



Exploring the reasons for unsafe abortion among women in the reproductive age group in western Ethiopia

Genanew Kassie Getahun^{a,*}, Muluneh Kidane^b, Wubalem Fekade^c, Tewodros Shitemaw^a, Zelalem Negash^d

^a Kotebe Metropolitan University, Menelik II Medical and Health Science College, Addis Ababa, Ethiopia

^b Yanet College, Addis Ababa, Ethiopia

^c Bahir Dar University, Bahir Dar, Ethiopia

^d Yekatit 12 Medical College, Addis Ababa, Ethiopia

ARTICLE INFO

Keywords:

Unsafe abortion
Qualitative study
Reasons
Women of reproductive age
Ethiopia

ABSTRACT

Background: Unsafe abortion, even though it is preventable, remains a significant cause of mortality and morbidity among women in the developing world. It has always been a dilemma for researchers to explore the reasons for unsafe abortion in communities due to the sensitive nature of the subject. As a result, the aim of this study was to explore the reasons for unsafe abortion in women of reproductive age in western Ethiopia, 2022. **Methods:** A qualitative study with a purposive sampling technique was used to explore the reasons for unsafe abortion. The sample size was determined by the data theoretical saturation. Thematic data analysis was used to analyse the data, which was aided by Open Code 4.03 software.

Results: Five thematic categories were drawn from the collected data. The categories were: lack of knowledge of safe abortion policy and services; socioeconomic conditions; safe abortion as a real religious and cultural taboo; stigma of unplanned pregnancy; and a desire to pursue education.

Conclusion: The obtained evidence in this study revealed that lack of knowledge, poor socioeconomic conditions, cultural and religious beliefs, stigma of unplanned pregnancy, and a desire to pursue education were quoted by participants as reasons to unsafe abortion practices. As a result, it is critical to improve family planning education, raise awareness about safe abortion services, and educate young women about the consequences of unsafe; abortion to reduce the rate of unwanted pregnancy and unsafe abortion-related complications.

1. Introduction

According to the World Health Organization (WHO), an unsafe abortion is defined as an abortion done outside of a health facility, a pregnancy terminated by someone who lacks the essential expertise, or both.¹ Between 2015 and 2019, 121 million unintended pregnancies were reported annually, resulting in a global rate of 64 unintended pregnancies per 1000 women of reproductive age, with 61% of those pregnancies ending in abortion, corresponding to a global rate of 39 abortions per 1000 women of reproductive age.^{2,3} Abortion rates were reported to be higher in poor nations than in developed countries.^{4,5}

In affluent countries, 30 women were reported to die for every 100,000 abortions; in contrast, in underdeveloped nations, there were 220 deaths per 100,000 abortions, particularly in Sub-Saharan Africa,

and 520 deaths per 100,000 unsafe abortions were reported.³ Women in Africa are disproportionately affected by unsafe abortion-related mortality. While the continent is home to 29% of all unsafe abortions; it contributes to 62% of all abortion-related deaths.^{3,6} Similarly, different studies also found that women in South America, Eastern Africa, and Western Africa had more unsafe abortion practices than women in other regions, indicating that unsafe abortion was a public health concern in these regions.^{7,8} Following obstructed labor (22.34%), pregnancy-induced hypertension (16.9%), and puerperal sepsis (14.68%), unsafe abortion (8.6%) was the fourth leading direct cause of maternal death in Ethiopia.⁹ In Ethiopia, 620,300 induced abortions were estimated to be done each year, and the abortion rates was 28 per 1000 women aged 15–49 years, with the greatest rates in the country's urban areas.¹⁰

* Corresponding author.

E-mail addresses: genanaw21kassaye@gmail.com (G.K. Getahun), savichkidane@gmail.com (M. Kidane), wubfek@gmail.com (W. Fekade), tewoderosshitemaw@gmail.com (T. Shitemaw), zolabelay256@gmail.com (Z. Negash).

