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Unsafe Abortion in Lomé, Togo: What do women report in their communities?

By

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Master of Public Health

Hubert Department of Global Health

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Committee Chair

Unsafe Abortion in Lomé, Togo: What do women report in their communities?

By

Haley McLeod

B.A., Whitman College, 2013

Thesis Committee Chair: Dr. Roger Rochat, M.D.

An abstract of a thesis submitted to the Faculty of the Rollins School of Public Health of Emory University in partial fulfillment of the requirements for the degree of Master of Public Health in Hubert Department of Global Health

2018

Abstract

Unsafe Abortion in Lomé, Togo: What do women report in their communities?

By Haley McLeod

Background: Despite the available knowledge and technology to provide safe abortions, abortion continues to account for maternal deaths worldwide. In Togo, abortion still remains legally restricted, only available in instances of rape, incest, fetal malformations, or when the pregnancy threatens the health of the mother. While there is a lack of literature on abortion in Togo, the few studies published suggest that high proportions of young women attempt to end their pregnancies, most likely using unsafe and clandestine methods.

Methods: We surveyed 99 women in four healthcare setting on their knowledge of women's experiences on induced abortion in Lomé, Togo.

Results: We found that 56.5% of participants knew of a woman who had attempted to induce an abortion, 34.3% knew of a woman who had health complications from an induced abortion, and 30.3% knew of a woman who had died from an induced abortion. While 42.9% of the known women procured an abortion in healthcare settings, 33.9% attempted to self-induce an abortion.

Conclusion: Knowledge of negative health outcomes from induced abortion among surveyed women are common, suggesting a need for further research and public health interventions.

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CHAPTER I: BACKGROUND

Unsafe Abortion and Maternal Mortality

Between 1990 and 2005, the worldwide maternal mortality rate reduced by one third, well below the desired three-fourths reduction dictated by the 1990 Millennium Development Goals (MDGs) (1). Maternal mortality remains a leading cause of death for women worldwide, with an estimated 275,288 women dying from maternal related deaths in 2015 (1). Ninety-nine percent of maternal deaths occur in developing countries (1). The Sustainable Development Goals (SDGs), an extension of the MDGs, published in 2015, continue to prioritize reducing maternal mortality under SDG Goal 3, which aims to reduce the maternal mortality rate to less than 70 per 100,000 births worldwide (2).

Unsafe abortion is a leading cause of maternal mortality, after other common causes such as hemorrhaging, infections, eclampsia, and obstructed labor (2). Despite the widespread knowledge of technology and skills to provide safe abortion procedures, unsafe abortions continue to account for morbidity and mortality among women around the world (3). The World Health Organization (WHO) estimates that 13 percent of all maternal deaths are due to unsafe abortion, most of these occurring in Africa or Asia (4). In 2008, 47,000 deaths were due to unsafe abortion globally (3).

Unsafe abortion, as defined by the WHO, is "a procedure for terminating an unintended pregnancy carried out by persons lacking the necessary skills or in an environment that does not conform to minimal medical standards, or both" (1). The number of unsafe abortions performed each year has increased, from 19.7 million in 2003 to 22 million unsafe abortions in 2008 (5). The vast majority of this health burden falls on developing countries, where 98% of all unsafe abortions occur (6) and particularly on young women from ages 20-29 (7). Almost all abortions that are performed in Africa are considered to be unsafe (8).

Health Consequences of Unsafe Abortion

The risk of death from an unsafe abortion in Sub-Saharan African is currently 800 times higher than that of a legal abortion procedure in the United States (4), with a case fatality rate of 460 per 100,000 unsafe abortions (4). The methods and circumstances of unsafe abortions are influenced by various factors, including the setting, traditional methods employed, availability of providers, and whether those providers are willing to provide abortion services (9). Methods used to complete unsafe abortions include inserting an object vaginally, ingesting toxic substances, vigorously massaging the abdomen, or dilation and curettage by untrained individuals (10). Health complications from unsafe abortion include hemorrhage, peritonitis, sepsis, and organ trauma and around 20-50% of women who attempt an unsafe abortion are hospitalized (11). Following complications, many women do not seek care when needed due to fear of legal persecution or fear of abuse (10). Delays in receiving care, including long transit times or deferred treatment due to stigma exacerbate health problems in women with complications from unsafe abortion (11). Unsafe abortion accounts for five million DALYs lost worldwide per year by women of reproductive age (11). In 2014, developing countries spent $232 million on post-abortion care (12).

Legal Access to Abortion Worldwide

Worldwide, 26% of the world's population lives in a country that prohibits abortion or allows it only to save the life of the mother (13). Maternal mortality from unsafe abortion increases in countries that restrict legal access to abortion services (11). Countries with strict abortion laws have four times the rate of unsafe abortions compared to countries with liberal abortion laws, and a maternal mortality ratio three times higher than countries with liberal abortion laws (14). Countries that have taken steps to legalize abortion have seen subsequent reductions in maternal

mortality due to abortion and complications due to unsafe abortion (11). In South Africa, the number of severe complications from abortion fell from 16.5% to 9.5% after legalization of abortion in 1996 (11).

