



Available online at www.ijtmrph.org

INTERNATIONAL JOURNAL OF TRANSLATIONAL
MEDICAL RESEARCH AND PUBLIC HEALTH
ISSN: 2576-9499 (Online)
ISSN: 2576-9502 (Print)
DOI: 10.21106/ijtmrph.393

FIELD REPORT | WOMEN'S HEALTH

Individual and Community Level Factors Related to Contraceptive Access, Family Planning, and Reproductive Health Challenges Among Women in Kumasi, Ghana: A Field Study

Lauren E. Gibson, BSPH¹; Albert Adusei Dua, MD²; Jake W. Coldiron¹; Amanda S. Peters, BA¹; Sushana Lamsal, BS¹; Grace-Elizabeth A. Edeh¹; Destiny Masha, BA¹; Elizabeth A. Armstrong-Mensah, PhD¹✉

¹Georgia State University School of Public Health, 140 Decatur Street, Atlanta, Georgia, USA; ²Komfo Anokye Teaching Hospital, Kumasi, Ghana

✉ **Corresponding author email:** earmstrongmensah@gsu.edu

ABSTRACT

Despite the availability of contraceptives, cultural practices and social factors create barriers that prevent women in Ghana from realizing their reproductive health potential. The purpose of the field study was to examine individual and community level factors related to contraceptive access, family planning, and reproductive health challenges among women in Kumasi, Ghana. Specifically, we conducted a field-based comparison of women's health-related issues in Kumasi and the US to determine areas of similarities and differences. Since our focus was Kumasi in general and the Suntreso Government Hospital in particular, we used convenience sampling. Thus, study results are not generalizable to the entire population of Ghana. Given the short duration of the entire field study (three weeks), and the fact that information on the women's health areas of focus in Ghana is available in the US, secondary data from various sources were used for the US comparison. Utilizing a cross-sectional, mixed-methods study design, 100 women of reproductive age were surveyed. Results showed that 69.0% of study participants in Kumasi knew where to go to access birth control services but had little desire to use them. Like the study participants in Kumasi, most women in the US also know where to access reproductive health services but are more desirous and interested in using such services. We also found that while cultural norms and gender roles served as primary barriers to family planning and contraceptive access for women in Kumasi, access to health insurance is the barrier in the US.

Keywords: • Women's Health • Kumasi • United States • Contraceptives • Family Planning • Reproductive Health • Field Study

Copyright © 2022 Gibson et al. Published by Global Health and Education Projects, Inc. This is an open-access article distributed under the terms of the Creative Commons Attribution License **CC BY 4.0**.

1. Introduction

1.1 Statement of the Problem

Approximately 90% of all births in the world occur in developing countries and about one-fifth of those

births are unwanted. To address this issue, some women resort to unsafe abortions. According to existing literature, an estimated 50 million induced abortions are performed annually worldwide, with about 20 million of those abortions performed under

unsafe circumstances or by untrained providers, putting women at risk for a number of negative health outcomes and even death.¹ While developing countries have experienced a decline in maternal mortality rates in the last decade, thanks to the 2000 Millennium Development Goals, the current Sustainable Development Goals, and individual country programs and initiatives,¹ progress has been uneven among and within countries. Access to family planning and reproductive health services have far-reaching implications for improving women's health outcomes, yet not all women in Ghana utilize these services.²

Socio-cultural and economic constraints including religion, cost of services, family perceptions, and cultural beliefs, negatively impact the utilization of modern contraceptives, and reproductive health services by women in Ghana.³ Consequently, most women end up experiencing multiple and unintended pregnancies, poor maternal and neonatal health outcomes, and unsafe abortions. In the bid to address these issues, the Ghana Ministry of Health recently launched the Four Year Ghana Family Planning Costed Implementation Plan,⁴ as well as a National Health Insurance Scheme (NHIS).⁵ Despite these efforts, the utilization of modern contraceptives and reproductive health services by women in Ghana, remains low.²

1.2. Objective of the Study

The purpose of the field study was to examine individual and community level factors related to contraceptive access, family planning, and reproductive health challenges among women in Kumasi, Ghana. Specifically, we conducted a field-based comparison of women's health-related issues in Kumasi and the US to determine areas of similarities and differences.

