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"I have no choice": Influences on Contraceptive Use and Abortion among Women in the Democratic Republic of the Congo

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Abstract

In 2015, the Democratic Republic of the Congo (DRC) recorded an estimated maternal mortality ratio of 693/100,000 live births. Strict abortion laws, high fertility rates, low contraceptive prevalence, and lack of emergency obstetric care all contribute to the high maternal mortality ratio. This study explored influences on contraceptive use and abortion in the DRC. Qualitative in-depth interviews were conducted with 32 women and 10 healthcare providers in four provinces. Participants were recruited at health centers and households in the study communities. Thematic analysis was used and identified that Congolese women's contraceptive decision-making was shaped by a range of external influences rather than their own independent decisions. Non-autonomous decisions and strict abortion laws influenced the methods used to abort a pregnancy, exposing risks of infection, complication, and fatality. These findings highlight that Congolese women's decisions about their fertility and family planning are constrained by policy and socio-cultural influences. *(Afr J Reprod Health 2019; 23[1]: 128-138).*

Keywords: Democratic Republic of the Congo, Qualitative Research, Maternal Mortality, Contraception, Abortion

Résumé

En 2015, la République démocratique du Congo (RDC) a enregistré un taux de mortalité maternelle estimé à 693/100 000 naissances vivantes. Des lois strictes en matière d'avortement, des taux de fécondité élevés, une faible prévalence contraceptive et le manque de soins obstétricaux d'urgence contribuent tous au taux de mortalité maternelle élevé. Cette étude a exploré les influences sur l'utilisation de contraceptifs et l'avortement en RDC. Des entretiens qualitatifs approfondis ont été menés avec 32 femmes et 10 prestataires de soins de santé dans quatre provinces. Les participants ont été recrutés dans des centres de santé et des ménages dans les communautés de l'étude. Une analyse thématique a été utilisée et a révélé que la prise de décision des femmes congolaises en matière de contraception était modelée par une gamme d'influences externes plutôt que par leurs propres décisions indépendantes. Les décisions non autonomes et les lois strictes sur l'avortement ont influencé les méthodes utilisées pour avorter une grossesse, exposant ainsi les risques d'infection, de complication et de décès. Ces résultats montrent que les décisions des femmes congolaises concernant leur fécondité et leur planification familiale sont limitées par des influences politiques et socioculturelles. *(Afr J Reprod Health 2019; 23[1]:128-138).*

Mots-clés: République démocratique du Congo, qualitative, mortalité maternelle, contraception, avortement

Introduction

The Democratic Republic of the Congo (DRC) is located in Central Africa and is geographically the second largest country in Africa and the largest country in sub-Saharan Africa[1]. In 2013, the DRC had an estimated total population of 80 million people[1]. Overall, the DRC is one of the most impoverished countries in the world, ranking 176th of 188 countries on the 2014 Human Development Index (HDI)[2]. The Gender Inequality Index is one component of the HDI and suggests the degree to which women are disadvantaged by "showing the loss in potential human development due to disparity between female and male achievements in two dimensions, empowerment and economic

status"[3]. Of the 155 countries measuring gender inequality, the DRC ranked 149th in 2014[4].

Pregnancy is a fragile and complex period of any woman's life and women should be empowered to make the decision about whether they wish to conceive a child. However, Congolese women may have limited autonomy in their fertility decisions due to the cultural expectations of women in the DRC, thereby constraining their independent decision-making process.

In 2015, the DRC recorded a maternal mortality ratio of 693 deaths/100,000 live births, ranking the country 10th highest in the world[1]. The use of contraception is one solution to high maternal mortality rates, preventing high parity births, unsafe abortions, and facilitating safely spaced pregnancies. High fertility rates coupled with low contraceptive prevalence and unintended pregnancies linked with unsafe abortion practices are all contributors to high maternal mortality in the DRC. Low contraceptive use in the DRC largely stems from socio-economic factors such as: lack of affordability and access to reproductive health services, poor quality of services, and differing cultural beliefs about contraceptive use[5]. Researchers have explored each of these factors to determine whether access to contraceptive use is voluntary, affordable, and acceptable for women in the DRC.