Family Planning and Unsafe Abortion

Family planning has an important role to play in preventing unsafe abortions. Studies show that increasing family planning uptake is effective in reducing abortion rates, and thus risk of maternal mortality (15). The World Health Organization estimates that 214 million women in developing countries have family planning needs that are not met, among which 84 percent of untended pregnancies occur (12). Less than one-third of women treating complications from an unsafe abortion in Latin America, South America, and Africa use a modern method of family planning (15).

Measuring Unsafe Abortion

In both legal and illegal settings, induced abortion is consistently stigmatized and thus underreported, and community studies around the world consistently find a higher rate of abortion than national health statistics (11). Many developing countries around the world do not have abortion surveillance systems in place. Given these challenges, studies on induced abortion utilize both direct methods, such as the Bongaarts Model (16) to attempt to measure abortion rates, and indirect methods, such as the sisterhood technique, the random response technique, and the newly developed list technique in order to measure induced abortion in stigmatized settings (17).

CHAPTER II: UNSAFE ABORTION IN LOME, TOGO

Problem Statement

In West Africa, it is estimated that the unsafe abortion rate is 28 per 1000 women aged 15-44 years old (10). Most countries in West Africa limit abortion rights, with no countries allowing abortions for economic or social reasons, or upon request (14).

In Togo, a country in West Africa, the 1980 Togolese penal code made no reference to abortion. Thus, until recently, a 1920 French penal code dictated Togo’s abortion law, only allowing abortion when the mother’s life was at risk (18). In 1984, Togo adopted a law punishing anyone who helped a girl in school or in a professional center to obtain an abortion (18). In 2003, Togo’s ratified the International Maputo Protocol, drafted by the African Commission on Human and People’s Rights, a document that supports reproductive rights and rights to an abortion under rape, incest, fetal impairment, or danger to the mother’s physical or mental health (19). Togo altered their abortion law in 2005 in attempt to comply with the International Maputo Protocol, permitting an abortion in instances of rape, incest, fetal impairment, or in cases where the pregnancy threatens the life of the mother (18). However, there is still a discrepancy between the International Maputo Protocol and Togolese law, which still legally restricts a mother from seeking an abortion in cases where the pregnancy poses a threat to her mental health. Reasons for this discrepancy remain unclear. Knowledge of the abortion law is generally low among both Togolese women and healthcare providers (18).

The rate of modern contraception use by married women in Togo has increased over the years, from seven percent in 1998 to 17.3 percent in 2013-2014 (20). The majority of health facilities in the country offer a range contraceptive options, including the IUD, pills, injectables (DMPA), male condoms, and implants (21). However, Togo still has a high unmet need for family planning, with 34 percent of women reporting an unmet need (20). Currently Togolese

women, on average, give birth to 4.3 children, but women cite their ideal number of children as 4.3 (22). Additionally, young, unmarried Togolese have limited access to contraception methods due to a persisting idea that promoting contraception also encourages sexual promiscuity (18). As abortion rates increase with higher unmet needs for family planning, this would suggest that abortions significantly contribute to the country's maternal mortality rate of 368 per 100,000 births (1, 23).

In legally restricted settings such as Togo, many women resort to using unsafe methods to end their pregnancies (24). An "unsafe abortion" could be either attempted by the woman herself or by a non-medical personnel, or by a medical professional outside of official healthcare facilities (10). A study from 2002 revealed that many women in Togo attempt to self-induce abortions, either by ingesting medication or drinking herbal teas (18) and in Burkina Faso, a study found common traditional methods among schoolgirls to induce abortions included ingesting various chemical compounds (indigo, potassium permanagate, chloroquinine, and large amounts of coffee powder) and traditional compounds (such as leaves and roots) (25).

In other sub-Saharan African countries with restricted legal settings, studies find that healthcare providers often perform abortions upon request, and in Burkina Faso, 61% of abortions are completed by healthcare providers (9). A study conducted in Lomé in 2002 found that 40 percent of all abortions were completed in healthcare settings by a healthcare professional, using either curettage or manual aspiration; however, 22 percent of these had previously attempted an abortion under unsafe conditions (26). A study conducted in Ouagadougou found that women often first attempt inexpensive or less effective methods of abortion; if these fail, then women will often attempt more expensive, medical procedures (27).

The rate of induced abortion in Lomé has increased in recent years, and it is estimated that induced abortion reduces women's fertility by 10 to 12 percent in Lomé (18).

The DHS module on abortion in Togo has never been completed (22). While there is a lack of information regarding abortion rates in Togo, previous studies have suggested high rates of clandestine abortions; a 2002 survey found that up to 33% of women between the ages of 15-49 have undergone at least one abortion, with most of these occurring in younger women (28), while a study in 2000 found that 28% of women who have been pregnant have had an abortion (29). However it is likely that these estimates are an underestimate of the true figure, as underreporting of abortion rates are common due to stigma and cultural disapproval (30).. Misoprostol, an inexpensive and relatively safe medication that can be used to induce an abortion, has increased sales in Africa in recent years, however, it is unclear to what extent the medication is utilized to induce abortions among women (24).

Togo's high unmet for contraception, restricted abortion legality, high rates of induced abortions among young women, and methods reported all strongly suggest that unsafe abortion presents serious health consequences to young women in Lomé, Togo and likely contributes to the country's maternal mortality rate of 368 per 100,000 births (1, 23).

Purpose Statement

This study aims to elucidate Togolese women's experiences surrounding clandestine abortion and quantify its health consequences, including locations where women commonly seek abortion services, methods used to induce an abortion, and the health consequences that result. By exploring Togolese women's experiences, we hope to describe Togolese women's level of access to safe abortion services and the resulting consequences on women's health outcomes.