<https://doi.org/10.1016/j.cegh.2023.101301>

Received 25 January 2023; Received in revised form 2 March 2023; Accepted 16 April 2023

Available online 18 May 2023

2213-3984/© 2023 The Authors. Published by Elsevier B.V. on behalf of INDIACLEN. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

Several factors were reported to be responsible for unsafe abortion practice, including some of the following: place of residence, knowledge of pregnancy signs and symptoms, being a student, age during pregnancy, delay after the decision for abortion, religious stigma, sexual assault, financial problems, and a lack of information about where to get the service, delays to suspect pregnancy, transportation problems, and family conflict, which have all been identified as reasons for unsafe abortions.^{11–14} For instance, a study conducted in Ghana and Bahir Dar, Ethiopia, revealed that women who were unaware of the legal status of abortion were more likely to have unsafe abortion services.^{14,15} Similar studies also discovered that lack of self-confidence and anti-abortion sentiments go with traditional values,⁹ socioeconomic stress, and a lack of male partner support were the leading causes of unsafe abortion.¹⁶

When studies revealed that unsafe abortion contributed 32% of Ethiopia's maternal mortality burden in 2005, the Ethiopian Parliament recognized and decided to prompt amendments to the penal code regarding abortion, allowing for legal, safe abortion in cases of rape or incest, if the woman has a physical or mental disabilities, if it is necessary to preserve the woman's life or physical health, or if she is younger than 18 years old (juvenile) and is physically or mentally unprepared for childbirth.¹⁷ It was only legal before the 2005 revisions if the pregnant woman's life was in danger.¹⁸ The Ethiopian Ministry of Health has led the expansion of comprehensive abortion care in governmental and private health institutions since the new law was enacted.¹⁷ The policy allowed abortion to be semi liberalized in Ethiopia.¹⁹ Legal abortion services are provided both in governmental and private health facilities in Ethiopia and are governed by the technical and procedural guidelines for safe abortion services. This guideline explains how to end a pregnancy through medical or surgical abortion depending on the gestational age since the last menstrual period (LMP), the degree of health care available, and professional competence.²⁰

Many Ethiopian women, however, continue to obtain abortions outside of health institutions, often in dangerous circumstances. This fact must be addressed by enhancing access to safe and legal abortion services, particularly for rural women.¹⁰ Therefore, it is crucial to investigate the reasons for unsafe abortions in Ethiopia to inform the development of appropriate programs and policies aimed at lowering maternal morbidity and mortality. Furthermore, this discovery aids in the improvement of services connected to safe abortion, as well as the accessibility and availability of abortion care in order to promote women's health and well-being. As a result, the purpose of this study was to explore the reasons for unsafe abortion practices among women of reproductive age at six health facilities in western Ethiopia in 2022.

2. Methods

The study was conducted in the Oromia Regional State of Ethiopia, particularly the West Shewa Zone, Cheliya District. Cheliya district has one main hospital and five health centres. According to the Central Statistics Agency of Ethiopia, the total population of the district was estimated to be 94,152, of whom 45,076 were men and 49,076 were women.²¹ The study was carried out from June 15 to July 22, 2022.

A qualitative phenomenological investigation was employed. Due to the sensitive and frequently covert nature of abortion, this was especially useful for unsafe abortions. It was chosen since the goal of the study was to learn more about the reasons for unsafe abortion practices among women in their reproductive years. The data were gathered from women of reproductive age (15–45 years) who had self-induced abortions or received services from untrained personnel to end pregnancies, as well as those who were treated for and recovered from complications of unsafe abortions. Participants' age, occupation, educational status, and marital status were all used to preserve maximum variation. Women who were unable to attend an in-depth interview owing to acute illness or pain was excluded. Until data saturation (no new ideas were emerging), fresh volunteers were recruited for in-depth interviews.

Data were collected via in-depth interviews using open-ended questions. Participants were recruited at the health centre during their follow-up visits six days later; hence, they are commonly scheduled for post-abortion care check-ups. The lead investigator (MK) created the in-depth interview guide after studying relevant literature and similar guidelines. The interview guide covered sociodemographic factors, reproductive health knowledge, religious-cultural difficulties, the stigma of unplanned pregnancy, and women's lived experiences with unsafe abortion. Because of the sensitivity of the subject, each participant's interview was performed in a separate and convenient location. The in-depth interview guide was written in English first and then translated into Afan Oromo and back to English to ensure consistency. Discrepancies in the code guide's application were investigated and rectified. Following these steps, a final version was developed through consensus by all principal investigators. The interviewees all agreed to have their voices recorded, and the sessions lasted between 50 and 63 min. (WF) and (TS) transcribed it, and then (GKG) and (ZN) translated it into English.