Fertility rates in the DRC vary between provinces, with a national average rate of 6.6 children per woman; the fertility rate is 5.4 for urban women and 7.3 for rural women[6]. Over the past 50 years, the population of the DRC increased fivefold due to an annual 2.8% population growth[5]. According to Kandala *et al*. this added two million people per year, "depriving the population of the socioeconomic benefits of controlled fertility"[5,7].

The DRC has a young population structure with 45% of the population aged under 15 years, and many do not receive essential reproductive health (RH) or family planning (FP) services[8]. This population growth results in an increased number of women of reproductive age (WRA), creating the juxtaposition of a high population growth rate, high fertility rates, and a young population.

Throughout the DRC, at-risk pregnancies are ubiquitous. According to the DRC National Strategic Plan for Family Planning (DRC-NSPFP), even among women in union or marriage, 80% of pregnancies are classified as "at risk" meaning the pregnancies are "too early, too close, too numerous, or too late"[8]. In 2013, of the three million pregnancies in the DRC, about 1.7 million of those were considered at risk, with just under half considered "high-risk" pregnancies[8]. Thus, reducing high-risk pregnancies through increased use of effective contraception is one strategy to decreasing maternal mortality.

In developing countries, high fertility rates decrease as use of contraception increases[5]. Increasing contraceptive use has important benefits: allowing for pregnancy spacing and delayed pregnancies, preventing transmission of HIV and sexually transmitted diseases, and decreasing adolescent pregnancies[9]. In 2013, the modern contraceptive prevalence (MCP) among WRA in the DRC was 6.5% compared with Liberia, a country ranking similarly on the HDI, whose MCP was 19%[8,10].

The DRC-NSPFP aims to increase this countrywide prevalence from its current 6.5% to 19% by 2020[8]. Figure 1 illustrates the varied MCP throughout the DRC provinces, with marked differences in urban areas (Kinshasa) versus rural areas (Kasai-Occidental).

However, less than half of the health zones in the country offer any type of RH or FP services, with more limited access in rural locations[8]. In the DHS-measured provinces, only 4% of rural areas compared with 15% of urban areas offer FP services[8]. Therefore, there is a need for increasing RH and FP services throughout the DRC, with substantial improvements required in rural communities.

Congolese women have requested support in transitioning from unplanned pregnancies to planned pregnancies. Twenty four percent of Congolese women either want no more children or

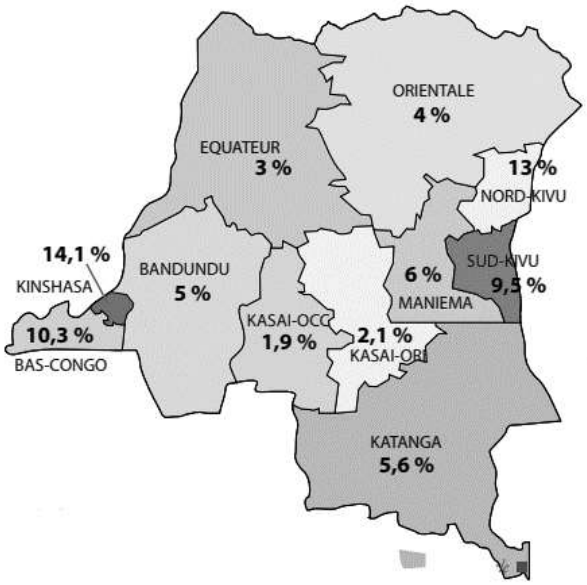

Figure 1: Modern contraceptive prevalence by province in the DRC[8]

want to space their births, illustrating a need for increased contraceptive services[8]. Furthermore, Eastern DRC is wrought with sexual violence in the form of gang rape, sexual slavery, and forced marriages, all of which can result in unintended pregnancies[11]. RH services, such as contraception, remain widely unavailable during conflict and civil unrest[12]. In a place plagued by conflict, the consequences of sexual violence toward women, including pregnancies because of rape, are largely unaddressed and provide ample rationale for the need to address contraceptive health services on behalf of Congolese women.