Significance Statement

While the knowledge and methods exist to provide safe abortions, access to safe abortion remains limited worldwide (3). Much of the world's population lives in countries that limit legal access to abortions (13), increasing the number of clandestine and unsafe abortions, causing negative health consequences for women and their families (11). While Togo has recently expanded their abortion law to allow abortions under circumstances of rape, incest, danger to the mother's health, or fetal impairment, implementation of the law remains limited (18, 31). Few studies have examined the circumstances and methods that women use to induce abortions in Togo, a gap which this study aims to fill. Data on unsafe abortion and its consequences can be utilized to promote education on abortion rights among women and providers, expanding access to abortion services, and to advocate for expansion of the current abortion law.

Research Objectives

This study aims to:

I. Characterize the burden of maternal deaths in Lomé, Togo that are due to unsafe abortion

   a. Understand the common short-term and long-term health complications that result from unsafe abortions in Togolese women in Lomé

   b. Determine common maternal risk factors for maternal death due to unsafe abortion

II. Understand under what circumstances women perform unsafe abortions in Lomé

   a. Describe under what circumstances unsafe abortions are procured in Togolese women of childbearing age in Lomé, Togo.

   b. Examine where women commonly seek abortion services

   c. Investigate the common methods used to perform unsafe abortions

CHAPTER III: MANUSCRIPT

Contribution of Student

For this manuscript, the student conducted data collection with Katherine Anderson, Emily Adams, and Rishi Varan. The student conducted all data analyses, created all tables, and drafted the manuscript with the editorial aid of Dr. Roger Rochat, Dr. Helen Baker, Emily Adams, and Katherine Anderson.

Title: Unsafe abortion in Lomé, Togo: What do women report from their communities?

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Key Words: Induced abortion, unsafe abortion, developing countries, West Africa

Synopsis: Survey among women of reproductive age describes their experiences with unsafe abortion and its health burden in Lomé, Togo.

Word Count: 3,238

Abstract

Context: In Lomé, Togo, abortion is legally restricted and very few studies have been conducted in order to quantify the health burden of induced abortion among Togolese women.

Methods: We surveyed 99 women in four healthcare setting on their knowledge of women's experiences on induced abortion in Lomé, Togo.

Results: We found that 56.5% of participants knew of a woman who had attempted to induce an abortion, 34.3% knew of a woman who had health complications from an induced abortion, and 30.3% knew of a woman who had died from an induced abortion. While 42.9% of the known women procured an abortion in healthcare settings, 33.9% attempted to self-induce an abortion.

Conclusions: Knowledge of negative health outcomes from induced abortion among surveyed women are common, suggesting a need for further research and public health interventions.

Introduction

Each year, 22 million unsafe abortions are performed, 98 percent of which occur in developing countries (6). Unsafe abortion, as defined by the World Health Organization (WHO), is "a procedure for terminating a pregnancy carried out by persons lacking the necessary skills or in an environment that does not conform to minimal medical standards, or both" (1). Despite the existing technology and knowledge to provide safe abortion procedures, unsafe abortions continue to cause morbidity and mortality among women worldwide. The WHO estimates that 13 percent of all maternal deaths are due to unsafe abortion (5).

Almost all abortions performed in Africa are considered to be unsafe (32), and in West Africa, the unsafe abortion rate is 28 per 1000 women aged 15-44 years old (10). Togo, a country in West Africa, lacks recent and reliable literature on induced abortion; however, a 2002 survey

found that up to 33% of women between the ages of 15-49 had undergone at least one induced abortion, while a study in 2000 found that 28% of ever-pregnant women have had an induced abortion (29). These likely underestimate the true figure, as stigma and cultural disapproval lead to underreporting (30).

In Togo, where the law limits a woman's access to abortion services to instances of rape, incest, fetal impairment, or in cases where the pregnancy threatens the life of the mother (18), the actual practice of legal abortion under these circumstances is very limited (31). Countries with restrictive abortion laws have higher rates of maternal mortality due to unsafe abortion (14).

In legally restricted settings such as Togo, women often resort to unsafe methods to end their pregnancies (24). A study published in 2011 reported that many women in Togo attempt to self-induce abortions, either by ingesting medications or drinking herbal teas (18). In neighboring countries with similar legal contexts as Togo, healthcare providers still provide a large proportion of abortion services (9). In the same study previously mentioned, researchers in Lomé found that 40 percent of women attempted abortions in healthcare settings by a healthcare professional, using either curettage or manual aspiration; however, 22 percent of these women had previously attempted an abortion under unsafe conditions (18).

Short term complications from unsafe abortion include hemorrhage, peritonitis, sepsis, and organ trauma. Long term complications can also result, including chronic pain, pelvic inflammatory disease, and secondary infertility (9). A study published in 2012 estimated that induced abortion contributed to a 10-12 percent decline in fertility among women in Lomé (26). About 20-50 percent of women who attempt an unsafe abortion are hospitalized (11). Misoprostol is an increasingly common and safer method of inducing abortions clandestinely (9), however, in Togo, access to and knowledge of misoprostol among women remains limited (31).

