.1%) said induced abortion is necessary to save the life of

mother, 88 (30.4%) said it is necessary if pregnancy is due to rape, 113 (39.9%) mentioned it is important to prevent school disruption Overall Attitude score towards induced abortion: A total of Ten (10) questions were prepared to assess the overall attitude of respondents towards induced abortion (Table 5)..

Table 5. Attitude towards induced abortion of the study participants in attending sexual and reproductive health clinics at Gambella town health facilities, Southwest Ethiopia, September 2019. (n=412).

Characteristics	Frequency (n)	Percentage (%)
Right concern of induced safe abortion		
Yourself	213	51.6
Your family	117	28.4
Government	48	11.6
NGO	34	8.4
Think of Induced safe abortion conduct		
It is good	52	12.5
It is Sin against God	174	42.4

Characteristics	Frequency (n)	Percentage (%)
It is harmful practice	67	16.2
It is crime	79	19.3
I don't know	40	9.6
Do you think safe abortion is necessary		
Yes	289	70.1
No	123	29.9
Safe abortion is necessary (n=289)		
To save the life of the mother	61	21.1
If pregnancy is due to rape	88	30.4
To prevent school disruption	113	39.2
Other	27	9.3
Safe abortion is not necessary (n=123)		
Religiously prohibited /sin	62	50.4
Socially unacceptable	28	22.7
Life of the mother health impact	18	14.8
Might be infertility	15	12.1
Abortion should be legalized in Ethiopia		
Always legal	128	31.1
Yes, but only some circumstance	145	35.3
No it is criminal (illegal)	89	21.5
Don't known	50	12.1

### 3.4. Practices of the Study Participants on Induced Abortion

Among the respondents 405 (98.3%) had sexual intercourse at least once before data collection time. Among those who experienced sexual intercourse before, 141 (34.5%) of the used family planning. and 113 (79.8%) of study participants were used family planning to prevent unwanted pregnancy (Table 6).

**Table 6.** Practiced towards induced abortion of the study participants in attending sexual and reproductive health clinics at Gambella town health facilities, Southwest Ethiopia, September 2019. (n=412).

Characteristics	Frequency (n)	Percentage (%)
Had sex previously		
Yes	405	98.3
No	11	2.7
Used any of family planning after sex (n=405)		
Yes	141	34.8
No	264	65.2
Contraceptive type used by respondents (n=141)		
Condom	45	11.1
Inject able (Depo)	134	33.2
Pills	95	23.4
Implant	51	12.5
IUCD	25	6.2
Others	55	13.6
Reason used a family planning method (n=141)		
Prevention of unwanted pregnancy alone	113	79.8
Prevention of pregnancy, HIV/ AIDS and STI	19	13.7
Prevention of HIV/AIDS alone	9	6.5
Had practiced induced abortion previously (n=405)		
Yes	66	16.3
No	339	83.7
Number of induced abortions (n=66)		
1 time	60	90.7
2 times	4	6.4
>3 times	2	2.9
Trimester of induced abortion (n=66)		
1 <sup>st</sup> Trimester (0-12wk)	59	89.6
2 <sup>nd</sup> Trimester (13-28wk)	6	8.3
3 <sup>rd</sup> Trimester (28-40wk)	1	2.1
Types induced abortion (n=66)		
Spontaneous Abortion	14	20.7
Safe induced abortion	22	32.9
Unsafe induced abortion	30	46.4