In the DRC, abortion remains illegal. In 2013, the *no explicit life exception law* stated "to save a woman's life [the law] may be interpreted to permit life-saving abortions on grounds of the general criminal law defense of 'necessity'[12]. Therefore, abortions, albeit illegal and restricted, could be conducted if it is necessary to save the woman's life[12]. However, the enforcement of such an exception to the law remains unstudied. To heighten the restriction in the DRC, the woman and healthcare provider can both be charged with 5-15 years imprisonment in cases of obtaining or conducting an illegal abortion[13].

RH and FP services play an integral role in reducing unsafe abortions. Interventions aimed at increasing access to contraception, safe abortion services, and post-abortion care are vital to decreasing maternal deaths and preventing unintended pregnancies and unsafe abortions[14].

The World Health Organization (WHO) defines unsafe abortion as "a procedure for terminating an unintended pregnancy either by individuals without the necessary skills or in an environment that does not conform to minimum medical standards, or both"[15].

The overall aim of this study was to explore the influences on contraceptive use among WRA, and the consequences of unintended pregnancy in a country where strict abortion laws persist. The specific research questions addressed include: 1) What are the socio-cultural influences on contraceptive use among Congolese women? and 2) What abortion practices are used for unwanted pregnancies in a country where abortion is illegal?

Methods

Study site

This study was conducted in provinces of the DRC with the highest fertility rates. Certain provinces were excluded due to their unsafe location. The 2013-2014 DRC DHS reported Kasai-Occidental Province with the highest fertility rate of 8.2 children per woman[6]. Three additional study sites were included: Equateur (fertility rate of 7.0); Maniema (fertility rate of 6.9); and North Kivu (fertility rate of 6.5)[6]. The provinces with the 2nd, 3rd and 4th highest fertility rates were not chosen due to their location within the active conflict zone.

Study design

Qualitative research was used to elicit the emic perspective from women and health care providers

on the study issues. In-depth interviews (IDIs) were conducted with WRA and reproductive healthcare providers (RHCPs) to achieve detailed insights of individual beliefs, experiences and perceptions. Table 1 lists the provinces, districts, health zones, interviewer demographics, and languages used to conduct interviews.

Study population and participant recruitment

Women of Reproductive Age (WRA)

The WHO defines WRA as a woman between the ages of 15-49 years of age[18]. To ensure diversity amongst participants, WRA were recruited with varied characteristics by marital status, parity and age. The study used a stratified purposive sampling approach to achieve variation and diversity, incorporating at least one of the following strata of women in the sample: post-partum women, married and unmarried women, and women with and without children. Participants were purposively recruited at health centers and households in the study communities. Initially, WRA were identified by health center staff and interviewed near the health center. An iterative sampling process was used to recruit younger women to achieve a diverse sample of women from different neighborhoods.

Reproductive HealthCare Providers (RHCP)

RHCPs were included in this study if they had ever been consulted by women about obtaining contraception. To gain some perspectives on contraceptive use by gender of providers, the study included both male and female healthcare providers. The initial study design focused only on recruiting WRA, however, including RHCPs provided an important perspective on the barriers to contraceptive use and the types of influences affecting the woman's contraceptive decision-making process.

Data collection

Data were collected from May to August 2015. A semi-structured interview guide was developed for each study population focusing on different topic areas. The interview guide for WRA included questions on: women's attitudes toward reproduction, contraceptive decision-making, community perceptions of contraceptive use, and views on abortion. The interview guide for RHCPs focused on: dissemination of reproductive health information, types of contraceptive methods available, and counseling on contraception and abortion.

In each province, in-country collaborators recruited interviewers with local language skills. Swahili was used to facilitate communication, complete interviewer training, and conduct debriefing sessions. Interviewers were trained on the following: qualitative research, study design, participant recruitment and the data collection instrument. During the interviews, we used an iterative process of redefining the study population and refining the research instrument based on early data collection, which involved minor changes to question structure and probes.