In countries where there exists little data on abortion, researchers have developed several methods, including the sisterhood and the confidant's method, which utilize second-hand accounts of abortion in order to estimate unsafe abortion rates (27). This study aims to describe knowledge of women's experiences around induced abortion and its health consequences, including identifying locations where women commonly seek abortion services, methods used to induce an abortion, and the health consequences that result.

Methodology

Our research team collected data from June to August 2017 in four hospitals in Lomé, Togo, the country capital. We selected one university hospital, one regional hospital, one district hospital, and one private clinic as research sites. Researchers administered a 17-question survey to participants on their opinions and experiences with unsafe abortion. Survey questions included topics such as demographics, family planning use, opinions on abortion, and knowledge of other women's experiences surrounding unsafe abortion, if any. The research team pilot-tested and modified the survey instruments with the aid of Togolese healthcare professionals prior to data collection.

We surveyed ninety-nine women from three hospital units: pre-natal care, post-natal care, and gynecology/family planning. To sample our survey participants, we asked a designated midwife at each hospital to identify eligible participants- French-speaking women between the ages of 15 and 49- after their consultation. Of the 127 women sampled, 20 (15.7%) women declined to participate, and three (2.4%) and five (3.9%) women were ineligible due to their age or language barriers, respectively. We read an informed consent document to participants and then obtained verbal and written consent before beginning the survey.

To investigate women's experiences with unsafe abortion, researchers asked the participant, "Have you ever known a woman who has attempted an abortion?" If the participant responded affirmatively, then the researchers asked the participants to think of one specific woman whose experience that they knew well. Researchers asked participants details about this woman's experience, including where the woman sought abortion services, the method used to induce an abortion, if any health complications emerged, and if and where she sought care for those health complications. At the end of the survey, the researcher asked the participant, "Have you ever known a woman who has died from attempting an abortion?"

Researchers administered all surveys in French, due to the language constraints of the research team, with the exception of five surveys that we conducted in French and translated into Ewe with the help of a midwife, and one survey that we conducted in English. After completion of the survey, we compensated participants 300 XOF, approximately $0.60, in phone credit for their time.

The Emory Institutional Review Board determined that the study did not require IRB approval. The *Comité de Bioéthiques pour la Recherche en Santé* (The Bioethics Committee for Health Research), Togo's research review board, reviewed and gave the research project approval in June 2017.

We used REDCap electronic data-capturing tool hosted by Emory University to enter, store, and manage all research data (33). We used SAS 9.4 statistical analysis software to perform univariate and bivariate analyses, including Fisher's Exact, chi-squared, and pooled t-tests, on variables of interest (34). For analyzing differences in outcomes between hospitals, we categorized all "I don't know" survey responses as "no" to yield more conservative estimates. We determined tests to be significant when the p-value was less than 0.05.

Results

Demographics

Participants who completed the survey were primarily young and married. Most participants were between the ages of 25 and 34 (60.0%) averaging 30.2 years (SD 6.7). Fifty-three percent of participants were legally married, 30.0 percent of the participants were not legally married but living with a partner, and 17.2 percent of the participants were single. Of the women that were married or living with a partner, 16.0 percent were in a polygamous relationship. Most participants had completed at least some secondary school education (65.7%) or continued beyond secondary education (20.2%). About half of the participants identified as Catholic (53.0%) (Table 1).

Family Planning and Pregnancies

Twenty-five percent of participants reported using a method of family planning currently or prior to their current pregnancy. There was a discrepancy between the number of children and the number of pregnancies partially because most obstetric participants were pregnant at the time of data collection. Among the 99 participants, women had, on average, 1.4 children and 2.4 pregnancies.

Women's Experiences with Unsafe Abortion

Fifty-six participants (56.5%) across the four hospitals reported knowing at least one woman who had attempted to induce at least one abortion (Table 2). We found no significant difference among hospitals in the proportion of participants who knew a woman who had attempted to induce at least one abortion (X^2 =2.08, p=0.56) (Table 6).

We found no difference across age groups, marital status, religion, number of children, or number of pregnancies in the likelihood of a participant knowing a woman who had attempted to

induce an abortion. Participants who knew a woman who had attempted an abortion were 3.5 times more likely to have completed at least some secondary school or higher than participants who did not report knowing a woman who had attempted an abortion (OR=3.55, p=0.039) (Table 3).

Slightly more than a third (39.3%) of participants reported that the woman sought abortion services at a healthcare center. Others self-induced an abortion (33.9%), which included attempting the abortion herself, purchasing street medications, or attempting the abortion with the help of a friend or a family member. Finally, three women went to a traditional healer (5.4%). The most common methods of inducing an abortion were street medication (40.0%), manual aspiration (17.1%), traditional herbs/medicine (14.3%), and a combination of both street medication and traditional medicine (8.6%) (Table 4). All categories listed are mutually exclusive.

Of the 56 participants who reported knowing at least one woman who had attempted to induce an abortion, 34 participants (60.7%) reported subsequent health complications as a result of that induced abortion. Among the 34 cases with reported health complications, 26 cases (72.2%) sought healthcare services as a result. Twenty-one of the 26 induced abortion cases (80.8%) sought post-abortion care at a healthcare center, two women (7.7%%) purchased street medications, and one woman (3.4%) sought post-abortion care at a pharmacy (Table 5).

Participants frequently reported knowledge of health complications among the induced abortion cases. We found no difference among hospitals in the proportion of participants who knew a woman who had complications from an induced abortion ($X^2 = 5.64$, p=0.13) (Table 6).