Participants were asked about their experiences throughout the in-depth interview to learn more about them. Throughout the research process, detailed field notes were taken about the participants' emotions and other nonverbal communication, offering a thorough account of the subject matter. The interviews were open-ended to increase trustworthiness, and respondents were urged to answer the questions freely while being guided to stay focused on the issue of interest. Folders containing data transcriptions were kept on a pen drive dedicated specifically to the study's aims and kept under lock and key.

The interviews were digitally recorded with the consent of the informants. The principal investigators transcribed the interviews and subsequently translated them into English. Then, we looked for recurring themes and variances in the transcripts and field notes. After that, the coder reads over each transcript to make sense. Using the preliminary code guide, all transcripts were coded individually. The final version of the code guide was developed by following these procedures. Then, the transcript was converted to open code 4.03 format.

Finally, the investigators looked into the relationships between the codes that had been generated previously and categorized them into groups. The different categories were then organized into themes. Finally, themes were scrutinized to ensure that they accurately depicted the circumstances. Throughout the proposal development, data collection period, and analysis pregnant women and members of the public provided free support and advice for the researchers regarding ethical issues and tips on how to communicate their findings to a broad audience in a way that the general public can understand and benefit.

3. Results

A total of 17 women who had unsafe abortions and recovered from complications were interviewed during their post-abortion care follow up at six health facilities. The mean age of the study participants were 26.7 years. Approximately two-thirds (64.7%) of women who took part in this study were single, 76.5% were unemployed, and 41% of the study participants had only completed primary school.

We organized the findings from the in-depth interview into the following thematic categories based on category construction and data interpretation: lack of knowledge of safe abortion policy and services; safe abortion religious and cultural taboo; economic conditions as a reason for unsafe abortion; the stigma of unplanned pregnancy; and a desire to continue education.

3.1. Theme 1: lack of knowledge of safe abortion policies and services

Regarding abortion law and safe abortion services in Ethiopia, almost all (88.2%) of the Study participants did not know about the existence of abortion law and legal abortion services in Ethiopia. However, only four of the study participants heard about the existence of safe

abortion services, and they reported that they received information from health institutions. Meanwhile, the remaining majority did not know the places where safe abortion service was provided, and no one was able to identify the most preferable time to perform a safe abortion. That is why they were obligated to perform unsafe abortion. Related to the above statement, a 21-year-old study participant reported that she and her friend know that abortion is an illegal practice prohibited by the community and the government that should not be encouraged and service provided.

My friend and I did not know where to go to terminate my pregnancy. Both of us knew that abortion was illegal and it is a sin, so I decided not to go to any health facilities. My friend recommended that I go to a traditional medicine provider and take the traditional herbs to terminate my pregnancy. I went there and took it; hence, I did not have any other option. After that, I knew that I was bleeding to death (21-year-old university student).

Most of the study participants perceived that abortion services were not available at health institutions, including health centres and hospitals. They feel that abortion is illegal and would not be performed by any facility or health care provider.

I do not have any information about the availability of safe abortion services in any health facilities. I knew that abortion was illegal and considered as murder in our community. I could not go to any health institution; as a result, I took around ten tablets (metronidazole) at a time to abort my pregnancy (married 28-year-old woman).

In general, a lack of knowledge of safe abortion services and safe abortion policies possibly leads those women to practice unsafe abortion.

3.2. Theme 2: safe abortion as a religion and cultural taboo

According to all of the participants, abortion, in any form, regardless of whether it is safe or unsafe, is against their beliefs and customs in society. Despite their deep feeling that it is against their spiritual values, they performed unsafe abortions since it was a must and obligatory. They preferred an unsafe method to hide it from adjacent families and the community at large. Respondents also reported that making such a decision against their fetus, ideology, and culture were extremely difficult, and they did it while knowing that it could result in permanent disability and even death, and they believed that it was their only option to survive relatively well. The following is how the participants expressed their thoughts: A 39-year-old government-employed woman explained the situation as:

Abortion is prohibited in all religions since it is killing a human being, which can result in imprisonment. Abortion, in any form, is strictly prohibited in my religion. It is a sin against God to take the life of an unborn child. I performed an abortion on myself that God made, and I always regret it. I'm not the appropriate kind of person. I believe God will punish me for what I have done, and I feel that I am a useless person on earth (a 39-years-old government employed married woman).

