INNOVATIVE JOURNAL

Journal of Medical Care Research and Review

Homepage: http://mcrr.info/index.php/mcrr/index

Medical Care Research and Review
OPEN ACCESS
(O):2589-8949 (P): 2589-8930

Utilization of Comprehensive Abortion Care: a community-based cross-sectional study among young people in Tamale Metropolis

Mumuni Alaru[1], Alhassan Osman[1], Catherine Kyiu[2], Faustina Yin Yariga[2], Mohammed Abdulai Kojo[3], Ababio-Boamah Christopher[2] and Afia Kwakyewaa Owusu-Agyeman[2]

[1]Technical University College, Ghana-Tamale, Post Office Box TL 2159, Tamale
[2]Nurses' and Midwives Training College Tamale, Post Office Box TL 565, Tamale
[3]College of Nursing and Allied Health Sciences, Nalerigu, North-East Region, Ghana.

DOI: https://doi.org/10.52845/mcrr/2024/07-01-4

Abstract: Introduction: Abortion poses a dual challenge as both a medical and social issue, with an estimated 50 million induced (unsafe) abortions occurring annually in developing countries. This study aims to assess the Knowledge, Attitude, and Utilization of Comprehensive Abortion Care (CAC) among young people aged 10 to 24 in the Tamale Metropolis.

Methods: A total of 397 young women were recruited through simple random sampling, and a descriptive cross-sectional study design was employed. Data analysis was carried out using SPSS version 25, employing Chi-square analysis for categorical variables. A significance level of $p < 0.05$ was considered statistically significant.

Results: The majority (51.4%) of respondents fell within the 15 to 19 age group, and over 95% had some level of education. While 94.7% were aware of abortion, 67.6% considered it illegal, and merely 3.3% were familiar with CAC services. Media (TV/Radio) played a predominant role (89.5%) as a source of information on CAC. Despite 50.1% knowing someone who had an abortion, CAC utilization remained low (10.1%). Significant associations were found between the use of CAC services was and age ($X2=108.4$, $P<0.001$), education level ($X2=48.9$, $P<0.001$), and marital status ($X2=18.1$, $P<0.001$)

Conclusion: The study concludes that despite a good level of knowledge regarding CAC, its utilization among young people is hampered by religious and cultural influences. Media emerged as a crucial source of information on CAC, emphasizing the need for targeted awareness campaigns.

INTRODUCTION

Women's lives reach a turning point when they get pregnant, signifying their contribution to the continuation of life [1]. While being pregnant is a goal for every woman, it may sometimes happen by accident, which makes some think about ending the pregnancy [2, 3]. The word "abortion" refers to the removal of a fetus or embryo from the uterus before to viability, and it is often used to describe this termination of pregnancy[4]. A miscarriage, or spontaneous abortion, is different from an intentional induced abortion [5, 6].

It is acknowledged that abortion is a social problem in addition to a medical one [7, 8]. A significant number of abortions—roughly 45%, or more than 25 million per year between 2010 and 2014—are dangerous, according to the World Health Organization (WHO). 97% of unsafe abortions occur in developing nations, where 50 million induced (unsafe) abortions are expected to occur annually[9, 10]. Approximately seven million women seek care for complications resulting from unsafe abortions annually, with the majority of these operations taking place in state-run and private health institutions [11].

Between 2003 and 2008, there were 6.4 million unsafely performed induced abortions in Africa, accounting for 13% of all pregnancies on the continent [9, 12]. The number of legally conducted cases in 2008 was 3.4 million, however, only 3% of them were documented. Notably, West Africa has among of the highest abortion rates in the world [13].

Ghana has maintained pro-abortion laws for at than 35 years, as shown by PNDC L 102, the Criminal Code Law [14]. Legal abortions may be performed by qualified medical personnel in approved institutions and are allowed in certain situations, including rape, incest, threats to the mother's physical or mental well-being, and abnormalities in the fetus [15].

13% of Ghanaian women between the ages of 15 and 19 were either first-time moms or expecting their first child, according to data from the Ghana Demographic Health Survey (GDHS)[16]. Ghana Health Services (GHS) reported a startling 750,000 adolescent pregnancies nationwide among 15–19-year-olds. The high abortion rates among adolescents, especially those aged 10–14 and 15–19, highlight the high occurrence of teenage pregnancies in Ghana's north and central regions [17].

Particularly in the 15–34 age range, complications from abortions have been shown to be a major cause of death for young women and thereby contribute to maternal mortality [18]. The PNDC Act 102; 1985 rules that regulate abortion in Ghana not only outline the legal requirements but also specify that abortions must be performed by registered personnel in facilities that have been licensed and approved by the Ghana Health Service[19–21]. However, there are many obstacles in the way of successfully putting these laws

and regulations into practice at the individual level, and if enforcement is weak, their effectiveness may be limited [22].

In the Tamale Metropolis, there isn't much literature on comprehensive abortion care (CAC), despite a number of awareness campaigns. The purpose of this research is to assess the Tamale Metropolis's youth, aged 10 to 24, on their knowledge, attitudes, and use of comprehensive abortion care (CAC). Apart from examining current legislation, the research endeavors to evaluate the advancement of Community Advocates' consciousness and suggest approaches to improve the accessibility of CAC services for the underprivileged.

