WOMEN'S EMPOWERMENT AND FAMILY PLANNING IN SUB-SAHARAN AFRICA: THE CASE OF ETHIOPIA, KENIA AND NIGERIA.

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Introduction and literature

Over the last two decades, women's empowerment has become a focus for development efforts worldwide and has been at the top of development priorities from many years. In 2000, 189 countries signed on to the eight Millennium Development Goals: "promoting gender equality and empowering women" is the third goal of the Millennium Development Goals. A number of studies, primarily focused on Asia, display that women's empowerment is associated with contraceptive use, lower fertility, and longer birth intervals.

Women empowerment determines the extent to which children gain access to education and healthcare, whether women can acquire contraceptive information and have the freedom to act on their fertility preferences, whether they are able to search for employment outside of the home (Dyson and Moore 1983; Mason and Smith 2003).

Yet not sufficiently is known about the association of women's empowerment with fertility desires and behavior in sub-Saharan African countries where overall fertility levels remain high (Upadhyay and Karasek 2010). In fact it is still unknown whether the same dimensions of empowerment that were developed with respect to other regions in the world are relevant in sub-Saharan Africa, where the gender environment is totally different than in other regions.

In this contribution, we intend to analyze the most recent and available Demographic and Health Survey data of three sub-Saharan countries, Ethiopia, Kenya and Nigeria aiming at understand, if any, the relationship between women's empowerment on one side and fertility control on the other.

Although there is still no complete agreement on the identification of the best indicators that can summarize female empowerment, there is, however, consensus that women's empowerment is a dynamic and multidimensional process of different dimensions: economic, socio-cultural, familial/interpersonal, legal, political and psychological. It is important to outline that the different dimensions may vary independently of one another: women having high levels of empowerment in one dimension, not always will also have high levels in other dimensions (Mason and Smith 2003).

The body of research on women's empowerment has conceptualized and defined this concept in many ways and used different terms, often interchangeably, including "autonomy," "status," and "agency" (that is, ―the ability to make choices and act upon them). Dimensions including (but not limited to) self-determination of movement, access to financial and non-financial resources, decision making autonomy, gender attitudes, freedom from fear and oppression, and equality in her relationship with her partner are perhaps important and distinct aspects of a woman's position in relation to men, other family members, and other women within her household (Upadhyay et al. 2014). For example, qualitative studies conducted in Ghana and India, showed that marriages having higher intimate-partner violence exhibit less family planning behavior, more unintended pregnancies, and higher unplanned fertility (Bawah et al. 1999; Wilson-Williams et al. 2008). Another result shows that in all sub-Saharan African countries (except Malawi), a minority of women (from 10 percent in Mali to 49 percent in Ghana) disagree with all the reasons justifying wife beating (Kishor and Subaiya 2008).

In our analysis, we start from the assumption that women's empowerment is a multidimensional concept, and we measure it by an index that takes into account four aspects: (i) socio-economic status of women; (ii) decision making in the family context; attitude toward (iii) psychological and physical violence and (iv) toward female genital cutting.

Women's empowerment and fertility behavior in sub-Saharan Africa

A broad body of research exists on women's empowerment and reproductive outcomes (Upadhyay and Karasek 2010). Evidence suggests that in developing countries women's empowerment is often associated to the decline of fertility, acting through diffusion of contraception. Many channels can lead to a link between women's empowerment and fertility. Some researchers have suggested that women's empowerment is a key pathway through which education influences fertility (Doepke and Tertilt 2018). Based on World Fertility Survey data, some researches reveal that education affects women's reproductive behavior by altering ideas about their opportunities.
The issues relating birth control are still of key importance: the 2012 London Summit on Family Planning bring improved attention to the importance of family planning as a means of reducing fertility and increasing the options accessible to women beyond reproduction (Carr et al., 2012).
Demographers and anthropologists have described the pace and nature of changing ideals of family size among many populations, highlighting the importance of women's education, better child survival, and family planning. As fertility has declined in other regions, in many countries of sub-Saharan Africa total fertility rates (TFRs) are among the highest in the world (Angeli and Salvini, 2018). Within the literature, considerable analysis is devoted to understanding how large family ideals are affected by structural indicators of gender equality such as women's relative educational attainment, employment status, age discordance within couples, and, more recently, attitudes toward women's decision making authority and tolerance of wife beating (or tolerance of intimate partner violence). A recent analysis in East Africa found that temporal fertility trends across DHS waves were associated with changes in women's educational attainment, and that a positive association existed between the proportion of women having no education and stalled fertility decline in Kenya**,** Tanzania, Uganda, and Zimbabwe (Locoh and Mouvagha-Sow, 2004). The effect of women's empowerment on the likelihood of spousal communication around preferred family size emerges in the study conducted by Hogan et al. (1999) on Ethiopia.
Moreover, in Nigerian areas of low and medium gender equity, measures of women's autonomy, (higher decision-making, education, women's higher financial contribution to the household in relation to her husband, and labor force participation) were positively associated with the desire to limit family dimension (Upadhyay et al. 2014).

