Women's Empowerment and Reproductive Autonomy in the Democratic Republic of the Congo

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Background

With a TFR of 6.6 and wanted TFR of 5.7, the Democratic Republic of the Congo (DRC) has one of the highest fertility rates in the world.[1] While Congolese women state a preference for large families, nearly a third of married women (28%) have an unmet need for contraception, and 25% of married women's pregnancies are unplanned. Just 8% of married women are currently using a modern contraceptive method, and 13% are using a traditional contraceptive method.

One of the key drivers of DRC's low modern contraceptive prevalence rate (mCPR) is low service availability and uneven commodity supplies.[2,3] In addition to these supply-related factors, qualitative studies conducted in Kinshasa and in rural DRC uncovered other barriers to contraceptive use, such gendered power dynamics in decision-making.[4,5] The relationship between reproductive outcomes and empowerment-related measures, such as attitudes and experiences with intimate partner violence[6,7] and autonomy[8] have also been assessed in previous studies conducted in DRC. While these studies found significant relationships between intimate partner violence, autonomy, contraceptive use, unplanned pregnancy, and pregnancy loss, they each only presented a piece of the complex concept of women's empowerment, and they did not utilize validated measures of this construct.

This study will operationalize Kabeer's theory of women's empowerment[9,10] through a measure validated in Sub-Saharan Africa in 2018 by Asaolu et al.[11] to assess the relationship between empowerment and reproductive autonomy in DRC.

Conceptual Framework

Kabeer conceptualized women's empowerment as the "process by which those who have been denied the ability to make choices acquire such an ability."[9] She identified three interrelated dimensions of empowerment: agency, resources, and achievements. Agency refers to the "ability to define one's goals and act on them," and resources refers to "material, human, and social resources which serve to enhance the ability to exercise choice."[9] Kabeer's "achievements" dimension refers to "well-being outcomes;" for the purposes of this study, these achievements are within the realm of reproductive autonomy[12]— specifically, unplanned pregnancy, pregnancy loss, and contraceptive use.

Using exploratory factor analysis (EFA) and confirmatory factor analysis (CFA), Asaolu et al. constructed a multi-dimensional measure of women's empowerment that was validated, regionally, in the Sub-Saharan Africa setting.[11] Given the highly contextual nature of empowerment, this newly constructed metric enables a more valid and culturally appropriate analysis of this concept. Asaolu et al. identified four distinct factors of women's empowerment in the Central Africa region (which includes DRC): economic, socio-cultural, education, and health. Each factor is further broken down into eight domains: labor force participation, household decision-making, attitudes toward violence, women's life course, legal status of women, education, negotiating sex, and access to healthcare. This paper assigns each of Asaolu et al.'s domains to Kabeer's "resources" and "agency" dimensions to evaluate the relationship between different types of women's empowerment and reproductive autonomy.

Methods

This study utilizes the Demographic and Health Survey (DHS) conducted in DRC in 2013-14.[13] The DHS conducts a stratified two-stage cluster sampling design, and regression analyses will be weighted and clustered to account for this complex survey design. The sample is limited to parous women who are married or in union. All analysis will be conducted in Stata 13. Table 1 provides descriptive statistics of this population.

Table 1: Married/In Union Parous Women in DRC, Descriptive Statistics

Women's Characteristics (N)%	N=9,559
Age	
15-19	609 (6.4)
20-24	2,015 (21.1)
25-29	2,608 (27.3)
30-34	1,877 (19.6)
35-39	1,451 (15.2)
40-44	789 (8.3)
45-49	211 (2.2)
Parity	
Children ever born - mean (sd)	4.3 (2.6)
Wealth Index	
Poorest	2,470 (25.8)
Poorer	2,223 (23.3)
Middle	2,021 (21.1)
Richer	1,623 (17.0)
Richest	1,222 (12.8)
Education	
No education	2,016 (21.1)
Primary	4,279 (44.8)
Secondary or higher	3,264 (34.1)
Residence	
Urban	2,810 (29.4)
Rural	6,749 (70.6)
Region	
Kinshasa	519 (5.4)
Bandundu	1,321 (13.8)
Bas Congo	418 (4.4)
Equateur	1,505 (15.7)
Kasai Occidental	898 (9.4)
Kasai Oriental	1,191 (12.5)
Katanga	1,183 (12.4)
Maniema	494 (5.2)

Nord Kivu	502 (5.3)
Orientale	1,001 (10.5)
Sud Kivu	527 (5.5)

2013-14 DRC DHS Women's Survey.