The results of the research are intended to help major players, such as the Ghana Health Service and Civil Society Organizations, devise a more successful strategy to improve the Knowledge, Attitude, and Practice of Comprehensive Abortion Services in Tamale and across Ghana. In line with Sustainable Development Goal 3, which calls for a reduction in maternal mortality by 2030, this initiative aims to lessen the problems resulting from unsafe abortions. The study's findings are expected to make a valuable contribution to the area of research, generating more interest and leading to better usage of comprehensive abortion care—not only in Northern Ghana but also across the world. Encouraging good changes in accordance with global health and development goals is the main focus.

METHODS AND MATERIAL

Study setting:

The 16 MMDAs in the Northern Region comprise the Tamale Metropolitan Assembly (TMA), one of the 261 Metropolitan, Municipal, and District Assemblies (MMDAs) in Ghana.

Tamale, the capital, is located between latitudes 9.16° and 9.34° North and longitudes 00.36° and 00.57°. It was designated as a Metropolis in 2004. Situated at an estimated height of 180 meters above sea level, the Metropolis is a key location in the Northern Region. Its terrain is undulating, with small valleys serving as stream channels. There are isolated hills, but they do not hinder people from developing physically.

The Savelugu Municipality to the north, the Yendi Municipal Assembly to the east, the Tolon District to the west, the Central Gonja District to the southwest, and the East Ganja Municipality to the south are the borders that Tamale Metropolitan shares with these areas.

A total of 374,744 people is living in the Metropolis as of the 2021 Population and Housing Census, with 185,051 men and 189,693 women.

Study design:

A descriptive cross-sectional research approach was used in this work, with a primary emphasis on the quantitative methods. The reason for choosing a cross-sectional design was its capacity to record data at a given point in time from two different places. This strategy makes it easier to investigate differences between study variables and collects data from cohorts that represent a range of age ranges or developmental stages. A cross-sectional methodology, in contrast to longitudinal techniques, offers a snapshot of the research variables across many groups, providing insights into the disparities that are currently present[23, 24].

Study population:

People between the ages of 10 and 24 who lived in the Tamale Metropolis made up the population under investigation.

INCLUSION AND EXCLUSION CRITERIA

For this study, anybody who has lived in the Tamale Metropolis for more than a year was eligible to participate, regardless of gender. The research also focused on those who were between the ages of 10 and 24, with a particular emphasis on those who were in good mental health. In addition, the study's inclusion criteria included those who actively and voluntarily consented to participate.

On the other hand, people who resided outside of Tamale Metropolis or had just been in the city for a year were not allowed to participate, according to the exclusion rules. In addition, the research did not include participants who were not mentally fit or who were older than the designated age range of 10 to 24 years. Furthermore, those who declined to take part in the study were not included in the population under investigation.

Sample size:

The sample size for this study was determined using the Snedecor & Cochran [25] method for a point estimate sample. The formula accounts for the estimated percentage of pregnant women who do not use medication (0.564 or 1-p), the margin of error (5% or 0.05), the estimated percentage of the population aware of Comprehensive Abortion Care (CAC) services in the Tamale Metropolis (43.6% or 0.436), and other factors.

Based on these parameters, a sample size of around 378 was chosen. To account for a 5% non-response rate, the total number of individuals that needed to be recruited for quantitative data was adjusted to 397 sample units. Consequently, 397 young people were effectively recruited to participate in the study.

Sampling:

The study's sample units were selected by the balloting technique, which serves as a kind of basic random sampling. A unique identifying number was assigned to each individual who met the requirements for this procedure. To carry out the random selection procedure, a voting system was implemented. Identifiers were arranged one by one into a box, hat, or other container, thoroughly mixed, and then chosen at random for this purpose.

The study used the balloting approach to ensure that every member of the population had an equal chance of being included in the sample. This approach enhanced the impartiality and fairness of the sampling process by eliminating any potential biases associated with certain patterns or preferences. This increased the

representativeness of the study's participant pool, enhancing the validity and applicability of the findings.

Data collection tools and procedures:

The use of a well-designed questionnaire was crucial to the study's data collecting process since it enabled the acquisition of quantitative data. In order to ensure alignment with the study's aims, an extensive evaluation of relevant literature and insights from well-established questionnaires in prior research were consulted throughout the questionnaire creation process. Its format, which included both closed- and open-ended questions, was carefully tailored to the particular study objectives and offered a flexible method of gathering data.

It is predicted that each interview session will take 15 to 25 minutes, taking into account the questionnaire's complexity. In order to account for the language variety of the participants, the questionnaire was translated utilizing the translate-back-translate method into Dagbani. Aiming to foster inclusion and cultural sensitivity in the data gathering process, this methodical approach enabled participants with limited English proficiency to meaningfully answer in Dagbani.

Furthermore, the research placed a high priority on ethical issues. A consent form was acquired for individuals who were younger than eighteen, guaranteeing their informed and willing involvement. This action incorporated younger individuals in the decision-making process about their engagement and emphasized the adherence to ethical norms.

To guarantee moral behavior, the research simultaneously sought authorization from important community stakeholders. Support for these permissions came from the local chief, an assemblyman, and other influential members of the community. Establishing a collaborative connection and garnering support between the research team and the local community was largely dependent on their engagement with leaders and stakeholders in the community. It showed a dedication to upholding regional government systems and guaranteed that the community was fully informed and gave its agreement for the research to be carried out.