Data analysis

Data comprised 32 in-depth interviews with WRA and 10 in-depth interviews with RHCPs. Data were collected in multiple languages and translated into English. Thematic analysis was used to identify core themes and patterns across data[20]. During close readings of the transcripts, memos were kept on issues raised and reflexivity was used to manage potential subjective interpretations of the data. Reflexivity is a tool to

Table 1: Summary of In-depth Interviews

Province	District	Health Zone	Number of Interviews	Interviewer Demographics	Languages
Gbadolite	North Ubangi	Gbadolite	WRA: 5 RHCP: 0	1 female, American 1 female, Congolese	French and Lingala
Kasai-Occidental	Kasai	Tshikapa	WRA: 5 RHCP: 2	1 female, Congolese	French, Lingala, Tshiluba
		Kanzala	WRA: 4 RHCP: 2		
		Bakuba	WRA: 2 RHCP: 1		
		Mutena	WRA: 1 RHCP: 1	1 female, Congolese 1 male, Congolese	
		Kalima	WRA: 5 RHCP: 1		
Maniema	Kindu	Alunguli	WRA: 4 RHCP: 1	1 male, Congolese	Swahili
		Kindu	WRA: 5 RHCP: 1		
North Kivu	N/A	Goma	WRA: 1 RHCP: 1	1 female, American	Swahili
Total	**3 Districts**	**9 Health Zones**	**42 Interviews**	**7 Interviewers**	**4 Languages**

WRA: women of reproductive age, RHCP: reproductive healthcare provider

manage researcher bias in qualitative research and involves "continuous awareness of reflecting, examining and exploring his/her relationship through all stages of the research process"[21]. After thoroughly reading all transcripts to identify core issues, codes were defined with examples from the transcripts to ensure consistent application, including both external deductive codes derived from the literature or theory, and internal inductive codes derived from the data itself. A comprehensive codebook was developed with a list of initial codes that were refined during each review of the transcripts; refining code definitions and splitting codes into sub-codes, until the point of saturation at which no new information was elicited from the data that had not previously been identified[21].

The codes were applied to the data using MAXQDA11, providing a framework for thematic data analysis. Using the codes, we applied the following analytic search techniques to explore the data: by single code, by topic (decision-making process, community perception, etc.), and by subgroup (WRA and RHCPs). Due to their repetition in the data, core themes were identified and documented in an analytic log. Thick descriptions of each theme were developed to give each issue depth, breadth, and nuance and to describe the context in which the issues occurred.

We used constant comparison, a tool to capture patterns and nuances in data, to further refine the description of issues in the data, e.g., community perceptions of women using contraception differed based on relationship status and number of children[22]. We grouped codes into categories to conceptualize the data more clearly. The categories highlighted distinct spheres of influence: beliefs associated with contraceptive use, lack of autonomy, and opinions of abortion practices. We validated themes such as male authority, community perception, barriers to obtaining contraception, and abortion practices by

going back to the data and repeating searches as well as checking for alternative explanations and confirming that themes were supported by data.

Results

Socio-cultural influences on contraceptive use

Sexual desires

Women reported that unintended pregnancies occur in the DRC because a wife is obliged to fulfill the sexual desires of her husband, even though a wife knows she could become pregnant. Women also mentioned that if they wanted to space their births, the advice they were given was to keep a distance from their husband. To illustrate the potential harmful situation that could ensue, a RHCP recounted a conversation with a patient:

> *So we started talking about the difficulties. She said her husband beat her up for that problem [the difficulties] and even tore off her clothes because she was not satisfying him. – male RHCP, Mutena, Kasai-Occidental Province*

In further discussing why women seek contraception, the same RHCP stated:

> *So this method [contraception] is to protect her to avoid unwanted pregnancy and early pregnancy and to have well-spaced births. Because men don't think of that. Once he feels the sexual desire, he doesn't think about all that, he just wants to get what he wants. – male RHCP, Mutena, Kasai-Occidental Province*

Husbands

A RHCP pointed out that husbands themselves are obstacles to a woman obtaining contraception or accessing RH services at the health center. Husbands may not allow their wives to enter the family planning program because "they like to give birth; they like to count the children." This RHCP stated that sometimes husbands neglect to understand the costs of raising children, which adds up quickly and could have a great impact on the family's wellbeing. However, another RHCP stated that some women also do not agree to use contraception because they too like to give birth to many children.

Many women reported that they required their husband's approval before they could go to the health center for contraception. If a wife wanted to obtain contraception despite her husband's approval, she may need to do so without the husband's knowledge. Similarly, a RHCP described a consultation with a patient who clandestinely planned to use contraception and stated that if her husband were to find out, the marriage could end in divorce.