Tabulations do not account for survey weights or cluster design.

To measure women's empowerment, a factor analysis was conducted to construct factor scores that measure latent empowerment constructs using variables validated by Asaolu et al.[11] Relevant DHS variables were recoded to ordinal scales where a higher score indicates a more empowered status. A polychoric correlation matrix was constructed to assess correlations between these ordinal variables. A factor analysis was then conducted on this matrix through principal component factors using the *factormat* command in Stata 13. A promax oblique rotation of factors was conducted to allow for interdependence of empowerment factors, with uniqueness assessed, and eigenvalues visualized on a scree plot. Factor scoring was conducted using regression to create factor variables for use in multivariate analysis.

To assess the relationship between empowerment factors identified in the factor analysis, three logistic regression models were estimated. The three models looked at three different measures of reproductive autonomy as dependent variables: contraceptive use (ever use), unplanned pregnancy (measured by whether last child was wanted), and pregnancy termination. The main independent variables assessed were the empowerment factors created as described above, and models were adjusted for possible confounding using the following covariates which have been identified in the literature as being significantly related to the dependent variables: wealth, age, province, rurality, and parity. Adjusted odds ratios with 95% confidence intervals are presented for each of the models, and significant findings will be further explored through interaction effects.

Preliminary Results

For married women in DRC, several empowerment factors are significantly related to reproductive autonomy, but the direction of this relationship varies based on the type of empowerment measured. Women who are more empowered in the areas of attitudes toward violence (AOR 1.37, 95% CI 1.13-1.66) and legal status (AOR 1.28, 95% CI 1.10-1.49) are more likely to report that their last child was wanted. However, the direction of this relationship reverses in the empowerment dimensions of education (AOR 0.80, 95% CI 0.72-0.90), life course (AOR 0.85, 95% CI 0.79-0.92), and negotiating sex (AOR 0.70, 95% CI 0.59-0.84). Empowerment is also significantly related to contraceptive behavior. Women who are more empowered in the dimensions of education (AOR 1.54, 95% CI 1.33-1.77) and negotiating sex (AOR 1.87, 95% CI 1.58-2.20) are more likely to have ever used contraception (including both traditional and modern methods). The DHS also reports pregnancy loss as a combined variable for having experienced either an induced or spontaneous pregnancy termination; this analysis finds that empowerment is also significantly related to pregnancy termination. Women who are more empowered in the labor force participation (AOR 1.10, 95% CI 1.02-1.19) and education (AOR 1.23, 95% CI 1.11-1.37) dimensions are more likely to have had a terminated pregnancy. This relationship reverses for the household decision-making (AOR 0.84, 95% CI 0.74-0.96) and life course (AOR 0.79, 95% CI 0.71-0.87) dimensions, where women who demonstrate higher levels of these types of empowerment are at a lower risk for pregnancy termination.

Discussion

Previous studies have also found a positive relationship between intimate partner violence and contraceptive use,[6,14] and that women who are more educated are at higher risk for unplanned pregnancy.[15] The findings of this analysis confirm that the relationship between empowerment and the