Data cleaning, analysis, and presentation:

Following data gathering, a human editing process was used to eliminate any duplicates and erroneous entries, therefore guaranteeing the accuracy and consistency of the dataset. The data was edited, and then SPSS version 25.0, the Scientific Package for Social Sciences, was used to code the data and do statistical analysis. Thanks to the widespread use of this statistical software, a comprehensive examination of the dataset was feasible.

To provide a comprehensive overview, the data was presented using a range of statistical measures, including percentages and frequencies. Additionally, graphic representations were used to enhance the visual interpretation of significant facts. Descriptive statistics like the mean and standard deviation were utilized to better characterize the dataset's central tendency and variability.

To learn more about the factors influencing young people in the Tamale metropolitan area's Knowledge, Attitude, and Utilization of Comprehensive Abortion Care (CAC), univariate and multivariate logistic regression analyses were performed. These investigations may allow for a more thorough investigation of the relationships between the variables. Results might be deemed statistically significant if they were below the significance threshold, which was set at p-value (<0.05).

Reliability and validity:

Several strong procedures were put in place to guarantee the accuracy and dependability of the data that was gathered, the first of which was the extensive training of data enumerators. Sufficient training was deemed essential to provide enumerators with the requisite abilities and understanding to carry out the data-gathering procedure efficiently.

Additionally, pilot research with ten respondents was carried out in the Dungu region to confirm the accuracy of the data. This pre-testing phase's main goals were to improve the questionnaire's correctness and consistency and make sure that it elicited the information that participants were expected to provide. Furthermore, by evaluating field enumerators' skills in utilizing data-collecting tools and crafting pertinent questions, the pilot research reduced the possibility of mistakes during the primary data-gathering phase.

Data input was a painstaking double-entry procedure that produced two datasets that were then compared in the analysis phase. This methodical approach played a crucial role in locating and fixing any mistakes or omissions that could have happened throughout the data-entering procedure. The two dataset’s comparison analyses provided an additional degree of validation, enhancing the overall correctness and dependability of the information gathered.

Ethics:

This research was conducted in line with the Declaration of Helsinki. It is important to emphasize that rigorous criteria, including written and oral consent processes, were followed for the ethical conduct of this study. All adult respondents provided express written consent, following ethical standards, ensuring their informed and voluntary participation in the study. In addition, verbal consent was obtained and recorded for individuals who chose this mode of consent.

When it came to those under the age of 18, a cautious assent process was followed. A consent form was provided to participants in this age range, who were requested to sign it as a formal confirmation of their approval to engage in these situations. By making sure that even younger volunteers actively engaged in the decision-making process about their involvement in the research, this strategy upheld ethical norms and safeguarded the rights of minors. These stringent procedures for obtaining agreement and assent demonstrate the study's commitment to upholding ethical research standards and participant welfare.

RESULTS

Socio demographics:

The study found that the majority of respondents (51.4%) were aged 15-19 years, with a mean age of 17.6. Most had some level of education, with only 3.8% having no formal schooling. The majority identified as Muslims, with 40.3% as Christians and 1.3% as traditionalists. The majority were single, with 92.2% being married. The major ethnic groups were Dagombas (43.3%), Mamprusi (20.0%), and Akans (15.9%). A significant proportion of both mothers and fathers had received education (Table 1).

Knowledge of Comprehensive Abortion Care (CAC) services among young people:

The majority of respondents (94.7%) demonstrated awareness of abortion, but 5.3% reported never hearing about it. Regarding Comprehensive Abortion Care (CAC) services, 43.3% were familiar with it, associating it mainly with safe abortion services. However, significant misconceptions existed, with 53.2% believing CAC is exclusively for teenagers with pregnancies. Knowledge gaps persisted, as 70.9% were unaware of accredited health centers for CAC. Respondents perceived health centers as the safest places for CAC (93.4%), while 88.4% identified medical officers as recommended personnel. Concerns about complications were prevalent, with 65.6% acknowledging potential risks, including bleeding (89.2%), infertility (27.4%), severe illness (20.8%), and death (12.4%) (Table 2).

Source of information:

The sources of information of CAC include; Media (TV/Radio) (89.5%), health workers (14.0%), friends (50.3%), and relatives (21.1%) (figure 1).