Thirty of the 56 participants (53.6%) who knew a woman that had attempted to induce an abortion also knew a woman who had died from an induced abortion. In total, 30 of the 99

survey participants (30.3%) knew a woman who had died from an induced abortion. We found a significant difference between hospitals in the proportion of participants who knew a woman who had died from an induced abortion (X^2 =9.77, p=0.021) (Table 6). We found no significant difference across age groups, education, marital status, religions, number of pregnancies, or number of children in the likelihood of a participant knowing a woman who had died from an induced abortion.

Discussion

This study documents the important public health burden of unsafe abortion in Lomé, the capitol of Togo. Most women attending clinics in each of the studied four healthcare centers in Lomé reported knowing at least one woman who had procured or self-induced an induced abortion. Moreover, participants often reported that the woman sought medical care for complications from the induced abortion, and many knew a woman who had died from an induced abortion. Given the restricted abortion legality in Togo, as well as the methods reported, many of these induced abortions were likely unsafe (11).

Participants who knew a woman who had attempted to induce an abortion were more likely to have completed at least a secondary school education than those who did not know a woman who had attempted to induce an abortion. Previous research demonstrates that women with higher education and socioeconomic statuses are more likely to seek an induced abortion in low and middle-income countries (35). Educated participants may have educated social circles, increasing their exposure to women with increased likelihood of having attempted an abortion, or more educated women may be more likely to report knowledge of an induced abortion.

New literature suggests that induced abortions should not be classified dichotomously as “safe” or “unsafe,” and should rather capture a spectrum of methods, settings, and providers and

thus varying degrees of risk (36). According to the new definition, published in The Lancet in 2017, abortions that are “less safe” include abortions that meet one of two criteria: it is completed using dangerous methods (i.e. traditional concoctions) *or* it is completed by an untrained individual; “least safe” abortions meet both of the previously mentioned criteria (17). While we cannot verify from our data if the person who performed the induced abortion was “untrained,” we found that a large proportion, sixty-three percent, of the induced abortion cases in this study used street medications, traditional herbs, or a combination of the two. Since these methods fall under the category of “dangerous methods,” we can classify these abortions as either “less safe” or “least safe” by this new definition.

Despite the restricted legal status of abortion in Togo (37), participants reported that 42.9 percent of cases procured abortions at healthcare centers. Previous literature supports that even in legally restricted and highly stigmatized environments, women are able to locate healthcare providers willing to provide abortion services. In Nigeria and Burkina Faso, countries with similar legal contexts to Togo, studies report healthcare professionals completing a high proportion of induced abortions (9)(16). Research demonstrates that women often first attempt inexpensive or less effective methods of abortion; if these fail, then women will often attempt more expensive, medical procedures at healthcare centers (27). While a high percentage of our survey sample procured an induced abortion in a healthcare clinic, it is possible that many previously self-induced an abortion.

We found that 60.7 percent of participants knew of an induced abortion that resulted in health complications and 30.3 percent knew a woman who had died from an induced abortion. While these figures are not representative of true morbidity and mortality rates, they may demonstrate the negative health consequences of induced abortion in Lomé, as well as the need

for increased services, both in comprehensive abortion care and post-abortion care, to ameliorate this burden.

Recommendations

This study supports several recommendations to reduce unsafe abortions and their resulting health complications in Lomé. First, countries with restricted abortion policies have successfully implemented post-abortion care (PAC) models in order to reduce health complications from unsafe abortions without violating abortion laws (9). The majority of the women that our participants knew sought both abortion services and PAC at healthcare centers, demonstrating a need for Togolese healthcare providers to be able to identify and adequately care for unsafe abortion complications.

Increasing access to misoprostol, a medication that the WHO added to its list of essential medicines in 2005, is an alternative method of increasing women's access to abortion care and PAC (9). Currently there is a high unmet need for misoprostol in Francophone West Africa (31) and a recent situational assessment in Togo found that misoprostol was out of stock at all attended pharmacies (31). Studies demonstrate that misoprostol improves PAC health outcomes when available in primary care settings, and is an adequate alternative to Manual Vacuum Aspiration, a method for which providers in developing settings might not have access to appropriate training or equipment (9). Further promoting misoprostol as a safer and more accessible way to provide PAC is another possible intervention to improve unsafe abortion outcomes.

Another promising intervention to reduce unsafe abortion in Lomé is increased family planning counseling. Togo still has a high unmet need for contraception, with 33 percent of married women reporting an unmet need in 2013, a small improvement from 1998, when the

unmet need was at 35 percent (20). Research shows that low contraception rates lead to more unwanted pregnancies and likely increased rates of unsafe abortion (38). Since 2013, EngenderHealth and the U.S. Agency for International Development/West Africa have been implementing "Agir pour la Planification Familiale (AgirPF)," a program that aims to increase access and uptake of family planning in Togo (39). Continuing and expanding projects such as AgirPF could increase contraception use and lower the rate of unsafe abortions. EngenderHealth is also implementing the Postabortion Care Family Planning Project (PAC-FP), which aims to improve PAC by expanding family planning options available to PAC clients (39).