2. Methods

2.1. Description of Activities

As part of the three-week Georgia State University School of Public Health's study abroad program, students participated in a virtual field study in the summer of 2021. The field study focused on three contemporary public health issues (water and

sanitation, HIV, and women's health) and required students to participate in lectures, site visits, field trips and to write a field study report. For the field report aspect of the study, our team chose to focus on women's reproductive health. Due to travel restrictions associated with the COVID disease of 2019 (COVID-19) pandemic, we were unable to travel physically to Ghana. Thus, we had one of our in-country partners at the Suntreso Government Hospital located in Kumasi, use an electronic questionnaire we had created to collect data on our behalf over a period of four weeks prior to the commencement of the three-week study abroad program. We pilot tested the questionnaire with our in-country partner for appropriateness, clarity, and ease of administration as he was the one going to use it for data collection. His feedback was used to revise and finalize the questionnaire.

2.2 Setting and Data Collection

The study focused on women of reproductive age who live in Kumasi. Individuals qualified to participate in this study if they self-identified as female, were of reproductive age and accessed the Suntreso Government Hospital's antenatal care clinic, labor ward, post-delivery/recovery ward, or the baby unit.

Using a mixed-methods study design and the face-to-face questionnaire administration format, data was collected from 100 female patients during their hospital visit, using Twi (the predominant language spoken in Kumasi) and English language (depending on what was preferred by participants). Prior to data collection, our in-country partner obtained consent from participants and assured them of the confidentiality of any responses they would provide. Data was collected electronically via Qualtrics⁶ over a period of two weeks. The data collection instrument comprised 20 qualitative and quantitative questions across four domains: i) demographics, ii) contraception access, iii) family planning, and iv) reproductive health challenges.

2.3. Data Analysis

Quantitative and qualitative data collected were exported from Qualtrics⁶ to the Statistical Package for the Social Sciences (SPSS) software⁷ and reviewed for

duplicate entries, inconsistencies, and completeness. Quantitative data was analyzed using SPSS version 27.⁷ Univariate/descriptive analysis and bivariate analyses using a 95% confidence interval were conducted. Quantitative data with missing values were excluded from calculations. NVivo version 13⁸ was used to conduct qualitative analysis and to identify themes.

2.4 Ethical Approval

The field study was approved by the Institutional Review Board of the Kwame Nkrumah University of Science and Technology in Kumasi.

3. Findings

3.1. Overall Findings

We found that 69.0% of study participants in Kumasi knew where to go to access birth control services but had little desire to use them. Like the study participant in Kumasi, most women in the US also know where to access reproductive health services but are more desirous and interested in using such services. We also found that while cultural norms and gender roles served as primary barriers to family planning and contraceptive access for women in Kumasi, access to health insurance is the primary barrier in the US.

3.2. Demographic Information

Of the study participants in Kumasi, 79.0% were Akan, 17.0% were Northerners, 1.0% was Ewe, 1.0% was Ga, and 2.0% were of mixed ethnicity. With regards to age, 5.0% of study participants were under the age of 20 years, 47.0% were between the ages of 21 and 29 years, 46.0% were between the ages of 30 and 39 years, and 2.0% were between the ages of 40 and 49 years. When it came to marriage, 67.7% of study participants were married, 31.3% were single, and 1.0% was divorced. By way of geographic location, 89.0% of study participants lived in an urban area while 11.0% lived in a rural area. Regarding educational attainment, 4.0% of study participants had ever attended school, 2.9% had completed primary school, 43.6% had completed junior secondary/high school, 32.7% had completed senior secondary school, and 16.8% had completed university. Over three-quarters, (86.3%) of study participants were employed, and

their occupations included *trader* (cited 32 times), *entrepreneur* (cited 16 times), and *hairdresser* (cited 11 times).