The majority of participants believed that abortion is against Ethiopian tradition and social value and is considered a bad practice or horrible procedure. Anyone who engages in this type of activity will be stigmatized and marginalized. Respondents also revealed that social stigma and discrimination were their main concerns about practicing abortion against their faith and culture. Participants further explained that it was extremely difficult to decide against their spiritual beliefs and social norms, which were far worse than suicide. However, some perceive that the almighty God may forgive them. A 20-year-old preparatory school student stated that

Abortion is forbidden in our society. If people determine you are pregnant and choose to terminate your pregnancy, you will become a discussion

point in society. Moreover, abortion is a horrible and unacceptable practice, and anyone who engages in it is stigmatized by others and causes humiliation to their parents. As a result, I prefer to have an unsafe abortion in a way that society is unaware of. I did an incredibly difficult and unacceptable act, but God may forgive me (a 20-year-preparatory school student).

3.3. Theme 3: economic conditions as a reason for unsafe abortion

Many participants admitted that their socioeconomic problems were the driving force behind their risky abortions. Financial and social issues, schooling, and lack of preparation to care for a baby were stated as causes of unsafe abortions by respondents. The phenomenon was stated as follows:

I am a student, and I do not have the money to look after myself and a child at this time. I could also not keep the pregnancy because it would be embarrassing for me and my parents. In addition, to avoid the humiliation of having babies without a plan and a husband, I did not hesitate to take the herbal supplement that was recommended by my friends. I started having abdominal cramps, and my friends brought me here after heavy bleeding (a 20-year-old 1st year university student). I am a mother of three children; my husband has told me that they are all too much for us to endure. I pondered having an abortion since we could not afford to have another child at this point in my life because we do not have enough money to care for ourselves and a child. We are unable to raise them due to a lack of money. However, I became pregnant and devised a method to abort the child on my own (married 36-year-old woman).

3.4. Theme 4: the stigma of unplanned pregnancy and avoiding family disappointment

Pregnancy before marriage is considered unacceptable in Ethiopian society. According to the majority of participants, women who become pregnant prior to marriage are frequently shunned in their communities. Many women were expected to become pregnant after marriage. That is why women who become pregnant prior to marriage have a risky abortion. Furthermore, a woman does not want to lose her family's or society's trust; she executes an unsafe abortion to maintain this relationship. A 25-year-old 3rd-year university student stated the following:

Women who marry before having children are always praised, and if you become pregnant before being married, society will exclude you from social life. Apart from that, this is a dishonour to the woman and her family, and such behaviour is not tolerated in our culture. To avoid this, I would prefer to have an unsafe abortion (a 2nd-year-university student).

Many participants stated that they would always want to avoid disappointment and animosity from their parents regarding their unwanted pregnancy. Because many of them were still living under their parents' care, they would wish to continue their existing cordial connections with them. A 19-year-old high school student reported the following:

I have a close relationship with my mom and dad. When I discuss about sex with my mother, she always encourages me to finish school, then marry and have a child. Therefore, if I get pregnant and keep it until term, I will disappoint her, my family, and be stigmatized by the community. Here, the stigma is serious. I do not want to have a child and disappoint them (a 19-year-old high school student).

3.5. Theme 5: a desire to further one's education

The majority of participants revealed a desire to finish their education as a factor that contributes to unsafe abortion practice. Many of the participants were in various stages of education and did not want to

discontinue because of their pregnancies and had a fear of service restrictions at the health facility and being blamed by health care providers. A grade 10 student identified that:

I am a high school student. To have a child, I need to have my own job. If you are not educated, you will have a terrible time. I did not want to sacrifice my education for childbearing; hence, everything has its own time. My friend was kicked out of school due to her pregnancy, and when she sought medical advice, she was ordered to quit trying (an 18-year-old high school student).