Data and Methods

At the base of our paper, there are the most recent and available Demographic and Health Survey data of three sub-Saharan countries, Ethiopia, Kenia and Nigeria, respectively with 15683, 31079 and 38948 respondents. Nevertheless, only a part of women was interviewed in the different sections of questionnaires. In particular, in the table 1 we report the number of people that have answered ~~to~~ the questions concerning the different aspects of women empowerment. We have created the five variables starting from the following questions of the questionnaire and giving scores to the different answers, summing up the single scores:
Decision
Person who usually decides on respondent's health care
Person who usually decides on large household purchases
Person who usually decides on visits to family or relatives
Person who usually decides what to do with money husband earns
Beating
Beating justified if wife goes out without telling husband
Beating justified if wife neglects the children
Beating justified if wife argues with husband
Beating justified if wife refuses to have sex with husband
Beating justified if wife burns the food

Freedom
Husband/partner jealous if respondent talks with other men
Husband/partner accuses respondent of unfaithfulness
Husband/partner does not permit respondent to meet female friends
Husband/partner tries to limit respondent's contact with family
Husband/partner insists on knowing where respondent is
Moral violence
Ever been humiliated by husband/partner
Ever been threatened with harm by husband/partner
Ever been insulted or made to feel bad by husband/partner
Physical Violence
Ever been physically forced into unwanted sex by husband/partner
Ever been forced into other unwanted sexual acts by husband/partner
Ever had arm twisted or hair pulled by husband/partner
Experienced any less severe violence (D105A-C,J) by husband/partner
Experienced any severe violence (D105D-F) by husband/partner
Experienced any sexual violence (D105H-I,K) by husband/partner
Circumcision
Female circumcision: continue or be stopped

Table 1 – Respondents to the sections of the questionnaire on the different aspects of women's empowerment.

Country	N. of respondents	Sections	N. of respondents
Ethiopia 2016	15683	Decision	9768
		Beating	15683
		Freedom	4720
		Circumcision	7795
		Psychological violence	4720
		Physical violence	4720
Kenya 2014	31079	Decision	8901
		Beating	14734
		Freedom	4512
		Circumcision	14264
		Psychological violence	4514
		Physical violence	4506
Nigeria 2013	38948	Decision	27034
		Beating	38885
		Freedom	22208
		Circumcision	26025
		Psychological violence	22263
		Physical violence	22258

Source: Our elaboration on DHS datasets.

The method we use is the logistic regression, because the dependent variable is binary, with the aim to disentangle the relationship between women empowerment and the use of contraception.

Preliminary results

In these preliminary contribution we use Ethiopian data, showing in Table 2 the results of the logistic regression of Use (Use of contraception 0=no; 1=yes) as dependent variables, the variables that define women's empowerment as explicative variables, and age, number of children and level of education as control variables.

Table 2. Logistic regression: coefficients and odds ratios. Dependent variable Use of contraception. Ethiopia 2016.

	B	S.E.	Wald	gl	Sign.	Exp(B)
Decision	0,034	0,011	8,764	1	0,003	1,035
Beating	-0,053	0,017	9,368	1	0,002	0,949
Freedom	-0,094	0,030	9,683	1	0,002	0,910
Circumcision	0,942	0,078	146,704	1	0,000	2,565
Psychological violence	0,103	0,058	3,171	1	0,075	1,108
Physical violence	0,212	0,060	12,423	1	0,000	1,237
Respondent's current age	0,028	0,006	22,594	1	0,000	1,029
Highest educational level	0,488	0,050	94,244	1	0,000	1,629
Total children ever born	-0,082	0,019	19,646	1	0,000	0,921
Constant	-1,729	0,268	41,497	1	0,000	0,177

Source: Our elaboration on DHS data, Ethiopia, 2016.

Note: Decision increases with the increasing of female decision power. Beating decreases with the increase of the female approval of women. Freedom increases with diminishing of control of the husband/partner. Circumcision =0 if woman says that this practice must continue and =1 if she approves the elimination of the cutting practice. Psychological and physical violence increases with the increasing / decreasing respectively with psychological and physical abuse.

Net of the control variables including education another proxy of women's empowerment (all confirming hypothesis), results show the relationships between use of contraception and female empowerment. Women using contraceptive methods are positively associated with a larger female decision power and willingness to eliminate the practice of circumcision, while the link between the opinion on the beatings by the husband is negative, that is the more the wife approves her husband's punishment, the lower is the propensity to use contraception. The lack of psychological violence presents a positive relationship with use of contraception, confirming – as the above cited variables – the hypothesis that female empowerment is connected also with family planning, that is with the willingness to have/not to have children. Nevertheless, physical violence has a positive coefficient, meaning that abused women use contraceptives in a larger extent, an unexpected result. In addition, this is the case of freedom: the larger is the control of man on his wife, the larger is the proportion of women that do not use contraception.

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