3.3. Contraceptives

Regarding contraceptives, 69.0% of study participants in Kumasi knew where to access birth control services and 74.0% actually had access to birth control services. Factors cited for the underutilization of birth control were *no interest in use* (cited 13 times), *don't like it* (cited 4 times), and *side effects* (cited 1 time). A little over half (58.0%) of study participants indicated that they use a modern form of birth control. The most used methods are intramuscular injection (27.5%) and condoms (25.5%). Most of the participants (98.0%) also indicated that they are comfortable talking to their health care provider about contraceptives. Those who were uncomfortable also stated they '*have no intention of ever using birth control*' and they '*don't like birth control.*' No study participant was pressured by their provider to use a specific birth control method.

3.4. Family Planning and Reproductive Health Challenges

Results for family planning practice showed that 28.0% of study participants in Kumasi had been pregnant five or more times. Very few (5.0%) had five or more living children, 21.0% said none of their pregnancies were planned, and 65.7% said they were planning on having more children. A little over half (58.8%) of study participants indicated that they had ever been diagnosed with a pregnancy-related health condition. The most common diagnoses were anemia (34.3%) and gestational hypertension (16.7%). Not many (39.0%) study participants knew of someone who had died during childbirth. Those who knew (6.9%) stated that it was mostly (6.9%) due to hemorrhaging. When asked about abortion, 33.3% of study participants stated that they had ever had an abortion. With regards to how the abortions were done, some said with *over-the-counter medication* (cited 17 times), at *the hospital* (cited 12 times), or *both* (cited 4 times). On the issue of antenatal care, 99.0% of study participants said they saw their doctor at least once during their last pregnancy and 82.3% said they saw their doctor eight or more times

during their last pregnancy. Most study participants (80.8%) indicated that they saw their doctor at least once after delivery and 81.3% of those participants said they made two to three additional follow-up visits after delivering.

3.5. Birth Control and Sociodemographics

Linear regression analysis and cross-tabulation were conducted to examine the relationship between birth control use (independent variable), age, marital status, education, ethnic group, and urban living environment (dependent variables). We found that there was a greater likelihood of birth control use among study participants in Kumasi of all age groups with the exception of women in the 30-39 age group. There was also a greater likelihood of birth control use among women of all educational levels, Akans, and Northerners. However, none of these associations were statistically significant as shown in Table 1. The bivariate analysis further showed that there was an increased likelihood of abortion among study participants who had ever attended school, were of the Northern ethnic group, married, and within the 40-49 age group. While most of these relationships were also not statistically significant, the association between abortion and the 40-49 age range was significant ($p = 0.044$) based on a 95% confidence interval (Table 2).

When it came to the knowledge of where to obtain birth control by age, 57.4% of study participants in the 21-29 age group knew where to access birth control. For the remaining age groups, the affirmative response to knowing where to access birth control was 78.0% or higher. The results also showed that 75.3% of urban study participant residents compared to 63.6% of rural residents had access to birth control, and 29.2% of the urban residents had been pregnant five or more times compared to 18.2% of rural residents. We found that 9.2% of rural study participant residents compared to 4.5% of urban residents had five or more living children.

4. Discussion and Implications for Policy and Practice

The purpose of the field study was to examine individual and community level factors related to contraceptive access, family planning, and

Table 1: Bivariate analysis using a linear regression model to assess the relationship between birth control use by age, education, ethnic group, marital status, and living environment

Indicator: Ever used birth control	Odds Ratio	p-value (95% CI)
Age		
< 20	1.036	0.311
21-29	1.747	0.189
30-39	0.283	0.596
40-49	1.470	0.228
Education		
Ever attended school	2.245	0.137
Ethnic Group		
Akan	3.671	0.058
Northerner	1.323	0.253
Marital Status		
Married	0.004	0.953
Urban vs Rural Living Environment		
Urban	0.158	0.692

Table 2: Bivariate analysis using a linear regression model to assess the relationship between abortion by age, education, ethnic group, marital status, and living environment

Indicator: Ever had an abortion	Odds Ratio	p-value (95% CI)
Age		
< 20	0.415	0.521
21-29	0.499	0.482
30-39	0.180	0.672
40-49	4.172	0.044
Education		
Ever Attended School	1.540	0.218
Ethnic Group		
Akan	0.774	0.381
Northerner	3.795	0.054
Marital Status		
Married	3.316	0.072
Urban vs. Rural Living Environment		
Urban	0.050	0.823

reproductive health challenges among women in Kumasi, Ghana, and to determine areas of similarities and differences between Kumasi and the US.

