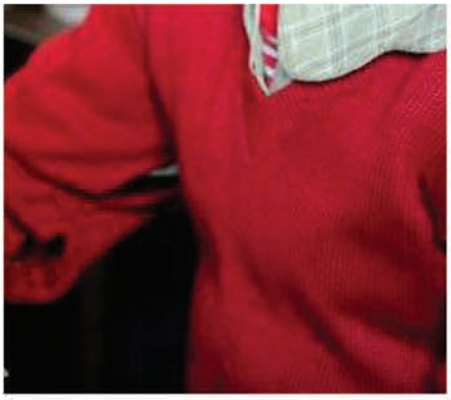
Women's Empowerment as a Determinant of Contraceptive Use in Ethiopia





Further Analysis of the 2000, 2005 and 2011
Demographic and Health Surveys

August 2013

Women's Empowerment as a Determinant of Contraceptive Use in Ethiopia

Further Analysis of the 2011 Ethiopia Demographic and Health Survey

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This report presents women's empowerment as a determinant of contraceptive use in Ethiopia based on data from the 2011 Ethiopia Demographic and Health Survey (EDHS). USAID and UNICEF coordinated the further analysis, and ICF International provided technical assistance. Irish Aid, USAID, and MoFED provided the funding, the latter through the evaluation and research capacity building programme supported by UNICEF. The opinions and arguments herein are those of the authors and do not necessarily reflect the views of the Government of Ethiopia, USAID, UNICEF, or Irish Aid. The Ethiopia Demographic and Health Surveys are part of a worldwide programme that collects data on maternal and child health, nutrition, HIV/AIDS, fertility, family planning, and women's empowerment.

Additional information about the MEASURE DHS project can be obtained from:

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Additional information about the 2000, 2005, and 2011 EDHS can be obtained from:
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ABSTRACT

Background: Although females constitute almost half of the population of the country, their participation in their own matters and benefit from social, economic and political spheres is low. Giving due attention to improving the rights, status and access to resources of women is a highly worthy goal and is imperative to improve the reproductive health of Ethiopian women. Therefore, this study attempts to fill the gap by exploring major gender-related factors that can potentially influence the use of contraception among women who are married or living with a partner.

Methods: We used data from the 2011 Ethiopia Demographic and Health Survey (EDHS). Women numbering 10,204 who were currently married or living with a partner were included in the analysis. The outcome of interest in this analysis was use of any (modern or traditional) contraceptive method. Factor analysis was employed to determine theoretically meaningful dimensions of empowerment from fifteen items. The corresponding empowerment factor scores, socio-demographic characteristics, and gender-related variables were used as independent variables for further analysis in a multivariate model.

Results: In the multivariate model that included the indicators of women's empowerment, dimensions representing women's attitude towards domestic violence, women's involvement in household decision making, and exposure to sources of knowledge were positively associated with contraceptive use. For instance, the indicator for women's attitude towards domestic violence, that is, women who reject the notion that wife beating is justified, was associated with a 20% increase in the likelihood of current contraceptive use. Contrary to expectations, the factor representing ownership of assets was negatively associated with contraceptive use. When fitted with indicators of women's empowerment most of the socio-economic and other gender-related variables were significantly associated with contraceptive use, except for the education level of the respondent.

Conclusion: The findings indicated that all the women's empowerment indicators used in this analysis were significantly associated with contraceptive use. Women empowerment indicators from the perspective of decision making power, attitude towards domestic violence, and exposure to sources of knowledge were positively associated with current contraceptive use. We concluded that women's empowerment indicators were more important determinants of contraceptive use than education.

1. INTRODUCTION

Women's empowerment is defined by Kabeer as, "A process by which those who have been denied the ability to make a strategic life choices acquire such ability" (Kabeer, 1999). It is said to be multi-dimensional, existing in the economic, socio-cultural, familial/interpersonal, legal, political and psychological realms (Malhotra, Schuler and Boender, 2002). Substantial research has examined the relationship between women's empowerment and their reproductive health. Research generally finds that women's empowerment is associated with contraceptive use. Some scholars propose that women's empowerment increases with education and economic status and thereby influences fertility (Upadhyay, 2009; Kabeer, 1999; Woldemicael, 2009). In most sub-Saharan African countries, the prevalence of contraceptive use is low and unwanted pregnancies common (Upadhyay, 2009).

In Ethiopia, women's participation in their own matters and women's benefit from social, economic and political spheres is low. Traditional, social and economic values constrain the rights of women and their opportunities to direct their own lives or participate in and contribute to community and national development (Bogalech and Mengistu, 2007). Gender imbalances exist in the division of labour, access to resources, distribution of income, and decision-making. In the history of Ethiopia, women are primarily tasked with food production and other household level activities. Rights to land, credit, and other productive resources are difficult for women to attain. In 1993, the government of the Federal Democratic Republic of Ethiopia (FDRE) issued the National Ethiopian Policy on Women and granted equal rights for women under the constitution. Moreover, a new family law was recently instituted focusing on the advancement of women, affirmative action, and provision for higher education, employment and promotion in the workplace (FDRE, 1993).

The 2011 Ethiopia Demographic and Health Survey (EDHS) collected data related to women's empowerment and contraceptive use, which provides an excellent opportunity to study this relationship in the Ethiopian context. The various dimensions of empowerment –economic, socio-cultural, familial/interpersonal, legal, political and psychological – may each influence the reproductive health of women. Despite high fertility and a high unmet need for family planning the country contraceptive prevalence rate for married women is very low (28.6%). This study will explore the relationship between major dimensions of women's empowerment and their use of contraception.