4. Discussion

The current study explored the reasons for unsafe abortions among women of reproductive age in Ethiopia's Oromia region's west Shewa zone. In the research area, we discovered that unsafe abortion is still a neglected sexual and reproductive health issue. According to this study, the primary causes of unsafe abortion were socioeconomic hardship, a lack of support from the male spouse, religious and cultural norms, a lack of knowledge about safe abortion policies and services, the stigma of unplanned pregnancy, and a desire to continue education.

Women with unwanted pregnancies may be motivated to seek safe abortion procedures if they are aware of the law and safe service provision. However, one of the main reasons identified as a factor contributing to unsafe abortion practice in Ethiopia was a lack of knowledge about safe abortion policy and services. Despite the fact that Ethiopia has a reproductive health policy that mandates the provision of safe abortion services,⁸ the majority of respondents had a poor understanding of safe abortion services and the country's abortion legislation. Moreover, women who go to a hospital for postabortion complications may also hide the truth about their induced abortion because they are terrified of the legal ramifications. This might be due to a lack of awareness about safe abortion legislation. Even in places where abortion is legal, women have been deterred accessing safe abortion care due to a lack of understanding of the legislation and worries about confidentiality (15, 21).

Another reason for continuing to utilize informal abortion care was cultural and religious influence. The majority of respondents cited that abortion is forbidden by the Bible, and that they were also swayed by counsel from friends and accounts from other women in their neighbourhood. Participants in this study also admitted that they performed risky abortions since safe abortion of pregnancy was regarded as a religious and cultural taboo in Ethiopia. Most of the respondents stated that they favoured hazardous abortion practices to conceal the activity from their families and communities. They also admitted that terminating a pregnancy against their religion and culture was difficult and traumatic. Women's decisions were influenced by the advice they received from friends and the stories they heard from other women in their neighbourhood.^{22,23}

Many of the study participants confessed that their socioeconomic circumstances, such as financial troubles, unemployment, and a lack of financial support, led them to engage in unsafe abortion practices. In addition, not being prepared for motherhood, already having a little child to care for, and not having enough money to care for the baby were also mentioned as key reasons for the termination of pregnancy.¹⁴ Similarly, according to Loi, being wealthy was protective against unsafe abortion-related dangerous situations. When compared to women in the highest quintile, poorer women (those in the lowest asset index quintile) had a 45% higher risk of unsafe abortion.^{24,25} Furthermore, women from low income families and those with little or no education were more likely to have an unsafe abortion.^{26–28} This was directly tied to the fact that these women who were not financially equipped to parent their pregnant kids might believe that it would negatively impact their future prospects.

According to the responses of many participants, stigma and societal disappointment were two more reasons for performing unsafe abortions.

They mentioned that abortion is completely prohibited in Ethiopia. This suggests that the public discussion about unsafe abortion should be linked to health-care services, allowing it to be discussed more openly and removing sociocultural barriers like fear and shame. There is also a need for community wide campaigns to oppose the stigmatization of safe abortion among unmarried pregnant mothers. In the long run, this would lower the possibility of these mothers seeking unsafe abortions.²⁹

The desire to further their education was another factor in Ethiopian young women's unsafe abortion practices, particularly in high school and university students. In Ethiopia, a girl who becomes pregnant during her junior or senior years of high school is more likely to drop out. These women were most likely hoping to find work after graduation and did not want an unwelcome pregnancy to derail their plans. This is common because these women's futures were usually gloomy without education. Many civil society organizations have called for educational institutions to enable pregnant women to stay in school if their circumstances allow it. This indicates that to avoid these unwanted births among women and students, contraceptive accessibility and education should be increased in schools.

As a limitation of this study, we acknowledged that the perspectives and perceptions of parents and other community groups may need to be investigated to provide a more comprehensive picture of the factors that contribute to unsafe abortion practices in Ethiopia. Moreover, due to the sensitive nature of the topic, it was hard to collect more data and we only interviewed 17 patients which might be few for generalizing results.

5. Conclusion

Our findings from perspectives of Ethiopian setting revealed that religious and cultural norms, lack of knowledge about safe abortion policy, and socioeconomic hardship were the major reasons for unsafe abortion practices in Ethiopia. Therefore, to address these factors, education about Ethiopia's safe abortion law is needed. Moreover, improving family planning services, and sexual and reproductive education, enhancing awareness of safe abortion services, and education on the consequences of unsafe abortion are critically important.