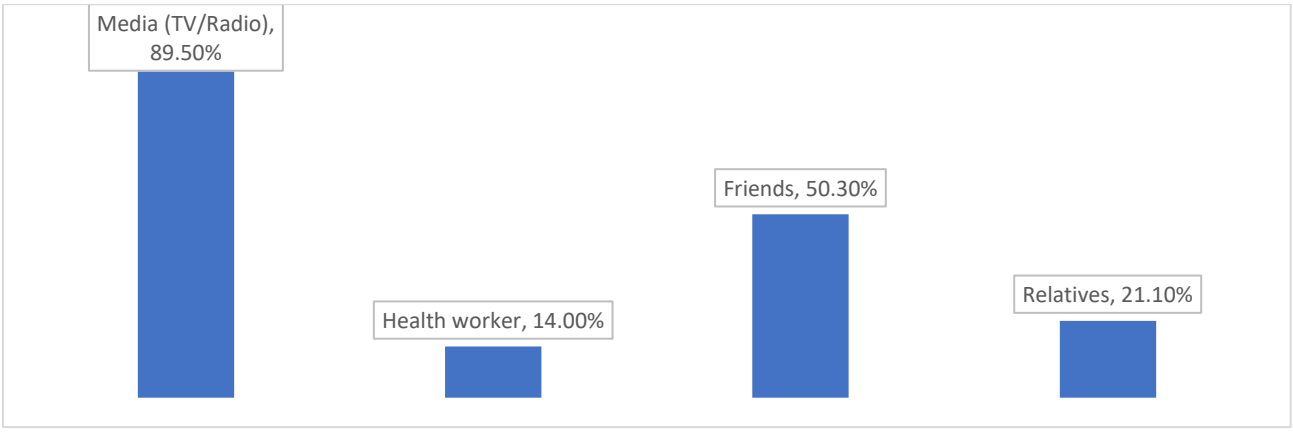

Figure 1: Source of information on CAC services

Overall knowledge of CAC:

The majority (68.9%) of respondents had good knowledge of CAC services while 31.1% had poor knowledge (figure 2).

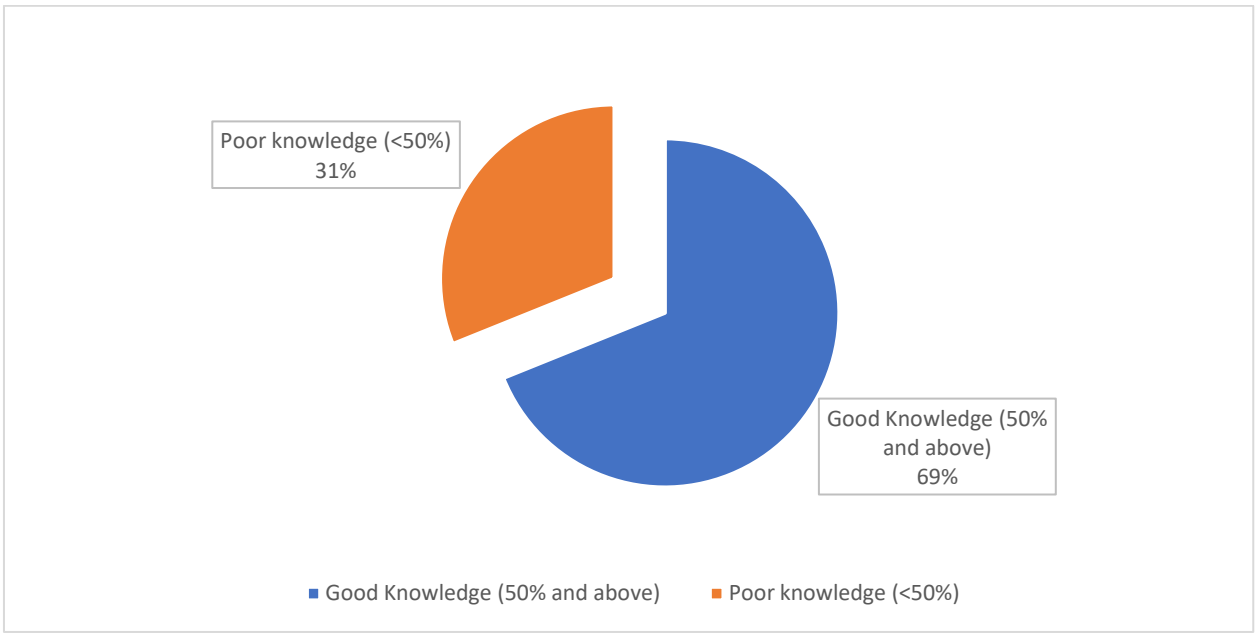

Figure 2: Overall knowledge of respondents on CAC services

The utilization rate of Comprehensive Abortion Care (CAC) services among young people:

The majority of respondents (89.9%) had not utilized CAC services, while 10.1% reported previous use. Methods for terminating unwanted pregnancies included medicines (18.5%), herbs or mixtures (5.8%), and visits to accredited health centers (16.5%), with 59.2% do not respond. Factors influencing CAC utilization encompassed accessibility (21.3%), awareness (9.9%), household income status (6.1%), autonomy (13.4%), youth-friendly services (25.6%), and low charges (23.7%) (Table 3).

Association between CAC service usage and demographics:

A statistically significant relationship was found in the research between sociodemographic characteristics and the use of Comprehensive Abortion Care (CAC) services. Notably, it was discovered that the use of CAC services was influenced by age ($X2=108.4$, $P<0.001$), education level ($X2=48.9$, $P<0.001$), and marital status ($X2=18.1$, $P<0.001$) (Table 4).

DISCUSSION

Over half of those who took the survey had no idea what "comprehensive abortion care" was. The majority of adolescents do not comprehend Comprehensive Abortion Care, as previously shown by Nuuri-Teg [26]. Participants in these studies were youth from Tamale. The majority of female medical students in India were familiar with CAC, according to Sydén [27], however our data disproves that claim. It is probable that these participants were taught in a classroom setting. Adolescent awareness of child abuse and neglect is poor in the Tamale Metropolis, a city in northern Ghana.