Women's lack of autonomy

The theme that women have "no choice" on whether they use contraception is interwoven throughout the data, painting a picture of women who are powerless against their husbands, parents, in-laws and other external influence (e.g. religion). Women often mentioned that if their husband wanted to continue having children, they must do so; "pregnancy is a part of life." A woman stated:

> *Some decide that they will only have three children. But … men always go over the set number. Like we just wanted four, but we got seven. Men come towards me all the time! It's him who wants to do it to me all the time. Therefore, I have no choice.*
>
> *It's Biblical. I must submit to his desire and wishes or else he might go elsewhere. – 47-year-old WRA, 7 children, Tshikapa, Kasai-Occidental Province*

Frequently, when women were asked who made decisions about contraception, a typical response was "Ni mimi mwenyewe" ("It is me myself"). However, they also described the need to first

obtain their husbands' permission to go to the health center. When asked who influences their decision, the women's answers varied, and included husbands, parents, friends, and teachers; therefore, the decision-making process varies.

The decision-making process for unmarried women differed from their married counterparts. With no husband as an influence, these women often sought guidance from their mothers, friends, teachers, and health center staff. Unmarried women in the study did not mention religion as an influence. Still, many of the unmarried women first answered "Ni mimi mwenyewe" when asked about their contraceptive decision-making process.

Parents

In addition, the parents of a married couple may also desire many grandchildren, and sometimes have the greatest influence on the number of children the couple has. One RHCP recounted that a couple just had a baby, and both agreed to use contraception to delay another pregnancy. After some time passed, the husband's parents became involved and questioned the absence of a subsequent grandchild. They asked his wife to remove the method of contraception they chose; the husband felt he must obey his parents and told his wife to discontinue the method. Although she knew she could become pregnant again, reluctantly, she agreed.

"Difficulties of life"

Although uncommon, some women said the decision to use contraception was made jointly with their husband after recognizing the "difficulties of life." These difficulties included the realization that they could not afford or take care of more children and wanted to give the children they had the necessary resources so they "can survive."

Religion

Also, worth noting is that both married women and RHCPs cited lack of contraceptive use due to "religion" or "the Bible", explaining that the church is a barrier to contraceptive use because "they [the church] say contrary to what we say," and women who attend church tend not to use contraception.

Opinions of abortion practices

In the context of abortion, the issue of "no choice" emerges once again. The unanimous answer from the women and RHCPs was that there is nothing the woman can do but to accept the pregnancy. RHCPs were asked for their advice given to women who come to the health center for an abortion under two different scenarios: 1) an unmarried woman with no children, and 2) a married woman with six nearly adult children. The unequivocal recommendation was that the woman should "alinde mimba yake" ("protect her pregnancy") until it comes to term and then revisit the topic of contraception in the future.

Throughout the DRC abortion is denounced for several reasons, including religious convictions, a fear of dying, and the fact that it is forbidden by law and may result in imprisonment. The women believed that the Bible prohibits abortion because it is considered a sin, and the community would condemn a married woman for seeking an abortion more so than an unmarried girl. Women stated that a married woman should feel guilty for having an abortion if she has a husband, although:

> *Those with no husband, they get rid of it. And they throw it on the road in that way. – WRA, Goma, North Kivu Province*

One woman stated:

> *If it [abortion] was a good thing, they wouldn't do it in hiding … the community doesn't see it as a good thing. They abort by force. But if the community hears about it, people start accusing each other and sometimes the state gets involved. – WRA, Bakuba, Kasai-Occidental Province*

This illustrates the severe consequences of obtaining or performing surreptitious abortions. Of worth noting is the idea that the woman "can be arrested because she killed someone who could have saved the community." The collective perceptions are: the child would be able to help around the house, no one can predict what the child could be someday, and the woman should "keep the pregnancy and give it to the world."