Ethical consideration

The ethical principles outlined in the Declaration of Helsinki guide the entire research process, which states that "it is the duty of the physician to promote and safeguard the health, well-being, and rights of patients, including those who are involved in medical research".³⁰ Ethical approval was secured from the Research and Ethical Review Board of Yanet Health College with approval number 11/2022. A permission letter was obtained from the North Shoa Zone health authority, and informed written consent was obtained from each study participant and their respective guardians of minor respondents for interview and consent to publish. All study participants were informed that participation was voluntary. The potential benefits, risks, confidentiality, and the option to withdraw from the interview at any time were also explained.

Data availability

The data used to support the findings of this study are attached to the manuscript.

Please state any conflicts of interest

The authors declare they have no competing conflicts of interest.

Please state any sources of funding for your research

The study has no funding source.

Ethical approval

The ethical principles outlined in the Declaration of Helsinki guide the entire research process, which states that “it is the duty of the physician to promote and safeguard the health, well-being, and rights of patients, including those who are involved in medical research”. Ethical approval was secured from the Research and Ethical Review Board of Yanet Health College with approval number 11/2022. A permission letter was obtained from the North Shoa Zone health authority, and informed written consent was obtained from each study participant and their respective guardians of minor respondents for interview and consent to publish. All study participants were informed that participation was voluntary. The potential benefits, risks, confidentiality, and the option to withdraw from the interview at any time were also explained.

Consent

Not applicable.

Author contribution

Muluneh Kidane-Topic selection, conceptualization, data analysis.
Wubalem Fekade-Supervision, data analysis, methodology.
Tewodros Shitemaw-Data collection, manuscript writing.
Genanew Kassie Getahun-Conceptualization, data analysis, manuscript writing.
Zelalem Negash-Supervision, methodology, data analysis.

Registration of research studies

Name of the registry: Research Registry.
Unique Identifying number or registration ID: researchregistry8608.
Hyperlink to your specific registration (must be publicly accessible and will be checked).

Guarantor

All authors will take responsibility for the work, access to data and decision to publish.

Acknowledgement

We would like to acknowledge the study participants and data collectors of this study.