achievement of reproductive goals is very complex, where increased empowerment may influence a woman's pregnancy intentions but may not be enough to enable her to achieve those intentions, possibly due to factors related to inconsistent access to reliable and effective contraception. For example, women who are more educated are less likely to have wanted their last pregnancy, more likely to have ever used any family planning method, and more likely to have ever had a terminated pregnancy. This may indicate that educated women are terminating unwanted pregnancies due to having attempted, and failed, to prevent pregnancy through contraception. Additionally, this study shows that not all types of empowerment have the same impact on women's health. Empowerment in the home and in domestic partnership may vary in importance, in terms of determining reproductive autonomy, compared to economic empowerment, and these influences are likely different between countries and cultures. While this cross-sectional study cannot assess temporality or causality, it contributes to current research on factors that may influence women's reproductive decisions and outcomes in this setting. Further assessment of these findings, in light of Kabeer's "agency" and "enabling resources" construct of women's empowerment, will enable a more multifaceted and nuanced analysis of the multidimensionality of empowerment in DRC. This study may then inform policy-making and program design in reproductive health and family planning, reduce contraceptive disparities, and support women's reproductive autonomy.

References

1. Sedgh G, Ashford LS, Hussain R. Unmet need for contraception in developing countries: Examining women's reasons for not using a method. New York, NY: Guttmacher Institute; 2016: https://www.guttmacher.org/report/unmet-need-for-contraception-in-developing-countries.
2. Kayembe P, Babazadeh S, Dikamba N, et al. Family Planning Supply Environment in Kinshasa, DRC: Survey Findings and Their Value in Advancing Family Planning Programming. *Global Health: Science and Practice.* 2015;3(4):630-645.
3. Kayembe PK, Fatuma AB, Mapatano MA, Mambu T. Prevalence and determinants of the use of modern contraceptive methods in Kinshasa, Democratic Republic of Congo. *Contraception.* 2006;74(5):400-406.
4. Muanda M, Gahungu Ndongo P, Taub LD, Bertrand JT. Barriers to Modern Contraceptive Use in Kinshasa, DRC. *PloS one.* 2016;11(12):1-13.
5. Muanda MF, Ndongo GP, Messina LJ, Bertrand JT. Barriers to modern contraceptive use in rural areas in DRC. *Culture, Health & Sexuality.* 2017:1-13.
6. Kidman R, Palermo T, Bertrand J. Intimate partner violence, modern contraceptive use and conflict in the Democratic Republic of the Congo. *Social science & medicine (1982).* 2015;133(1873-5347 (Electronic)):2-10.
7. Tiruneh FN, Chuang K-Y, Ntenda PAM, Chuang Y-C. Unwanted pregnancy, pregnancy loss, and other risk factors for intimate partner violence in the Democratic Republic of the Congo. *Women & Health.* 2017:1-18.
8. Sano Y, Antabe R, Atuoye KN, Braimah JA, Galaa SZ, Luginaah I. Married women's autonomy and post-delivery modern contraceptive use in the Democratic Republic of Congo. *BMC Women's Health.* 2018;18(1):49.
9. Kabeer N. Gender equality and women's empowerment: A critical analysis of the third millennium development goal 1. *Gender & Development.* 2005;13(1):13-24.
10. Kabeer N, McFadden P, Arnfred S, Dominguez E, Sadallaah S. *Discussing Women's Empowerment - Theory and Practice.* Sida;2002.
11. Asaolu I, Alaofe H, Gunn J, et al. Measuring women's empowerment in Sub-Saharan Africa: Exploratory and Confirmatory Factor Analyses of the Demographic and Health Surveys. *Frontiers in Psychology.* 2018;9.
12. Purdy L. Women's reproductive autonomy: medicalisation and beyond. *Journal of Medical Ethics.* 2006;32(5):287-291.
13. Congo Democratic Republic: Standard DHS. In: USAID, ed2013-14.
14. Alio AP, Em D, Nana PN, Duan J, Salihu HM. Intimate partner violence and contraception use among women in Sub-Saharan Africa. *International Journal of Gynecology and Obstetrics.* 2009;107(1879-3479 (Electronic)):35-38.
15. Dhakal S, Song JS, Shin DE, Lee TH, So AY, Nam EW. Unintended pregnancy and its correlates among currently pregnant women in the Kwango District, Democratic Republic of the Congo. *Reproductive Health.* 2016;13(74):1-7.