Although abortion is severely restricted, both women and RHCPs admitted that someone they know has induced an abortion. While women of all ages may seek an abortion, younger girls are more likely to pursue the procedure. The types of abortion methods included the use of salt, glycerin, medicinal herbs, "white medicines," self-injections, indigenous products containing roots and leaves, higher doses of unidentified pills, secreting or dripping the uterus, and bending or stooping to discontinue the pregnancy. The main place women obtained these methods was from a pharmacy in the local market. However, a few women mentioned that some women went to a local healer who "opened her uterus" to expel the pregnancy.

Some women admitted that they knew others who had gone to a health center for an abortion, and in one instance the doctor demanded money. This woman was then forced to induce an abortion in a non-professional setting, putting her at higher risk of complications. Additionally, a woman specified that, "Abortion is very wrong, but the doctor who provides abortion, sees it as good because he has got money," suggesting some RHCPs do benefit financially from performing illegal abortions.

Due to the potential consequences, many women were afraid to obtain an abortion. In fact, most RHCPs admitted they had received women with unsuccessful abortions, and frequently, the women presented with severe infections and were rushed to a larger medical facility. A RHCP mentioned that an abortion would be ill advised due to the inadequate quality of equipment at the health center. In this example, complications from an abortion procedure resulted in a woman's death:

Yes, I have received a single mother who used salt to have an abortion. She came here, and we took her to the hospital where she died. – male RHCP, Kalima, Maniema Province

Discussion

Numerous quantitative studies focus on family planning, contraception or abortion in the DRC, however there exist few qualitative studies on these issues. We compare our results to those studies below. This study found that Congolese women are not autonomous in decisions about family planning. These decisions are inextricably linked to external forces such as the absence of laws protecting Congolese women's reproductive rights and patriarchal dominance within Congolese society. This study also identified that current abortion laws may drive Congolese women to use dangerous methods to perform at-home abortions resulting in abortion-related fatalities.

Reproductive health rights

While sexual and reproductive health (SRH) is included in the Constitution of the DRC, many systemic challenges endure[23]. Addressing women's SRH needs is first dependent on the acknowledgement of women's basic rights. However, the Family Code within the Constitution stipulates that "men are the head of the household and women must obey them"[24]. The systemic inequality subordinating Congolese women lies at the root of many challenges, including but not limited to, justice for women's SRH and fundamental rights. Furthermore, in 2006 the DRC adopted a law to address sexual violence and although the DRC Penal Code prohibits rape, both are still used as weapons of war today[24]. Not only is effective enforcement of these laws essential, the Congolese government is obligated to guarantee women the basic protection they deserve to alleviate their suffering.

Barriers to contraceptive use

This study suggests that influences on contraceptive use such as the expectation of giving birth to multiple children, requiring permission from the husband, and the authority held by the male partner's parents affect women's contraceptive decision-making. Additionally, the lower status of women in the DRC indicates that Congolese women lack the ability to make independent decisions pertaining to their reproductive health.

These barriers are consistent with those identified in a study in Western DRC, which included fears of infertility and side effects, husband's resistance, and religious principles[25]. Specifically, the desire to have multiple children is consistent with findings from two additional qualitative studies. Focus group discussions in rural DRC and Uganda found that due to a community desire for a large family size, some reasons in support of this argument are attributable to religious orders, a symbol of wealth, and to ensure future financial support[26,27].

Results indicate that gender norms play a distinct role in fertility and reproduction. While most of the women identified that they themselves make the decisions, they also said that their husband, parents, friends and teachers influenced their use of contraception. Therefore, it appears that while women may make the initial decision to use contraception, cultural authority figures may hold the power to make the final decision.

Abortion practices in the DRC

This study showed that women in the DRC seeking an abortion resort to unsafe and life-threatening methods to terminate a pregnancy. Perhaps because abortion is illegal in the DRC, few researchers have investigated this issue; however, the following three studies are worth mentioning. A study in Bukavu, DRC focused on evaluating the reduction of back-street abortions due to the activation of family planning programs[28]. In the context of sexual violence, a related study argues for decriminalizing abortion in the DRC due to the high number of unintended pregnancies and the occurrence of unsafe abortions that contribute to maternal deaths[29]. An additional study by Kisindja *et al.* described the presentation of first trimester abortions in the DRC and concluded that induced abortions are an important problem and additional information is required to understand the prevalence of clandestine abortions[30].