Characteristics	Frequency (n)	Percentage (%)
Reason for induced Abortion (n=66)		
Maternal Health problems (Maternal indication)	5	7.7
Too many too close to previous pregnancies	5	6.9
Not to discontinue education (to complete education)	4	6.4
Economic reasons	9	15.6
Disagreement with husband	3	4.1
Fear of parents and public criticism (Fear of criticism)	29	43.7
Others	10	15.6
Influence to induced abortions (n=66)		
Myself	56	84.9
Partner	3	4.6
Family	1	2.3
Health care provider	5	8.2
Place induced abortion conduct (n=66)		
Using local rural TBA drugs (traditional medicine)	6	8.9
In governmental health institution	23	34.1
In Non-governmental health institution	3	5.3
In Private clinic	34	51.7
Who conducted induction abortion (n=66)		
Medical Doctor	4	6.7
Midwifery	3	4.8
Any health professional	53	79.9
Traditional healer	6	8.6
What material was used to induce abortion (n=66)		
Done with taking Medication (Drug)	26	39.1
Done with metallic instrument (EAC)	8	12.3
Done with plastic tube (MVA)	24	35.7
Done with Mixed procedure	3	4.6
Done with local herbs	5	8.3
Problem after abortion (n=66)		
Yes	17	25.9
No	49	74.1
Possible complication of after Abortion (n=17)	66	100
Bleeding/ hemorrhage	1	3.1
Infection (Fever and weakness)	9	55.8
Infertility	1	8.2
painful duration sex and urination	6	32.9
Assume that you have unwanted pregnancy now, What would you do		
I was abort it (induced abortion)	232	56.2
I was continue to term the pregnancy	104	25.3
I don't know what to do	76	18.5

## 4. Discussion

In the current study, more than two-third, 286 (69.5%) of women in reproductive age group have inadequate knowledge towards safe abortion. Of these most believed that safe abortion should be allowed under any circumstance. The World Health Organization (WHO) estimates that every year, nearly 5.5 million African women have an unsafe [3]. To minimize this burden associated with unsafe abortion it is important to legalize abortion which might enhance the provision of quality service. In addition to this improving the knowledge, attitude and practice of women in reproductive age group towards safe abortion is critical. This study was intended to assess the knowledge, attitude, practice of women of reproductive age groups towards induced abortion because knowledge on abortion will improve their practices towards safe abortion practices, which will further reduce the incidences of maternal mortality and morbidity due to complications of unsafe abortion.

Overall knowledge on abortion is good in our study

respondents i.e. 126 (30.5%). This is slightly lower than the finding from Debre markose, Nepal, and Urban Slums Of Guwahati City where overall knowledge were 76%, 71.2%, and 83.47, respectively [34-367]. Good knowledge on abortion in the respondents might be due to adequate amount of awareness provided by their relatives as a source of knowledge on abortion. Out of the different types of abortions 39.1% and 35.7% had knowledge on medical abortion and surgical abortion respectively, but only 20.7% of them knew about spontaneous abortion. One study conducted in Debre Marquos claims that the odds of male students were 2.5 times more likely to have adequate knowledge than females [30]. But this is dissimilar with this current finding; women in reproductive age group were 1.6 more likely to have adequate knowledge related to safe abortion than males. The reason is because females are becoming more accessed to different mass media and getting more information about the problem than males and the number of females going to schools and Universities is improving. In addition females have different information regarding health problems and their awareness is increased

through establishing gender clubs at schools and Universities to have open communication regarding females' problems which are related to major obstacles for their education and other health related problems.

According to the finding of this study only 67 (16.3%) of women of reproductive age group knew the legal status of induced abortion in Ethiopia. This study was found to be much lower than a result obtained in Nepal among medical college students where satisfactory proportions (66.5%) of the respondents were aware about legalization of abortion with the country [19]. This might be attributed to the difference in level of education among students in two study areas.

Unsafe abortion was reported as it is a major health problem by 322 (78.1.9%) of the study subjects. This is higher than the finding from Addis Ababa study that is 26% [17]. This might be due to difference in study subjects only first year students were included in this study, where as Addis Ababa study subjects includes first year and above. It is fact that as the year of study increases the level of knowledge of students also increased [11, 22,]. This study showed that 48.2% of study participants were aware of at least one type of due to induced abortion. This result was similarly supported with the qualitative finding, unsafe abortion was said to cause for increased morbidity, mortality, psychosocial and economic problems, excessive bleeding, genital traumas including uterus perforation, infections, infertility, and increased risk of transmission of STI and HIV/AIDS. This finding was much lower than a knowledge, attitude, practice study conducted in public health practitioners in Tigray, Ethiopia which were 55.9%, 94% [23, 24]. Though students are expected to know about complication of abortion. Dissemination of information about the reproductive health problems specially, about abortion has been weak; this results in limited knowledge about the issue. This could lead to unsafe sexual practices. The most commonly cited complications include, bleeding (40.4%), infection (25.3%) and infertility (10.2%). This finding was lower than the study finding obtained in Kampala, Uganda where most (93.1%) of participants knew at least one complication of an induced abortion [29]. The variation might be occurred due to difference in access to health information in different settings. Majority of the respondents 54.7% opposed legalization of abortion Ethiopia. This finding was lower from the study conducted in Jimma where 67% of study participants opposed its legalization [31]. On the contrary the result was much higher than a study conducted in Argentina among college students where only 4.6% of study participants opposed the legalization of induced abortion [32]. The reason why most respondents opposed might be religion and cultural factors which has its influence on one's attitude.

