Ethnic minority status and family planning:
A mixed-method study in the context of ethnic conflicts of Ethiopia

1. Introduction

Ethnicity is one of the key contextual factors that have been shown to differentiate childbearing intentions, behaviors, and outcomes [1–3]. Several explanations have been put forward. As summarized by Murty & de Vos (1984) [4] in their study on ethnic differentials in contraceptive use in Sri Lanka, ethnic differences in fertility may arise from: differences in social positions (structural/socioeconomic hypothesis), different attitudes and values (cultural hypothesis), minority status itself (minority status hypothesis), and relative lack of access to family services (family services hypothesis.) These hypotheses are non-mutually exclusive, and are not easy to test because the different sources proposed tend to co-vary with each other. More often than not, ethnicity is invoked as a 'cultural' difference when group difference cannot be explained by other factors, without referring to socio-political contexts associated with ethnic difference.

In this study, we expand the notion of minority status hypothesis, and define ethnic minorities not by ethnic labels but by status. Applying this method requires a multi-ethnic context, where being ethnic minority can be differentiated from ethnicity per se (e.g., members of ethnicity A can be either an ethnic minority or majority depending on how the ethnicity A is represented differently across regions). Moreover, ethnic conflicts can act as a 'magnifying glass' for studying the impact of ethnicity on fertility behaviors. Studies have shown that ethnic conflicts may create a context characterized by lower uptake of family planning and higher fertility due to both structural barriers (e.g., low level of material resources and of gender equity) and ideational reasons (e.g., lower support to the ideas of family planning) especially among ethnic minority groups [5–7]. In this regard, Ethiopia provides a relevant context, for its multi-ethnicity, stark differences in majority ethnic groups across regions, and ongoing ethnic conflicts.

2. Background: Ethiopian context

In Ethiopia, an ethnic federal republic with more than eighty ethnic groups, the politics of ethnicity provides a critical angle for understanding the acceptance and resistance of marginalized ethnic groups against government initiatives, including family planning. During the war of conquest by the Ethiopian kingdom from the late nineteenth century, there was a significant decrease in the population of neighboring ethnic groups, including the Oromo [8,9]. The principle of the one-ethnicity-per-territory remapped ethno-geographic administrative boundaries in Ethiopia, which intensified ethnic conflicts and consolidated ethnic identities in multi-ethnic communities under newly launched regional governments since 1991 [10]. The ruling Ethiopia People's Revolutionary Democratic Front (EPRDF) appropriated ethnic politics to strengthen their legitimacy by ruling through ethnic elites, to implant a false sense of democratization in the form of ethnic representation, and to reify a wide spectrum of social problems into ethnic problems, which further deepened ethnic grievances among marginalized ethnic groups [11].

The political protests over the 2007 census results demonstrate the gravity of the ethnic demography in Ethiopia, where the population size of the ethnicity affects the political economic influence through the number of congressmen and the size of the regional government budget. Some nationalist movement

members mobilize conjectures of the ethnic demography as the political grounds for power-sharing and independence. For the Ethiopian developmental state whose legitimacy is based on the two-digit growth of the GDP per capita, it was vital to amplify this pivotal economic indicator by reducing the denominator, population, through family planning. Hence the political interest of an ethnic group to increase its population conflicts with the blueprint of the developmental state regime to augment GDP growth by curtailing population increase. Within this controversial context of ethnic demography, resistance to family planning was interpreted as anti-development and anti-government positions, which was closely monitored by public healthcare providers.

3. Objectives

This paper seeks to improve understanding of how experience as ethnic minorities might be related to family planning behaviors and attitudes as well as fertility. We use both qualitative and quantitative data from Ethiopia, to investigate (i) the barriers to family planning among ethnic minorities based on a case study from the Oromo people, and (ii) the magnitude of differences in family planning and fertility, between the ethnic minorities and majorities across the Ethiopian population based on the Ethiopia Demographic Health Surveys data. Our main hypothesis is ethnic minority status is related to lower family planning uptake and higher desired fertility. For the quantitative analysis, we test two sets of predictions: Among respondents belonging to ethnic minority groups, 1) family planning take up is lower and/or slower to increase, and 2) desired family size was higher especially in men, after statistically controlling for factors known to influence family planning behaviors and attitudes.