Conclusion

Our study illustrates that Congolese women lack basic reproductive rights including access to safe and legal abortions; these rights have been granted to women across the world for decades. Through examining fertility norms, barriers to contraceptive uptake, and gender inequalities, along with current abortion practices, this study provides contextual information on the socio-cultural influences affecting Congolese women's reproductive choices.

This study demonstrates that the decision-making process and numerous diverse influencers could complicate the woman's use of contraception. Targeted education for Congolese men and older generations (e.g. parents) is necessary to instruct them about the benefits of contraception for their wives, sisters, daughters, and friends. Motivating women to make independent, empowered decisions along with targeted education are crucial steps in securing the attainment of Congolese women's reproductive rights.

Congolese women have not only voiced the desire for planned pregnancies, they have admitted to knowing another woman who has induced an unsafe abortion, strongly indicating the need for increased contraceptive services. Disappointingly, we are retroactively addressing this issue. Given the country's high maternal mortality ratio of 693 deaths/100,000 live births and the complications and mortality risks of unsafe, illegal abortions, a Congolese woman's very survival depends, in part, on using effective

contraception[1]. Throughout her life a Congolese woman may experience repeated unwanted pregnancies and face the dilemma of whether to continue the pregnancy or seek an illegal abortion, both of which may have a fatal outcome.

Ethical Considerations

The study was deemed exempt after submission to the Emory University Institutional Review Board, because it did not meet the definition of "research with human subjects". Nonetheless, we used the following ethical procedures to protect the study participants: obtained oral consent from participants, maintained confidentiality of data and anonymity of participants, and de-identified all transcripts after translation and transcription.

Limitations

This study had one notable limitation regarding language of data collection. Over 200 native languages are spoken in the DRC, therefore interviews were usually conducted in a combination of languages used by participants, including French, Lingala, Tshiluba, and Swahili. This posed challenges in finding qualified translators to transcribe the interviews in multiple languages, which may have influenced data quality.

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Contribution of Authors

JMS conceptualized the study, collected and analyzed data, and drafted the initial manuscript. MMH and RWR contributed to the study design, data collection, analysis and interpretation of results. All authors contributed to writing and reviewing the final manuscript. The authors declare that they approve this manuscript and have no conflict of interests regarding the publication of this paper.

References

1. Central Intelligence Agency. The World Factbook Africa: Congo, Democratic Republic Of The. 2016; Available from: https://www.cia.gov/library/publications/the-world-factbook/geos/cg.html.
2. United Nations Development Programme, Human Development Reports. Table 1: Human Development Index and its components. 2014; Available from: http://hdr.undp.org/en/composite/HDI.
3. United Nations Development Programme, Human Development Reports. Gender Inequality Index. 2014; Available from: http://hdr.undp.org/en/content/gender-inequality-index-gii.
4. United Nations Development Programme, Human Development Reports. Table 5: Gender Inequality Index. 2014; Available from: http://hdr.undp.org/en/composite/GII.
5. Kandala NB, Lukumu F, Mantempa JN, Kandala JD and Chirwa T. Disparities in modern contraception use among women in the Democratic Republic of Congo: a cross-sectional spatial analysis of provincial variations based on household survey data. J Biosoc Sci, 2015. **47**(3): p. 345-62.
6. Ministère du Plan et Suivi de la Mise en oeuvre de la Révolution de la Modernité (MPSMRM) Ministère de la Santé Publique (MSP) and ICF International, Democratic Republic of Congo Demographic and Health Survey 2013-14: Key Findings. 2014: Rockville, Maryland, USA: MPSMRM, MSP et ICF International.
7. DKT International. Democratic Republic of Congo,2014; Available from: https://www.dktinternational.org/country-programs/democratic-republic-of-congo/.
8. Democratic Republic of the Congo Ministry of Health. Family Planning - National Multisectoral Strategic Plan (2014-2020), Political Advocacy Committee and Permanent Multisectoral Technical Committee. 2014; Available from: http://ec2-54-210-230-186.compute-1.amazonaws.com/wp-content/uploads/2014/10/DRC_National_Family_Planning_Plan_English.pdf.
9. World Health Organization. Family