Reducing barriers to accessing an induced abortion under the existing law, both for women seeking an induced abortion and for the medical professional providing the service, is another possible solution. Currently, all abortions under Togolese law require a doctor's prescription and in the case of rape, the police must confirm the rape's occurrence (31). Additionally, doctors' understanding of the law is minimal, and the Togo's 2007 reproductive health law allowing abortion under certain circumstances has never been implemented, leaving doctor's reticent to perform abortions (31). Reducing these barriers could increase abortion access to women who qualify under the current law.

Finally, several countries have seen subsequent reductions in maternal mortality due to unsafe abortion after liberalizing their abortion laws (40). Advocating for policy change to expand the current abortion law in Togo could reduce the number of induced abortions that are performed in unsafe settings with unsafe methods.

Future Research

We recommend further research on unsafe abortion methods, service providers, and the short-term and long-term complications of unsafe abortion in Lomé in order to better understand

its health and economic consequences. Additionally, conducting more research on unsafe abortion in other cities or rural areas of Togo could help to describe the issue on a national level. Investigating the current use and knowledge of misoprostol among women and healthcare providers in Lomé could determine the feasibility of promoting misoprostol as a safer and more accessible way to provide PAC care. Identifying which healthcare centers are most in need of increased PAC training, and understanding barriers to providing those services could help improve women's access to PAC. Ultimately, understanding where and how women procure abortion services in Lomé can provide a basis for future policies and interventions to increase access to safe abortion services and decrease negative health outcomes.

Limitations

This study does not provide representative data on women's experiences on unsafe abortion. Our survey sample cannot be considered representative of women in Lomé due to our convenience sampling method and exclusion criteria. We sampled from gynecology, family planning, and obstetrics units, resulting in a sample with a high proportion of pregnant women and creating bias in our survey sample. Furthermore, women who participated in the survey might have different characteristics from those who did not participate. Additionally, due to the language limitations of the research team, we excluded non-French speaking women from participation, further biasing our survey sample toward including more educated participants. Since more educated women may be more likely to report knowing a woman who had attempted an induced abortion, our results may be biased.

We cannot verify that the reported cases are mutually exclusive and it is possible that the same deaths were known by multiple women. However, given Lomé's urban context, we assume that the likelihood of women reporting the same cases is small. Additionally, we assume

that the response “healthcare center” as reported by participants defines a healthcare setting run by a trained healthcare professional.

We attempted to reduce underreporting of induced abortion experiences by using women researchers, by conducting surveys in private settings, and only asking participants about second-hand accounts of induced abortion experiences. However, as abortion is a highly sensitive and stigmatized topic, abortions may be underreported. Finally, given that we utilized second-hand accounts of abortion experiences, abortion experiences might have been misreported or misrepresented by the survey participants.

Conclusion

This study documents the important health burden of induced abortion at four major Lomé healthcare centers. We found that many participants knew of women who had attempted an induced abortion, and it is likely that most of these induced abortions were unsafe. Furthermore, complications and death from induced abortions are commonly reported. This study demonstrates a strong need for continued efforts to address unsafe abortion and its health consequences in Lomé, Togo.

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CHAPTER IV: DISCUSSION, RECOMMENDATIONS, & PUBLIC HEALTH IMPLICATIONS

Discussion

This study documents the important public health burden of unsafe abortion in Lomé, the capitol of Togo. Most women attending clinics in each of the studied four healthcare centers in Lomé reported knowing at least one woman who had procured or self-induced an induced abortion. Moreover, participants often reported that the woman sought medical care for complications from the induced abortion, and many knew a woman who had died from an induced abortion. Given the restricted abortion legality in Togo, as well as the methods reported, many of these induced abortions were likely unsafe (11).

Participants who knew a woman who had attempted to induce an abortion were more likely to have completed at least a secondary school education than those who did not know a woman who had attempted to induce an abortion. Previous research demonstrates that women with higher education and socioeconomic statuses are more likely to seek an induced abortion in low and middle-income countries (35). Educated participants may have educated social circles, increasing their exposure to women with increased likelihood of having attempted an abortion, or more educated women may be more likely to report knowledge of an induced abortion.

We found that over half of all participants knew at least one women who had attempted an induced abortion. Excluding education, participants who knew and did not know a woman who had attempted to induce an abortion were similar in other demographic characteristics, including age, religion, marital status, number of births, number of pregnancies, and family planning use. This suggests that unsafe abortion is a widespread issue that affects many Togolese women.

New literature suggests that induced abortions should not be classified dichotomously as "safe" or "unsafe," and should rather capture a spectrum of methods, settings, and providers and thus varying degrees of risk (36). According to the new definition, published in The Lancet in 2017, abortions that are "less safe" include abortions that meet one of two criteria: it is completed using dangerous methods (i.e. traditional concoctions) *or* it is completed by an untrained individual; "least safe" abortions meet both of the previously mentioned criteria (17). While we cannot verify from our data if the person who performed the induced abortion was "untrained," we found that a large proportion, sixty-three percent, of the induced abortion cases in this study used street medications, traditional herbs, or a combination of the two. Since these methods fall under the category of "dangerous methods," we can classify these abortions as either "less safe" or "least safe" by this new definition.

Despite the restricted legal status of abortion in Togo (37), participants reported that 42.9 percent of cases procured abortions at healthcare centers. Previous literature supports that even in legally restricted and highly stigmatized environments, women are able to locate healthcare providers willing to provide abortion services. In Nigeria and Burkina Faso, countries with similar legal contexts to Togo, studies report healthcare professionals completing a high proportion of induced abortions (9)(16). These are similar to our findings, where a high percentage of our survey sample procured an induced abortion in a healthcare clinic.