4. Method

4-1. Mixed-methods study design

We pursue a mixed-methods study of a triangulation design, where qualitative and quantitative data are collected non-sequentially and integrated to complement each other [12]. In our study, quantitative analysis builds on and expands an already finished fieldwork, by testing mechanisms hinted from the fieldwork across the broader population of Ethiopia. We are currently developing a method to optimally integrate qualitative and quantitative data.

4-2. Fieldwork with the Arsi Oromo people

Qualitative component of this study grows out of a long-term ethnographic research on a Korean government's global health project in rural Ethiopia. In 2010, a maternal health center was built as a part of a Korean family planning project in Iteya, a rural town in the Arsi zone, Oromia, a regional state predominantly inhabited by the Oromo people. From 2015 to 2017, participant observation was conducted to examine daily practices in this family planning clinic, including family planning counseling, dispensing birth control pills, contraceptive hormone injections, implanon insertions, village outreach campaigns and training programs for health extension workers. Based on rapport built over the course of daily interactions and numerous informal interviews, 40 semi-structured audio-taped in-depth interviews were conducted with female clients and their male partners as well as healthcare providers and bureaucrats associated with family planning programs.

4-3. Analysis of the Ethiopian Demographic Health Survey (EDHS)

For the preliminary analyses, we estimated logistic regression models with binomial error distribution for **contraceptive use**, a binary variable with 1 for women who are currently using any method and 0 for those not using any method. From all available EDHS data (2000, 2005, 2011, and 2016), we selected 56,850 women respondents who were not pregnant at the time of survey. To test predictions that not only average but also the rate of increase in contraceptive uptake is slower among respondents in ethnic minority status, we estimate the effects of **ethnic minority status** and **years of survey** and their interaction. We assess ethnic minority status, by first identifying one ethnic majority within each of 11 regions for each year of EDHS data, and then coding whether or not a respondent self-identified as belonging to the region-specific ethnic majority group. In this way, we make it clear that the unit of comparison is ethnic minority status but not ethnicity per se. Latter is a fluid concept that is difficult to define, as reflected in the varying numbers of ethnic categories recorded in EDHS over the years. In all analyses, we account for the factors known to affect women's contraceptive use in Sub-Saharan Africa: age (in years), highest education level (4 categories - no education, primary, secondary, and higher), number of children ever born, household income (wealth index of household quintile), and rural vs. urban residence.

For the preliminary analysis, we conducted model comparison between 3 nested models on contraceptive use: Model 1 with the above-mentioned variables except for the ethnic minority status variable, Model 2 with the variable added, and Model 3 with the interaction between the ethnic minority status and the years of survey added. Assuming that Model 1 is the most parsimonious among the 3 candidate models, difference of Akaike Information Criteria (AIC) more than 2 (which corresponds to the largest possible penalty for one added parameter) would indicate that any additional variables provide better explanation of the given data [13]. We used the R language for statistical analysis.

5. Preliminary findings

5-1. Fieldwork with the Arsi Oromo people

Ethnographic fieldwork among the Oromo people in Arsi suggested that historical experience of being a marginalized ethnic group in Ethiopia could reduce family planning uptake. Historical memories of mass death traumatized and instigated some Oromo males to have many children in order to become a bigger ethnicity [14]. Beginning in 1991, the current Ethiopian regime implemented long-term family planning measures at an unprecedented pace, using help from the clinical, educational, and outreach activities of global health projects, such as Korean family planning programs. However, minority ethnic groups question motives behind the government's family planning initiatives. They experience ethnic discrimination in every aspect of social life: personal humiliations, negative ethnic stereotypes, and restricted employment opportunities based on ethnicity and religion inscribed in their identification cards. Deepening economic injustices and state violence further worsened their mistrust of family planning campaigns. Under the fraught ethnic politics in Ethiopia, some secessionists described Ethiopian government's family planning programs as eugenics or genocide against minority ethnic groups. Despite the pronatalist claims under the ethnic politics, some women actively adopted implanon insertions for labor opportunities and to provide better education for their children, which were in constant conflict with religious teachings and reproductive rights of husbands under the patriarchal gender inequality [7].