Most of the participants learned about CAC through radio and television. In line with this, Gizaw[28], discovered that the majority of participants gained knowledge about abortion from various forms of mass media, including as television, radio, and newspapers. Friends, relatives, instructors, and conferences were all considered secondary sources. According to Mekuriaw and colleagues[29], more than half of the people surveyed said they got their information from the media. The majority of abortion-related information came from friends and family, next from the media, and last from the Internet, according to research by Abiola et al. [30]. According to Asumah et al., [21] health practitioners were the primary sources of knowledge regarding reproductive health and rights. The majority of family members just do not have the knowledge or understanding to help teach children about these issues. The most effective means of disseminating information on reproductive health, according to Nair et al. [31], are health care providers themselves, then the media, radio, and social networks. The family continued to provide the fewest details on their reproductive health. According to Charlton et al.[32], families do not provide youth with reliable information on reproductive health care as family members do not know much about reproductive rights and health and cannot educate youth about these topics.

Young people also seldom talk about reproductive health services and their rights. The results of the many investigations were conflicting[33, 34]. The individuals' socio-demographic traits may have influenced the disparity, even though they were female students. The survey ranked schools and health workers as the least significant sources of information. In order to educate Ghanaians, particularly those between the ages of 10 and 24, about Comprehensive Abortion Care (CAC), the Ministry of Health and the Ministry of Education should collaborate with health care providers and educational institutions. Also, as suggested by Asumah et al., [35], telemedicine could be utilized in reaching out to potential CAC users to educate them on the services.

Numerous respondents lacked knowledge on abortion regulations, according to our survey. Of those who took the survey, one-third were aware of the abortion legislation in Ghana. Even though safe abortion clinics have been available in India for decades, research reveals that many women still do not know about the regulations surrounding abortion. People need to be informed about women's rights to safe abortion therapy, and NGOs, women's groups, volunteers, and others may help with this. According to Animaw and Bogale[36], more than two-thirds of Ethiopians surveyed had no idea what the laws say about abortion. Some 38% of Ethiopians were aware that abortion is legal in their country, according to another survey [37]. The rules pertaining to abortion treatment were unknown to several Ghanaian healthcare practitioners [38, 39]. Brong Ahafo residents rated abortion as shameful, harmful, and against the law. Nevertheless, it was pervasive, comprehensible, and essential[40]. Only 3% of pregnant women and 6% of those seeking abortions were familiar with the legislation in another survey conducted in Ghana[41].

According to the majority of respondents, healthcare facilities are free of CAC. Hospitals were deemed the best site for safe abortions by 38.46% of the respondents surveyed by Mekuriaw et al. [29]. The best conditions for a safe abortion are a sterile, controlled room. There will be less chance of infection during an abortion caused by this. It is possible to require emergency surgery or blood transfusions during a pregnancy termination. A lot of work is going on in the hospital to make sure that late-pregnant ladies, in particular, don't have any problems.

A large percentage of people who took the study (68.9%) understood what Comprehensive Abortion Care was all about. range of knowledge scores ranged from 0 to 5, with an average of 4.01 ± 1.58. Ovonikoko et al.,[42]discovered that a large number of female students in Nigeria were aware of the dangers of abortion. Similar to what Abiola et al., [30] discovered, the majority of participants had a good grasp of CAC. Study participants recognized hazardous abortion to varying degrees: 53.3% (n=839), 30.5% (n=480), and 16.3% (16.3%). Most female students were unaware of medication abortion, contradicting Mutua et al., [43]. Medical abortion, though, has widespread approval. Possible explanations for the variation include differences in research locations, methodologies, and participant demographics.

Both age and the utilization of Comprehensive Abortion Care (CAC) services were shown to be significant according to the findings of the study. Based on the data, it appears that individuals of varying ages may utilize and receive CAC services in a variety of various ways. The fact that this is the case highlights the need of taking into consideration age-related considerations when promoting and offering reproductive healthcare services of this kind[44, 45]. The influence of age on the utilization of CAC services emerges as a key concern when the findings of our study are analyzed further. This makes considerable contributions to the greater discourse that is taking place around reproductive healthcare.

The results of our study show that there is a strong link between a person's level of schooling and how often they use CAC services. The strong link between the two shows how important education is as a factor in making decisions and making sure people can get full abortion services. As we look into the effects of this important link, our findings add to what is known about the link between schooling and using reproductive health care[46]. The study's results can help lawmakers, healthcare professionals, and educators make better rules to make sure everyone can use CAC services equally and to stop educational differences from making it harder for some people to get them. The complexity of nature is brought out in this study[47].

The study revealed a correlation between an individual's marital status and their utilization of CAC services. There exists a significant correlation between marital status and the utilization of crisis pregnancy centers. This highlights the need of considering one's relationship situation when individuals are selecting comprehensive abortion services[43]. The findings of the study may be utilized to develop customized interventions, training programs, and support systems that cater to the requirements and consider the distinct circumstances of individuals from various marital statuses seeking comprehensive abortion services.

CONCLUSION AND RECOMMENDATION

A significant portion of the participants demonstrated a strong understanding of comprehensive abortion care (CAC) based on the research findings. That being said, there was a relatively low usage of CAC services, primarily because of cultural and religious factors. The respondents' main sources of information about CAC were the internet, radio, and television. In order to effectively address barriers that arise from deeply held cultural and religious beliefs and improve the utilization of CAC services, it is crucial to understand these dynamics and develop appropriate interventions. The study emphasizes the importance of educating the public and raising awareness about comprehensive abortion care (CAC). There may be various factors, such as cultural and religious influences, that have played a role in the low adoption rate. However, the data also suggest that there is a lack of awareness and utilization of CACs. Implementing focused awareness campaigns, engaging in community involvement, launching educational initiatives, providing training for healthcare professionals, engaging in legislative lobbying, and conducting additional research are all crucial steps in overcoming the various obstacles that hinder the improvement of accessibility to safe and legal abortion services.