Contraceptives and Family Planning: Married study participants in the 30-39 age group in Kumasi were more likely to know where to access family planning services, more likely to engage in reproductive health visits, and more likely to use contraceptives compared to those less than 30 years. In comparison with the US, we found that younger married American women between the ages of 15-24 years tend to use contraceptives at a slightly higher rate (72.8%) than women in the 25-34 age group (70.0%).^{9,10} Contraceptive use was even higher among married American women who were above 35 years.⁹ This finding is consistent with existing literature on the positive influence of aging on contraceptive use.¹¹

We found that middle-aged (40-49 age group) study participants in Kumasi were more skeptical about using reproductive health services due to rumors, misconceptions, or para-social experience. We also found that study participants in Kumasi between the ages of 30-49 years followed physician-recommended reproductive health guidelines than women aged 21-29 years. According to existing literature, younger women in Ghana are less adherent to physician-recommended reproductive health guidelines.¹² When it came to the US, we found that most women, irrespective of age, are diligent about utilizing reproductive health services.¹³ Unlike Ghana where rumors and medical misconceptions affect reproductive health services utilization, in the US, it is disparities in socioeconomic status among minority populations founded on race and the lack of access to health insurance.¹³ When stratified by race in the US, we found that the unmet reproductive health needs of African American and Hispanic women are significantly higher compared to White women.⁹

Reproductive Health Challenges: The status of women, cultural norms, and gender-power relations are significant determinants of women's reproductive health behaviors in Kumasi, as in the rest of Ghana.^{2,12} In Ghanaian culture, men are the primary decision-makers in all realms, including decisions on health care access.¹⁴ The influence of these cultural norms likely contributed to the underutilization of reproductive health services by some study participants in Kumasi.

Unlike what pertains in Ghana, we found that women in the US have equal power and autonomy as men in the US in many spheres of life including decision-making about household finances. Thus, they do not need permission from men or their partners to utilize reproductive health services.¹⁵

Strengths and Limitations

There were some limitations with the study. A limitation was the ability to translate English words like "intramuscular implant" and "intrauterine device (IUD)" into Twi. Our in-country partner addressed this challenge by describing the contraceptive methods to participants. An additional challenge was poor internet connectivity. Unstable connections interrupted in-country partner's ability to smoothly collect data electronically. This challenge was addressed by switching between two internet service providers during questionnaire administration. Since the field study focused primarily on Kumasi and used a convenient sample, results cannot be generalized to the entire population of Ghana.

Recommendation for Faculty, Students, and Professionals

Researchers looking to conduct a similar study should sample other areas or regions in Ghana in addition to Kumasi in order to have a larger population size for comparison. There are misconceptions about birth control and family planning in Kumasi that need to be dispelled. Future field studies could focus on this area. Overall, students learned about the culture of Ghana as well as women's reproductive health issues in the country.

Compliance with Ethical Standards

Conflicts of Interest: The authors declare no competing interests. **Financial Disclosure:** Nothing to declare. **Funding/Support:** Publication support in part by the Georgia State University School of Public Health. **Ethics Approval:** Approved by the Institutional Review Board of the Kwame Nkrumah University of Science and Technology in Kumasi. **Acknowledgments:** We would like to acknowledge Dr. Thomas Aygarko-Poku of the Suntreso Government Hospital in Kumasi, Dr. Aramansah Barnor of the Barnor Memorial Hospital in Accra, and Dr. Kim Ramsey-White of the Georgia State University in Atlanta for their support during the field study. We would also like to acknowledge Destiny Lester for her contributions to this group's field study and analysis during the Georgia State University Summer 2021 Ghana Study Abroad program. **Disclaimer:** None

Key Messages

- ▶ Access to reproductive health services empowers women, improves birth outcomes, and reduces maternal morbidity and mortality rates.
- ▶ Although the government of Ghana has made great strides towards increasing access to family planning and contraceptives, more work is needed to address access barriers.
- ▶ A key difference noted between study participants in Kumasi and women in the US is that the majority of women in Kumasi had access to birth control, but little desire to utilize them, while most women in the US have a greater desire to use reproductive health services but are limited by the lack of access to health insurance.