We found that 60.7 percent of participants knew of an induced abortion that resulted in health complications and 30.3 percent knew a woman who had died from an induced abortion. Our findings are similar to a study published in 2011, which found that 60 percent of abortion cases in Lomé resulted in health complications. While our findings are not representative of true morbidity and mortality rates, they may demonstrate the negative health consequences of induced

abortion in Lomé, including both negative health consequences for women and loss of economic productivity.

This study demonstrates the need to address the negative health consequences of unsafe abortion, as well as the need for increased reproductive health services, both in comprehensive abortion care and post-abortion care, to ameliorate this burden.

Recommendations

This study supports several recommendations to reduce unsafe abortions and their resulting health complications in Lomé. First, countries with restricted abortion policies have successfully implemented post-abortion care (PAC) models in order to reduce health complications from unsafe abortions without violating abortion laws (9). The majority of the women that our participants knew sought both abortion services and PAC at healthcare centers, demonstrating a need for Togolese healthcare providers to be able to identify and adequately care for unsafe abortion complications.

Increasing access to misoprostol, a medication that the WHO added to its list of essential medicines in 2005, is an alternative method of increasing women's access to abortion care and PAC (9). Currently there is a high unmet need for misoprostol in Francophone West Africa (31) and a recent situational assessment in Togo found that misoprostol was out of stock at all attended pharmacies (31). Studies demonstrate that misoprostol improves PAC health outcomes when available in primary care settings, and is an adequate alternative to Manual Vacuum Aspiration, a method for which providers in developing settings might not have access to appropriate training or equipment (9). Further promoting misoprostol as a safer and more accessible way to provide PAC is another possible intervention to improve unsafe abortion outcomes.

Another promising intervention to reduce unsafe abortion in Lomé is increased family planning counseling. Togo still has a high unmet need for contraception, with 33 percent of married women reporting an unmet need in 2013, a small improvement from 1998, when the unmet need was at 35 percent (20). Research shows that low contraception rates lead to more unwanted pregnancies and likely increased rates of unsafe abortion (38). Since 2013, EngenderHealth and the U.S. Agency for International Development/West Africa have been implementing "Agir pour la Planification Familiale (AgirPF)," a program that aims to increase access and uptake of family planning in Togo (39). EngenderHealth is also implementing the Postabortion Care Family Planning Project (PAC-FP), which aims to improve PAC by expanding family planning options available to PAC clients (39). Continuing and expanding projects such as AgirPF and PAC-FP could increase contraception use and lower the rate of unsafe abortions.

Reducing barriers to accessing an induced abortion under the existing law, both for women seeking an induced abortion and for the medical professional providing the service, is another possible solution. Currently, all abortions under Togolese law require a doctor's prescription and in the case of rape, the police must confirm the rape's occurrence (31). Additionally, doctors' understanding of the law is minimal, and the Togo's 2007 reproductive health law allowing abortion under certain circumstances has never been implemented, leaving doctor's reticent to perform abortions (31). Reducing these barriers could increase abortion access to women who qualify under the current law.

Finally, several countries have seen subsequent reductions in maternal mortality due to unsafe abortion after liberalizing their abortion laws (40). However, expansion of abortion law does not necessarily translate to an increase in service availability; both India and Zambia

legalized abortion in the 1970's, however, women's access to abortion services still remains restricted (11). Advocating for policy change to expand the current abortion law in Togo, and ensuring implementation of the law, could reduce the number of induced abortions that are performed in unsafe settings with unsafe methods.

Future Research

We recommend further research on unsafe abortion methods, service providers, and the short-term and long-term complications of unsafe abortion in Lomé in order to better understand its health and economic consequences. Additionally, conducting more research on unsafe abortion in other cities or rural areas of Togo could help to describe the issue on a national level. Investigating the current use and knowledge of misoprostol among women and healthcare providers in Lomé could determine the feasibility of promoting misoprostol as a safer and more accessible way to provide PAC care. Identifying which healthcare centers are most in need of increased PAC training, and understanding barriers to providing those services could help improve women's access to PAC. Ultimately, understanding where and how women procure abortion services in Lomé can provide a basis for future policies and interventions to increase access to safe abortion services and decrease negative health outcomes.

Limitations

This study does not provide representative data on women's experiences on unsafe abortion. Our survey sample cannot be considered representative of women in Lomé due to our convenience sampling method and exclusion criteria. We sampled from gynecology, family planning, and obstetrics units, resulting in a sample with a high proportion of pregnant women and creating bias in our survey sample. Furthermore, women who participated in the survey might have different characteristics from those who did not participate. Additionally, due to the

language limitations of the research team, we excluded non-French speaking women from participation, further biasing our survey sample toward including more educated participants. Since more educated women may be more likely to report knowing a woman who had attempted an induced abortion, our results may be biased.

We cannot verify that the reported cases are mutually exclusive and it is possible that the same deaths were known by multiple women. However, given Lomé's urban context, we assume that the likelihood of women reporting the same cases is small. Additionally, the response "healthcare center" as reported by participants could encompass a wide range of healthcare facilities, including public hospitals, private clinics, or unlicensed private clinics. The lack of clarity surrounding the type of facilities the term "healthcare centers" includes might lead to false conclusions about the safety of abortion services at this location.