REFERENCES

[1]. Riggs DW, Bartholomaeus C (2016) The desire for a child among a sample of heterosexual Australian couples. J Reprod Infant Psychol 34:442–450

[2]. Evertz K (2021) A Visual Exploration of Psychodynamics in Problematic Pregnancies: Case Studies in Analytic-Aesthetic Art Therapy. In: Handb. Prenat. Perinat. Psychol. Springer, pp 309–331

[3]. Tsui AO, Casterline J, Singh S, Bankole A, Moore AM, Omideyi AK, Palomino N, Sathar Z, Juarez F, Shellenberg KM (2011) Managing unplanned pregnancies in five countries: perspectives on contraception and abortion decisions. Glob Public Health 6:S1–S24

[4]. ABDILLAHI HALI (2019) The study of knowledge, attitude and prevention of medical abortion among female patient attending general hospital in erigavo Somaliland. BY.

[5]. Bell SO, Fissell ME (2021) A Little Bit Pregnant?: Productive Ambiguity and Fertility Research. Popul. Dev. Rev.

[6]. Polis CB, Castillo PW, Otupiri E, Keogh SC, Hussain R, Nakua EK, Larsen-Reindorf R, Bell SO (2020) Estimating the incidence of abortion: using the Abortion Incidence Complications Methodology in Ghana, 2017. BMJ Glob Heal 5:e002130

[7]. Lee E (2017) Constructing abortion as a social problem:"Sex selection" and the British abortion debate. Fem Psychol 27:15–33

[8]. Lee E, Sheldon S, Macvarish J (2018) The 1967 Abortion Act fifty years on: Abortion, medical authority and the law revisited. Soc Sci Med 212:26–32

[9]. Ganatra B, Gerdts C, Rossier C, Johnson Jr BR, Tunçalp Ö, Assifi A, Sedgh G, Singh S, Bankole A, Popinchalk A (2017) Global, regional, and subregional classification of abortions by safety, 2010–14: estimates from a Bayesian hierarchical model. Lancet 390:2372–2381

[10]. Singh S, Remez L, Sedgh G, Kwok L, Onda T (2018) Abortion worldwide 2017: uneven Progress and unequal AccessAbortion worldwide 2017: uneven Progress and unequal Access.

[11]. Benson J, Healy J, Dijkerman S, Andersen K (2017) Improving health worker performance of abortion services: an assessment of post-training support to providers in India, Nepal and Nigeria. Reprod Health 14:1–15

[12]. Yegon EK (2017) Correlates of Stigma and Unsafe Abortions in Regions with High and Low Incidence of Unsafe Abortions in Two Counties in Kenya.

[13]. Woog V, Kågesten A (2017) The Sexual and Reproductive Health Needs of Very Young Adolescents In Developing Countries. Guttmarcher Inst 10–11

[14]. Aniteye P, Mayhew SH (2019) Globalisation and transitions in abortion care in Ghana. BMC Health Serv Res 19:1–12

[15]. Yasmin S, Aziz R, Hassan M, Fatima M (2018) TERMINATION OF PREGNANCY. Prof Med J 25:952–958

[16]. Ghana Statistical Service (2015) Ghana demographic health survey. Demogr Heal Surv 2014 530

[17]. Ghana Health Service (2017) 2016 Annual Report. Accra, Ghana.

[18]. Gumanga SK, Kolbila DZ, Gandua BBN, Munkaila A, Malechi H, Kyei-Aboagye K (2011) Trends in Maternal Morlility in Tamale Teaching Hospital, Ghana. Ghana Med. J. 45:

[19]. Appiah-Agyekum NN (2014) Abortions in Ghana: experiences of university students. Heal Sci J 8:531