planning/Contraception. 2015; Available from: http://www.who.int/en/news-room/fact-sheets/detail/family-planning-contraception.
10. Liberia Institute of Statistics and Geo-information Services (LISGIS) and Ministry of Health and Social Welfare and National AIDS Control Program and ICF International Inc., Liberia Demographic and Health Survey 2013. 2014: Monrovia, Liberia.
11. Nanivazo M. Sexual violence in the Democratic Republic of the Congo. 2012; Available from: https://unu.edu/publications/articles/sexual-violence-in-the-democratic-republic-of-the-congo.html.
12. Center for Reproductive Rights. The World's Abortion Laws Map 2013 Update. [Fact Sheet] 2013; Available from: http://www.reproductiverights.org/sites/crr.civicactions.net/files/documents/AbortionMap_Factsheet_2013.pdf.
13. Women on Waves. Abortion Law Congo. 2016; Available from: http://www.womenonwaves.org/en/page/4985/abortion-law-congo.
14. World Health Organization. Maternal Mortality. 2015; Available from: http://www.who.int/en/news-room/fact-sheets/detail/maternal-mortality.
15. Grimes DA, Benson J, Singh S, Romero M, Ganatra B, Okonofua FE and Shah IH. Unsafe abortion: the preventable pandemic. Lancet, 2006. **368**(9550): p. 1908-19.
16. U.S. Departmet of State - Bureau of Consular Affairs. Passports and International Travel, Democratic Republic of the Congo Travel Warning. 2015.
17. GOV.UK. Foreign Travel Advice: Democratic Republic of Congo. 2016.
18. World Health Organization. Sexual and Reproductive Health - Infertility Definitions and Terminology. 2016; Available from: http://www.who.int/reproductivehealth/topics/infertility/definitions/en/.
19. Johns Hopkins Bloomberg School of Public Health. Section III. Interviewing in Qualitative Research. 2015.
20. Boyatzis RE. Transforming Qualitative Information: Thematic Analysis and Code Development, L. Thousand Oaks, & New Delhi, Editor. 1998, SAGE Publications. p. 200.
21. Kolb SM. Grounded Theory and the Constant Comparative Method: Valid Research Strategies for Educators. Journal of Emerging Trends in Educational Research and Policy Studies, 2012. **3**(1): p. 83-86.
22. Hallberg LRM. The "core category" of grounded theory: Making constant comparisons. International Journal of Qualitative Studies on Health and Well-being, 2006. **1**: p. 141-148.
23. Hobday K. Sexual and Reproductive Rights: Democratic Republic of Congo. 2016. Available from: https://www.gfmer.ch/srr/Democratic-Republic-of-Congo.htm.
24. Organization for Economic Co-operation and Development. Social Institutions and Gender Index: Congo, Dem. Rep. 2016; Available from: https://www.genderindex.org/country/congo-democratic-republic/.
25. Izale K, Govender I, Fina JP and Tumbo J. Factors that influence contraceptive use amongst women in Vanga health district, Democratic Republic of Congo. Afr J Prim Health Care Fam Med, 2014. **6**(1): p. E1-7.
26. Muanda MF, Ndongo GP, Messina LM and Bertrand JT. Barriers to modern contraceptive use in rural areas in DRC. Culture, Health, & Sexuality, 2017. **19**(9): p. 1011-1023.
27. Kabagenyi A, Jennings L, Reid A, Nalwadda G, Ntozi J and Atuyambe L. Barriers to male involvement in contraceptive uptake and reproductive health services: a qualitative study of men and women's perceptions in two rural districts in Uganda. Reproductive Health, 2014. **11**(21).
28. Mibi Kakisingi J, Zacchè G and Zacchè MM. A family planning programme as a solution to back-street abortion in a Congolese Community. Italian Journal of Gynaecology and Obstetrics, 2012. **24**(1): p. 27-33.
29. Kalonda JC. Sexual violence in Congo-Kinshasa: necessity of decriminalizing abortion. Rev Med Brux, 2012. **33**(5): p. 482-6.
30. Kisindja RM, Benfield N and Wright M. Induced abortion in eastern Democratic Republic of Congo-a descriptive study. International Journal of Gynecology and Obstetrics, 2012. **119**: p. S583.