Regarding to knowledge of Ethiopia's abortion law, 20.5% responded that Ethiopia has no abortion law. Furthermore most of the FGD discussants did not know whether Ethiopia has abortion law. Few mentioned Ethiopia has abortion law; this finding was lower than a study conducted in Addis

Ababa University which reported 39% [17]. The lower response rate of knowing that Ethiopia has abortion law in this study might have been due to dissemination of information about the new penal code has been weak, and have limited knowledge about the issue. Besides, the study sample in this study were first year students but the study samples in the above two universities were exclusively health students. This is expected in the experienced health science students to have higher knowledge regarding safe abortion compared to first year students from other non-health departments.

As part of law reforms in Ethiopia in 2005 the penal code was revised to broaden the indications under which abortion is permitted. Termination of pregnancy is now legal when the pregnancy results from rape or incest, when continuation of pregnancy dangers the health or life of the women or the fetus, in case of foetal impairment, for women with physical or mental disabilities [20]. Despite the relative liberalization and despite the fact that several institutions in the town provided safe abortion services, the fact that significant proportion of Women in reproductive age group resorted to traditional and unsafe services indicates that access to safe abortion remains to be a problem. Furthermore, out of all study participants, only 67 (16.3%) properly identified all the conditions under which abortion is legally allowed in Ethiopia. This demonstrates that liberalization of abortion by itself is not enough and that, in order to ensure that legislative changes improve reproductive health; women must know the legal options they have in the case of unwanted pregnancy. This is in agreement with findings of study conducted in South Africa, where abortion is legal, yet unmet need for abortion information resulted in significant occurrence of unsafe and illegal abortion [20].

The current abortion law in Ethiopia allows abortion only under certain circumstances. But only 16.3% of women of reproductive age groups knew this, which means that almost all of women of reproductive age groups had poor knowledge to the current law, which is much lower than a studies conducted in University of Buenos Aires, Argentina and Nepal that were 52.2%, 59% respectively [25, 35]. The low level of knowledge on legal and safe abortion practices and complications of unsafe abortion might be due to health facility as a poor source of knowledge on abortion. In general this study suggest that the participants had relatively better knowledge related to unsafe abortion as major health problem, complication of abortion and presence of abortion law in Ethiopia; but there is least knowledge on stating the issue of the newly revised abortion law of Ethiopia. This is because women of reproductive age groups have limited information on the revised law.

Concerning attitude towards safe abortion about, One hundred Eight two (29.9%) women of reproductive age group have positive attitude towards safe abortion to be legal and accessible under any circumstance that is 44.1% of Respondents, woman under 18 requesting safe abortion service at health facility should be allowed, which is lower than that of University of cape town and walter Sisulu 83%

and Nepal [27, 35] In addition more than half of the participants of FGD support legalization of safe abortion, as they believed that it would reduce the risks associated with unsafe abortion which is lower than that of the studies conducted in University of Cape Town University of Washington and Nepal that is 48%, 70% and, 44.1% respectively (7, 8, 18). Out of all respondents in this study, 56.1%, 31.1% of them agreed that it is acceptable for a woman to choose abortion because of fetal anomaly or congenital disorder, serious fetal deformity, 66. This finding is lower than a study conducted at University of Nigeria which is 81.6% [28]. This difference may be due to the difference in the national legalization of abortion, the participants' background and a difference in personal beliefs. In addition to this, Out of the women of reproductive age group in this study, 35.2%, 43.2%, 56.2, and 66.2% of them agreed that abortion should be allowed if it is attributable to incest, rape, mental or physical disability, and if the pregnancy endanger her life respectively, which is lower than that of Mexico University that is 83% [18]. This is considered due to back ground factors such as cultural taboo towards abortion, their personal believe, religious affiliation and other factors.