[20]. Nana Nimo A-A (2015) Abortions in Ghana.
[21]. Asumah MN, Abubakari A, Amankwa A-M, Owusu D, Fosuah F, Anane J Utilization of Comprehensive Abortion Care (CAC) and associated factors among young people (10-24 years): a cross sectional study in the Tamale Metropolis, Northern Region of Ghana.
[22]. Akinlusi FM, Rabiu KA, Adewunmi AA, Imosemi OD, Ottun TA, Badmus SA (2018) Complicated unsafe abortion in a Nigerian teaching hospital: pattern of morbidity and mortality. J Obstet Gynaecol (Lahore) 38:961–966
[23]. Setia MS (2016) Methodology series module 3: Cross-sectional studies. Indian J Dermatol 61:261
[24]. Polit DF, Beck CT (2008) Nursing research: Generating and assessing evidence for nursing practice. Lippincott Williams & Wilkins
[25]. Snedecor GW, Cochran WG (1989) Statistical methods, 8thEdn. Ames Iowa State Univ Press Iowa 54:71–82
[26]. Nuuri-Teg FY (2017) ATTITUDE AND UTILIZATION OF COMPREHENSIVE ABORTION CARE SERVICES BY YOUNG PEOPLE (10-24 YEARS) IN THE TAMALE METROPOLIS.
[27]. Sydén F (2011) Knowledge and attitudes regarding abortion care among Indian medical students-A questionnaire study among medical students in 27 different colleges in Maharashtra, India.
[28]. Gizaw A, Regassa N (2011) Family planning service utilization in Mojo town, Ethiopia: A population based study. J Geogr Reg Plan 4:355–363
[29]. Mekuriaw S, Dereje RMA, Kumalo A, Feyissa M (2015) Knowledge, attitude and practice towards safe abortion among female students of Mizan-Tepi University, Southwest Ethiopia. J Womens Heal Care 4:2167–2420
[30]. Abiola A-H, Oke OA, Balogun MR, Olatona FA, Adegbesan-Omilabu MA (2016) Knowledge, attitude, and practice of abortion among female students of two public senior secondary schools in Lagos Mainland Local Government Area, Lagos State.
[31]. Nair MKC, Leena ML, Paul MK, Pillai HV, Babu G, Russell PS, Thankachi Y (2012) Attitude of parents and teachers towards adolescent reproductive and sexual health education. indian J Pediatr 79:60–63
[32]. Charlton BM, Corliss HL, Missmer SA, et al (2011) Increasing Awareness and Access to Safe Abortion Among Nepalese Women. BMC Pregnancy Childbirth 2:1–10
[33]. Abdul-Wahab I., Nungbaso A. M., Nukpezah R. N., Dzantor E. K. (2021). Adolescents sexual and reproductive health: A survey of knowledge, attitudes and practices in the Tamale Metropolis, Ghana. ARJGO , 6(1), 31–47.
[34]. Mutaru A-M, Asumah M, Ibrahim M, Sumaila I, Hallidu M, Mbemah J, Atakole B, Zakaria D (2021) Knowledge on Sexually Transmitted Infections (STIs) and sexual practices among Nursing Trainees in Yendi Municipality, Northern Region of Ghana. Eur J Heal Sci 6:33–47
[35]. Asumah MN, Mohammed MY, Abubakari A, Padhi BK (2023) Improving maternal health services utilization in Ghana: should digital health be considered? Correspondence. Ann Med Surg 85:557
[36]. Animaw W, Bogale B (2014) Abortion in university and college female students of Arba Minch town, Ethiopia, 2011. Sex Reprod Healthc 5:17–22
[37]. Gelaye AA, Taye KN, Mekonen T (2014) Magnitude and risk factors of abortion among regular female students in Wolaita Sodo University, Ethiopia. BMC Womens Health 14:1–9
[38]. Konney TO, Danso KA, Odoi AT, Opare-Addo HS, Morhe ESK (2009) Attitude of women with abortion-related complications toward provision of safe abortion services in Ghana. J Women's Heal 18:1863–1866
[39]. Voetagbe G, Yellu N, Mills J, Mitchell E, Adu-Amankwah A, Jehu-Appiah K, Nyante F (2010) Midwifery tutors' capacity and willingness to teach contraception, post-abortion care, and legal pregnancy termination in Ghana. Hum Resour Health 8:1–6
[40]. Nagar S, Aimol KR (2010) Knowledge of Adolescent Girls Regarding Menstruation in Tribal Areas of Meghalaya. Stud Tribes Tribals. https://doi.org/10.1080/0972639x.2010.11886610
[41]. Aniteye P, Mayhew SH (2013) Shaping legal abortion provision in Ghana: using policy theory to understand provider-related obstacles to policy implementation. Heal Res Policy Syst 11:1–14
[42]. Ovonikoko K, Adeniran MA, Tijani AM, Worinde OA (2015) Assessment of knowledge and practice of abortion among female undergraduate students of Ladoke Akintola University of Technology, Ogbomoso. Int J Humanit Arts, Med Sci 3:57–66
[43]. Mutua MM, Maina BW, Achia TO, Izugbara CO (2015) Factors associated with delays in seeking post abortion care among women in Kenya. BMC Pregnancy Childbirth 15:1–8
[44]. Madziyire MG, Moore A, Riley T, Sully E, Chipato T (2019) Knowledge and attitudes towards abortion from health care providers and abortion experts in Zimbabwe: a cross sectional study. Pan Afr. Med. J. 34:
[45]. Asumah MN, Abubakari A, Aninanya GA (2022) Determinants of Menstrual Hygiene Management Practices among Schoolgirls: A Cross-Sectional Study in the Savannah Region of Ghana. Infect. Dis. Obstet. Gynecol. 2022:
[46]. Ibrahim ZM, Mohamed ML, Taha OT, Ghoneim HM, Mohamed HS, Abdellah AM, Aboelroose AA, Fiala LA, Nassr AA, Abbas AM (2020) Knowledge, attitude and practice towards abortion and post abortion care among Egyptian private obstetricians and gynaecologists. Eur J Contracept Reprod Heal Care 25:245–250
[47]. World Health Organization (2015) Health worker role in providing safe abortion care and post abortion contraception. World Health Organization