We attempted to reduce underreporting of induced abortion experiences by using women researchers, by conducting surveys in private settings, and only asking participants about second-hand accounts of induced abortion experiences. However, as abortion is a highly sensitive and stigmatized topic, abortions may be underreported. Finally, given that we utilized second-hand accounts of abortion experiences, abortion experiences might have been misreported or misrepresented by the survey participants.

Public Health Implications

This study has significant health implications. If the true burden of unsafe abortion is as high as this study and previous studies suggests, then immediate action is needed. Taking measures to ensure safe abortion access for Togolese women, including expanding the current law, increasing legal abortion practice under the current law, and increasing the availability and quality of PAC could significantly decrease morbidity and mortality due to unsafe abortion. For Togolese

women, addressing this issue could decrease negative health burdens due to unsafe abortion and increase their access to reproductive health services.

Tables and Figures

Table 1. Participant demographics in four healthcare settings in Lomé, Togo (n=99)	Participants N(%) or Mean(SD)
Age	30.2 (6.7)
15-19	4 (4.0%)
20-24	13 (13.1%)
25-29	32 (32.3%)
30-34	28 (28.3%)
35-39	12 (12.1%)
40+	10 (10.1%)
Marital Status	
Married	52 (52.5%)
Not married but living with partner	30 (30.3%)
Single	17 (17.2%)
Widowed	--
Divorced	--
Education	
None	3 (3.0%)
Primary School	10 (10.1%)
Secondary School	65 (65.7%)
University or higher	20 (20.2%)
Religion	
Catholic	52 (52.5%)
Evangelical	21 (21.2%)
Protestant	13 (13.1%)
Muslim	8 (8.1%)
Animist	2 (2.0%)
Other	1 (1.0%)

Table 2. Number of women known to participants who have attempted to induce an abortion in four health care settings in Lomé, Togo (n=99)	Participants N(%)
Number	
0	44 (44.4%)
1	17 (17.2%)
2-5	31 (31.3%)
6-10	5 (5.1%)
10+	2 (2.0%)

Table 3. Comparison of participant report of woman attempting an abortion by selected respondent characteristics at four healthcare settings in Lomé, Togo (n=99)		
Demographics	P-Value	OR (95% CI)
Catholic vs. Protestant vs. Muslim[1]	0.42	--
Married (or living with a partner) vs. single	0.88	1.09 (0.37, 3.14)
Elementary school education or lower vs. high school education or higher	0.039**	3.55 (1.01, 12.45)**
Family planning use vs. no family planning use	0.094	2.30 (0.86, 6.18)
Age	0.16	--
Number of Children	0.66	--
Number of Pregnancies	0.21	--

**Denotes a significant result

[1] Categories "Evangelical" and "Protestant" were combined for analysis

Table 4. Location and Methods of Induced Abortion Reported by Participants in Four Healthcare Settings in Lomé, Togo (n=56)	Participants N(%)
Location where known woman sought abortion	
Healthcare Center	24(42.9%)
Other environment – Self-induced[2]	19(33.9%)
Traditional Healer	3(5.4%)
Unknown	10(17.9%)
Method used by known woman to induce abortion	
Street Medication	14 (40.0%)
Manual Vacuum Aspiration	6 (17.1%)
Traditional Herbs/Medicine	5 (14.3%)
Curettage	4 (11.4%)
Combination of Street Medication/Traditional Medicine[3]	3 (8.6%)
Vaginal Insertion of Medication	1 (2.9%)
Unknown	2 (5.7%)

[2] The response "Other environment- self-induced" includes the following categories: a self-induced abortion, inducing an abortion at a friend or family member's house, or purchasing street medication.
[3] The response "combination of street medication/traditional medicine" was when the participant cited both street medications and traditional medicine being consumed by the woman in order to induce an abortion

Table 5. Healthcare seeking behavior after an induced abortion in four healthcare settings in Lomé, Togo (n=34)	N(%)
Woman who had Complications (n=34)	
Sought Care	26 (76.5%)
Did Not Seek Care	7 (20.6%)
Unknown	1 (2.9%)
Location where woman sought healthcare (n=26)	
Healthcare Center	21(58.8%)
Pharmacy	1(3.4%)
Street Vendor	2(7.7%)
Traditional Healer	0(0.0%)
Unknown	2(7.7%)

Table 6. Comparing participant report of woman attempting an abortion by hospital in Lomé, Togo (n=99)

Hospital	Participants who knew a woman who had attempted an abortion N(%)	Participants who knew a woman who had died from attempting an abortion N(%)	Participants who knew a woman who had complications from attempting an abortion N(%)
Private Clinic (n=25)	17 (29.8%)	8 (26.7%)	10 (28.6%)
Regional Hospital (n=24)	14 (24.6%)	9 (30.0%)	8 (22.9%)
District Hospital (n=25)	14 (24.6%)	3 (10.0%)	7 (20.0%)
Teaching Hospital (n=25)	12 (21.1%)	10 (33.3%)	10 (28.6%)
TOTAL	57 (100.0%)	30 (100.0%)	35 (100.0%)
X^2 (P-Value)	2.08 (0.56)	9.77 (0.021)***	4.72 (0.19)

***Denotes a significant result

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