Fifty eight percent of participants agreed that women of reproductive age groups use induced abortion to terminate their pregnancy, this is also supported by FGD discussants, youngsters, unmarried youth and students were reported to be the most affected groups due to practice of unsafe abortion under unsafe conditions which is slightly higher than that of study conducted in Lagos state University of Nigeria 53.5% [22]. Most abortions are done backstreet because girls do not want the community to know what they are doing. This has an implication of unsafe practices that leads to increase mothers' mortality and morbidity.

Regarding the decision to be made to abort pregnancy, 25.4% of the respondents believed that the right of abortion was the woman's herself rather than her family or clinician. This finding was higher than a finding obtained in Chelia Woreda, Oromia Region, where only 11.4% of respondents had positive attitude towards induced abortion [33]. The legal status of abortion would be a key determinant of access to safe abortion. However, in this area the proportion of individuals who had adequate awareness about legalization of induced abortion was low. In addition to this, In the present study found 28.4% of women of reproductive age group were reported that they agree that husbands (Families) have influence in decision of aborting which was higher than the finding in university of cape town and walter Sisulu 22% [27]. This difference might have been due to effect of male dominance, and woman and men were not considered as having the same right in developing country. Gender and religion have been seen to have significant influence on the attitudes of women of reproductive age group towards abortion; whereas, age, marital status, tribe and institutions have been seen as socio demographic factors that do not have influence on the attitudes of women of reproductive age group towards abortion, which is dissimilar with the current

finding [28].

A very small proportion 89 (21.5%) of the respondents disagreed that abortion was a criminal and 18.9% agreed with the statement that it should be legalized, which is similar to a study carried out among South African students where only 19.8% of the respondents agreed with the statement that abortion should be legalized (26) and also similar to the study in Goma where the majority of the participants (76.2%) were against illegal abortion [29]. Only one of the respondents 62 in this study disagreed with the statement that abortion was a sin against God. This might be due to the fact that Ethiopia is a highly religious country, with the majority of the population being either Christians or Muslims both doctrines do not agree with abortion.

This study identified that among the respondents who experienced sex, 34.8% of them used family planning method. The common type of family planning method used by women of reproductive age groups was injectable (DEPO) (33.3%). This finding was found to be higher a result obtained in Jimma comprehensive school where 27.2% of study participants who had sex used family planning methods [31]. The difference might be due to increased awareness of HIV/AIDS transmission prevention method resulted in use of condom more than ever before.

As revealed in this study most of the induced abortions (79.9%) were conduct by health professionals. It was lower than the finding obtained in Jimma where 84% of induced abortions were conducted by health professionals [31]. The variation might be due to lack of access to health institution and economic problems. The problem of unwanted pregnancies and induced abortion is of very large impact to the health of women worldwide, but school youths are still shown to be highly affected due various reason. For example women might prefer to undertake induced abortion to avoid having their educational aspirations terminated [8].

## 5. Conclusion

This study showed that more than two-third (69.5%) of women in reproductive age group had poor level of knowledge about induced abortion. Also most of the studied participants had showed unfavorable/negative attitude toward induced abortion. Abortion is a serious issue in our society, which can never be considered as an isolated phenomenon. Majority of the women in reproductive age group who participated in inducing abortion gave reason for their intervention of the pregnancy was still they were in private clinic and home. Based on the finding of the study it was recommended at health information should be disseminated to school about the effect of unsafe abortion and importance of sex education preventing unwanted and unplanned pregnancy. Health information and education on modern contraceptive methods should be encouraged and modern contraceptives should be available. It would be better if there are conditions where young people discuss about sexual and reproductive health issues with their parents, friends and others. Finally, it was recommended that further study should

be done on knowledge, attitude and practice towards induced abortion in this area.

## Acknowledgements

We authors are thankful to Gambella University, Gambella Health Sciences College, for giving us this opportunity to conduct the research.

## Disclosure

We authors declared that we have no competing interests

## Availability of Data and Materials

The data that support our conclusion of the study are obtained from the corresponding author up on reasonable request. Because, the data set is not shared publicly

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