References

1. Barot S. Sexual and reproductive health and rights are key to global development: the case for ramping up investment. *Guttmacher Policy Review*. 2015;18(1):1-7.
2. Staveteig S. Fear, opposition, ambivalence, and omission: Results from a follow-up study on unmet need for family planning in Ghana. *PLOS ONE*. 2017;12(7):e0182076. doi: 10.1371/journal.pone.0182076
3. Frempong-Ainguah F, Bailey CE, Hill AG. Women's health status in urban Ghana: Dimensions and differentials using short form. *Health Qual Life Outcomes*. 2018;16(1):74. doi: 10.1186/s12955-018-0894-y
4. Ministry of Health. *Ghana Family Planning Costed Implementation Plan (2016-2020)*. Published September 2015. Accessed July 5, 2021. https://www.healthpolicyproject.com/ns/docs/Ghana_CIP_Brief.pdf
5. Dalinjong PA, Wang AY, Homer CSE. The implementation of the free maternal health policy in rural Northern Ghana: synthesised results and lessons learnt. *BMC Res Notes*. 2018;11(1):341. doi: 10.1186/s13104-018-3452-0
6. Qualtrics. 2005. Provo, Utah, USA: Qualtrics; 2021.
7. IBM Corp. Released 2020. IBM SPSS Statistics for Windows, Version 27.0. Armonk, NY: IBM Corp.
8. Nvivo, Version 13. QSR International; 2020. <https://www.qsrinternational.com/nvivo-qualitative-data-analysis-software/home>
9. Frederiksen BN, Ahrens KA, Moskosky S, Gavin L. Does contraceptive use in the united states meet global goals? perspectives on sexual and reproductive health. *Perspect Sex Reprod Health*. 2017;49(4):197-205. doi: 10.1363/psrh.12042
10. Hall KS, Moreau C, Trussell J. Determinants of and disparities in reproductive health service use among adolescent and young adult women in the United States, 2002-2008. *Am J Public Health*. 2012; 102(2):359-367. doi: 10.2105/AJPH.2011.300380
11. Aviisah PA, Dery S, Atsu BK, et al. Modern contraceptive use among women of reproductive age in Ghana: Analysis of the 2003-2014 Ghana demographic and health surveys. *BMC Womens Health*. 2018;18(1):141. doi: 10.1186/s12905-018-0634-9
12. Nyarko SH. Spatial variations and socioeconomic determinants of modern contraceptive use in Ghana: A Bayesian multilevel analysis. *PLoS One*. 2020;15(3):e0230139. doi: 10.1371/journal.pone.0230139
13. Centers for Disease Control and Prevention. *Health, United States, 2019 - Data Finder (Table 30)*. CDC. Published 2019. Accessed July 5, 2021. <https://www.cdc.gov/nchs/healthcontents2019.htm>
14. Bawah AA, Akweongo P, Simmons R, Phillips JF. Women's fears and men's anxieties: the impact of family planning on gender relations in northern Ghana. *Stud Fam Plann*. 1999;30(1):54-66. doi: 10.1111/j.1728-4465.1999.00054.x
15. Bossick AS, Brown J, Hanna A, Parrish C, Williams EC, Katon JG. Impact of state-level reproductive health legislation on access to and use of reproductive health services and reproductive health outcomes: a systematic scoping review in the affordable care act era. *Womens Health Issues*. 2021;31(2):114-121. doi: 10.1016/j.whi.2020.11.005