5-2. Analysis of the Ethiopian Demographic Health Survey (EDHS)

During the period covered by the EDHS data (2000 to 2016), the proportion of non-pregnant women using any contraceptive method increased steadily from 9.3%, 13.0%, 19.4% to 22.7% on average. On average, 15.4% of those in ethnic minority status used contraceptive method, while 17.2% of those in ethnic majority status did. The lower uptake of contraceptives in ethnic minorities was present after accounting for the overall time trend and factors known to affect contraceptive use (Figure 1). AIC value dropped by 2 and 30.06 in the Models 2 and 3, respectively, compared to the Model 1, suggesting that the best-supported model was Model 3, where the role of not only ethnic minority status but also its interaction with time trend was considered. In this model, the predicted probability of contraceptive use for those in ethnic minority status was 13.75 [95% CI: 13.23, 14.24] %, which is about 23 [16, 30] % lower than those in non-minority status. This provided support for our first prediction. Somewhat in contrast to our second prediction, however, the probability of contraceptive use increased faster (2 [1, 3] % per year) among those in ethnic minority status.

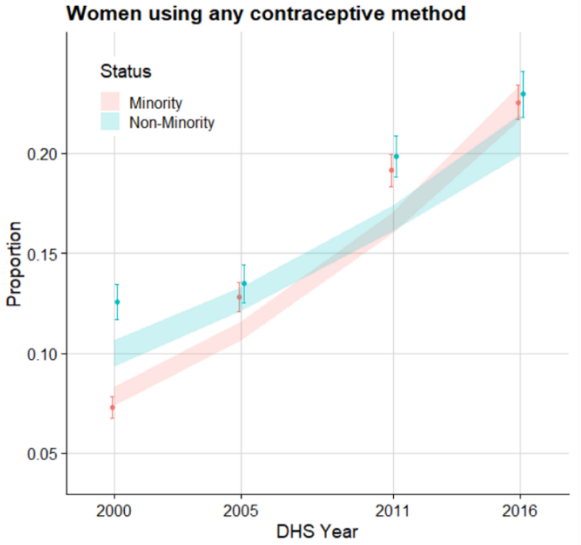

Figure 1. Proportion of Ethiopian women using any contraceptive method during 2000-2016. Observed measures (error bars) are overlaid with predicted measures from the Model 3 (ribbons), separately for ethnic minorities (coral color) versus non-minorities (cyan color).

Interestingly, the above-mentioned patterns persisted when we estimated the same Model 3 within each of the Tigray, Oromo, and Amhara people, three major ethnic groups in Ethiopia. That is, the impact of being ethnic minority on contraceptive use is not likely the reflection of ethnic differences, but rather the minority status per se. We conclude that the findings provide support for our first prediction, that being ethnic minority on average reduces the uptake of contraceptive methods, but not for our second prediction, that being ethnic minority slows down the time trend of increased contraceptive use. The latter finding was mostly driven by the rapid increase in contraceptive use among those in ethnic minorities during the years between 2011 and 2016 Ethiopia.

6. *Remaining works for the quantitative analysis*

Depending on regions, the degree of which one ethnic group outnumbers other groups differs: For example in 2011, out of the 11 regions, ethnic majority comprised over 80% in 5 regions, between 50-70% in 4 regions, between 20-40%in 2 regions. Because this difference may imply differences in the degree of minority 'intensity', we plan to incorporate the information in our future analyses. We will

further test differences in fertility preference, ideal number of children, and degree to which men disagree with the statement 'Contraception is a woman's business and a man should not worry'.

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