Table 1: Socio demographics characteristics of the study participants

Variables	Categories	Frequency	Percentage
Age	10-14 years	77	19.50%
	15-19 years	203	51.40%
	20-24 years	115	29.10%
	Mean		17.6-/+3.5
Respondent level of education			
	No formal education	15	3.80%
	Primary	42	10.60%
	JHS	134	33.90%
	SHS	126	31.90%
	Tertiary	78	19.70%
Religion	Christianity	159	40.30%
	Islam	231	58.50%
	Traditionalist	5	1.30%
Marital status			
	Married	31	7.80%
	Single	364	92.20%
Ethnicity			
	Akan	63	15.90%
	Dagomba	167	42.30%
	Gonja	45	11.40%
	Mamprusi	79	20.00%
	Others	41	10.40%
Mother's level of education			
	No formal education	143	36.20%
	Primary	61	15.40%
	JHS	42	10.60%
	SHS	84	21.30%
	Tertiary	65	16.50%
Father's level of education			
	No formal education	133	33.70%
	Primary	29	7.30%
	JHS	38	9.60%
	SHS	74	18.70%
	Tertiary	121	30.60%

Source (Field survey, 2023)

Table 2: Knowledge on Comprehensive Abortion Care (CAC) services

Variables	Categories	Frequency	Percentage
Have you ever heard of abortion			
	Yes	374	94.70%
	No	21	5.30%
Is abortion legal?			
	Yes	128	32.40%
	No	267	67.60%
Have you heard of comprehensive abortion care (CAC)?			
	Yes	171	43.30%
	No	224	56.70%
What do you know about CAC?			
	It's a legal form of abortion care	57	33.30%
	Contraceptive methods	14	8.20%
	It's about safe abortion services	122	71.30%
	only for teenagers with pregnancy	91	53.20%
Is there an age limit for CAC services?			
	Yes	192	48.60%
	No	203	51.40%
Indications for abortion			
	Birth spacing	10	2.50%
	Lack of family support	3	80.00%
	Mother's education	83	21.00%
	Risk of pregnancy to mother	169	40.50%
	To choose the right time for pregnancy	78	19.70%
	Women not psychological prepared	61	15.40%
Do you know any health center accredited for CAC?			
	Yes	115	29.10%
	No	280	70.90%
A safe place to conduct CAC?			
	Home	31	7.80%
	Health center	369	93.40%
	Pharmacy	5	1.30%
	Herbalist	6	1.50%
Persons who can conduct CAC?			
	Medical Officer	349	88.40%
	Midwives	196	49.60%
	Any health professionals	52	13.20%
	TBA	10	2.50%
	Herbalist	7	1.80%
The preferable time to perform Comprehensive Abortion care?			
	After 16 weeks	6	1.50%
	Before 12 weeks	268	67.80%
	Don't know	121	30.60%
Are there complications with CAC?			
	Yes	259	65.60%
	No	136	34.40%
The complication of CAC?			
	Bleeding	231	89.20%
	Death	32	12.40%
	Infertility	71	27.40%
	Severe illness	54	20.80%

Source (Field survey, 2023)

Table3: Utilization rate of comprehensive abortion care (CAC) services

Variables	Categories	Frequency	Percentage
Have you ever used CAC before?			
	Yes	40	10.10%
	No	355	89.90%
Ways people use to terminate an unwanted pregnancy?			
	Use of medications	73	18.50%
	Use of herbs and other mixtures	23	5.80%
	Visiting accredited health center	65	16.50%
	None response	234	59.20%
Reasons you would not go for CAC services?			
	Pains enduring in an abortion procedure	192	48.60%
	Insults and harassment by health workers	131	33.20%
	Lack of support from my partner	49	12.40%
	Fear of the side effect	276	69.90%
	Religious and cultural reason	215	54.40%
Which of the following can influences you most to utilize CAC services?			
	Access to CAC	84	21.30%
	Awareness about CAC	39	9.90%
	Household income status	24	6.10%
	Autonomy	53	13.40%
	Youth Friendly Service	101	25.60%
	Low charges of CAC services	94	23.70%

Source (Field survey, 2023)

Table 4: Association between socio-demographic characteristics and use of CAC services

		Have you used CAC services		
Variable	Categories	Yes	No	Statistically Test
Age	10-14 years	0(0.0%)	77(100.0%)	***X2=108.4***
	15-19 years	0(0.0%)	203(100.0%)	***P<0.001***
	20-24 years	40(34.8%)	75(65.2%)	
Respondent level of education				
	No formal education	1(6.7%)	14(93.3%)	X2=48.9
	Primary	6(14.3%)	36(85.7%)	***P<0.001***
	JHS	0(0.0%)	134(100.0%)	
	SHS	10(7.9%)	116(92.1%)	
	Tertiary	23(29.5%)	55(70.5%)	
Marital status				
	Married	10(32.3%)	21(67.7%)	***X2=18.1***
	Single	30(8.2%)	334(91.8%)	***P<0.001***
Mother's level of education				
	No formal education	124(86.7%)	19(13.3%)	X2=3.3
	Primary	57(93.4%)	4(6.6%)	P=0.51
	JHS	37(88.1%)	5(11.9%)	
	SHS	77(91.7%)	7(8.3%)	
	Tertiary	60(92.3%)	5(7.7%)	
Father's level of education				

No formal education	118(88.7%)	15(11.3%)	X2=3.9
Primary	28(96.6%)	1(3.4%)	P=0.42
JHS	33(86.8%)	5(13.2%)	
SHS	64(86.5%)	10(13.5%)	
Tertiary	112(92.6%)	9(7.4%)	

Source (Field survey, 2023)