References

- World Health Organization. *Medical Management of Abortion*. World Health Organization; 2019 Jan 30.
- Bearak J, Popinchalk A, Ganatra B, et al. Unintended pregnancy and abortion by income, region, and the legal status of abortion: estimates from a comprehensive model for 1990–2019. *Lancet Global Health*. 2020 Sep 1;8(9):e1152–e1161.
- Qureshi Z, Mehrtash H, Kouanda S, et al. Understanding abortion-related complications in health facilities: results from WHO multicountry survey on abortion (MCS-A) across 11 sub-Saharan African countries. *BMJ Glob Health*. 2021;6(1), e003702.
- Makuei G, Abdollahian M, Marion K. Optimal profile limits for maternal mortality rates (MMR) influenced by haemorrhage and unsafe abortion in South Sudan. *J Pregnancy*. 2020:2020.
- Kafu C, Ligaga D, Wachira J. Exploring media framing of abortion content on Kenyan television: a qualitative study protocol. *Reprod Health [Internet]*. 2021;18(1):1–8. <https://doi.org/10.1186/s12978-021-01071-5>.
- Ganatra B, Gerds C, Rossier C, et al. Global, regional, and subregional classification of abortions by safety, 2010–14: estimates from a Bayesian hierarchical model. *Lancet*. 2017;390(10110):2372–2381.
- Grimes DA, Benson J, Singh S, et al. Unsafe abortion: the preventable pandemic. *The Lancet*. 2006 Nov 25;368(9550):1908–1919.
- Boah M, Bordotsiah S, Kuurdong S. Predictors of unsafe induced abortion among women in Ghana. *Journal of pregnancy*. 2019 Feb 3:2019.
- Mekonnen W, Gebremariam A. Causes of maternal death in Ethiopia between 1990 and 2016: systematic review with meta-analysis. *Ethiop J Health Dev*. 2018;32(4).
- Moore AM, Gebrehiwot Y, Fetters T, et al. The estimated incidence of induced abortion in Ethiopia, 2014: changes in the provision of services since 2008. *Int Perspect Sex Reprod Health*. 2016 Sep 9;42(3):111.
- Kebede K, Gashawbeza B, Gebremedhin S, Tolu LB. Magnitude and determinants of the late request for safe abortion care among women seeking abortion care at a tertiary referral hospital in Ethiopia: a cross-sectional study. *Int J Wom Health*. 2021 Jan 7:1223–1231.
- Singh S, Remez L, Sedgh G, Kwok L, Onda T. Abortion Worldwide 2017: Uneven Progress and Unequal Access Abortion Worldwide 2017: clacaidigital.info.
- Yogi A, KC P, Neupane S. Prevalence and factors associated with abortion and unsafe abortion in Nepal: a nationwide cross-sectional study. *BMC Pregnancy Childbirth*. 2018;18(1):1–10.
- Wasihun Y, Mekonnen T, Asrat A, et al. Determinants of second-trimester safe termination of pregnancy in public health facilities of Amhara Region, Northwest Ethiopia: an unmatched case-control study. *Advances in Public Health*. 2021 Jan 20;2021:1–7.
- Shahbazi S. The consequences of unsafe abortion: a qualitative study. *J Adv Nurs*. 2012 Jun;68(6):1247–1255.
- Rehnström Loi U, Lindgren M, Faxelid E, et al. Decision-making preceding induced abortion: a qualitative study of women's experiences in Kisumu, Kenya. *Reprod Health*. 2018 Dec;15:1–2.
- Bridgman-Packer D, Kidane Mariam S. The implementation of safe abortion services in Ethiopia. *Int J Gynecol Obstet*. 2018 Oct;143:19–24.
- Wada T. Abortion law in Ethiopia: a comparative perspective. *Mizan Law Review*. 2008;2(1):1–32.
- Blystad A, Haukanes H, Tadele G, et al. The access paradox: abortion law, policy and practice in Ethiopia, Tanzania and Zambia. *Int J Equity Health*. 2019 Dec;18:1–5.
- Dibaba Y, Dijkerman S, Fetters T, et al. A decade of progress providing safe abortion services in Ethiopia: results of national assessments in 2008 and 2014. *BMC Pregnancy Childbirth*. 2017 Dec;17(1):1–2.
- CSA. *2007 population and housing census of Ethiopia: administrative report*. Addis Ababa. 2012.
- Footman K, Dessalegn B, Hayes G, Church K. Can universal health coverage eliminate unsafe abortion? *Sexual and Reproductive Health Matters*. 2020 Dec 17;28(2), 1848398.
- Ngwako K, Banke-Thomas A. ‘I guess we have to treat them, but...’: health care provider perspectives on management of women presenting with unsafe abortion in Botswana. *Global Publ Health*. 2020 Sep 1;15(9):1308–1321.
- Huber-Krum S, Karadon D, Kurutas S, et al. Estimating abortion prevalence and understanding perspectives of community leaders and providers: results from a mixed method study in Istanbul, Turkey. *Women's Health*. 2020 Aug;16, 1745506520953353.
- Fusco CL. Unsafe abortion: a serious public health issue in a poverty stricken population. *Reprodução & Climatério*. 2013 Jan 1;28(1):2–9.
- Bantie GM, Aynie AA, Assefa MK, et al. Knowledge and attitude of reproductive age group (15-49) women towards Ethiopian current abortion law and associated factors in Bahir Dar city, Ethiopia. *BMC Wom Health*. 2020;20(1):1–10.
- Yokoe R, Rowe R, Choudhury SS, et al. Unsafe abortion and abortion-related death among 1.8 million women in India. *BMJ Glob Health*. 2019 May 1;4(3), e001491.
- Yogi A, Kc P, Neupane S. Prevalence and factors associated with abortion and unsafe abortion in Nepal: a nationwide cross-sectional study. *BMC Pregnancy Childbirth*. 2018 Dec;18, 1-0.
- Wodajo LT, Mengesha ST, Beyen TK. Unsafe abortion and associated factors among women in reproductive age group in Arsi Zone, Central Ethiopia. *Int J Nurs Midwifery*. 2017 Oct 31;9(10):121–128.
- World Medical Association Declaration of Helsinki: ethical principles for medical research involving human subjects. *JAMA*. 2013 Nov 27;310(20):2191–2194. <https://doi.org/10.1001/jama.2013.281053>.