2. LITERATURE REVIEW

Our review of related literature showed that women's low status and disempowerment is highly associated with poor health outcomes. A study from Nepal suggests that women's empowerment and spousal violence appear to have important implications for the health of women and their children (Tuladhar et al. 2013). Another finding from research in Nigeria showed that women who were empowered in the economic, social, and political dimensions had improved reproductive health outcomes; empowered women had fewer children and used different methods of reproductive health (Kritz et al. 2000). In Ethiopia, research examining the net effect of women's autonomy on their health seeking behaviour showed that women's autonomy was significantly positively associated with their use of maternal health services, even after adjusting for other individual and household variables (Woldemicael and Tenkorang 2010).

Although much of the literature examined the relationship between women's autonomy and reproductive health outcomes, there is limited research exploring this relationship specifically in relation to contraceptive use in Ethiopia. In this regard, the results of a study conducted in Eritrea found that women's final say in decisions regarding day-to-day household purchases was significantly associated with wanting no more children, having a small ideal family size, and even using modern contraception. The study found that socio demographic factors such as employment and economic status affect women's reproductive preferences directly, and also indirectly by increasing women's autonomy, which in turn influences reproductive preferences (Woldemicael 2009). The study depicted the fact that the causal pathways of women's empowerment and reproductive health outcomes were bidirectional.

According to a study conducted in Togo, women who participated in income generating activities were more likely to communicate about family planning and to use contraception with their husband than women who did not (Gage 1995). On the other hand, a study conducted in Zimbabwe showed women's increased household decision-making was not associated with contraceptive use but was associated with lower fertility (Hindin 2000). A qualitative study from Indonesia found that women's empowerment from the perspective of awareness and access to information was found to be important determinant of contraceptive use. According to the findings, although men were regarded as the head of the family, women in the study areas were the major decision makers with regard to reproductive matters. Their decisions covered not only the use of a particular family planning method but also the number of children they would have (Rina, 2004). Most of the literature reviewed indicated that women's empowerment was associated with improved health outcomes.

3. DATA AND METHODS

3.1. Data Sources

We used data from 2011Ethiopia Demographic and Health Survey (EDHS 2011) women's questionnaire. The analysis is specific to 10,204 women of reproductive age (15-49 years) who were currently married or living with a partner (hereafter, referred to as 'currently married'). EDHS data collection took place from December 2010 to June 2011. Details relevant to the complex sampling design are available in the EDHS Final Report (EDHS 2011).

3.2. Measures

The dependent variable, women's current contraceptive use, was a dichotomous variable indicating respondents' use of any method (modern or traditional) of contraception at the time of the survey. Independent variables included a number of empowerment and gender-related variables. Women's empowerment measures were derived from a factor analysis conducted with fifteen survey questions representative of different dimensions of empowerment. These measures include five questions related to women's acceptance of domestic violence in the data. Women were asked their opinion about whether a husband is justified in hitting or beating his wife if she; goes out without telling her husband, neglects the children, argues with her husband, refuses to have sex, or burns the food. We divided respondents into those who said that the reason is not justified (code 1) — indicating a higher level of empowerment—and those who said the reason is justified (code 0). Women were also asked if they were aware of a law in Ethiopia to prevent partner violence and whether or not they owned a house or land. Women's awareness of the law and women's alone and/or joint ownership of a house or land were all coded 1 indicating a higher level of empowerment. In the data, there are four variables measuring women's role in household decision making: The wife's participation in her health care, major household purchases, visits to family and relatives, how her husband's earnings are used. For the factor analysis, we grouped respondents into two categories, that is, those who reported having any say (alone or jointly) in household decisions (coded 1) —indicating a higher level of empowerment— and those who reported that their husband/another person made the decisions (code 0). Finally, women were asked the highest level of education they had completed.

Table 1 shows the coding and distribution of variables used to construct women empowerment indicators. A factor analysis was conducted using each of these measures, and the corresponding factor scores for the resulting dimensions were used in the multivariate model. Other gender-related indicators likely to impact women's contraceptive use included women's age at first sex, age at first cohabitation, and ideal number of children. Note, approximately 10% of responses on ideal family size are non-numeric (God/Allah's will and other non-numeric responses). Following, Upadhyay and Karasek (2012) nonnumeric responses were recoded to the mean value.

Table 1: Distribution of indicators of women's status and coding scheme, Ethiopia 2011

	%	%	Unweighted Number of Cases
Wife beating is justified if wife …	No	Yes	
Goes out without telling husband	49.8	50.2	10,136
Neglects the children	57.1	42.9	10,138
Argues with husband	51.1	48.9	10,117
Refuses to have sex	45.4	54.6	10,051
Burns the food	53.4	46.6	10,135
Knowledge of the law that prevents a husband from beating his wife	53.0	47.0	10,187
Owns house alone or jointly	18.8	81.2	10,192
Owns land alone or jointly	29.9	70.1	10,190
Respondent involved in decisions (alone or jointly) about …	Alone/Jointly	Husband/Other	
Her health care	74.6	25.4	10,169
Major household purchases	66.3	33.7	10,177
Visits to family and relatives	78.0	22.0	10,175
How her husband's earnings are used	72.9	27.1	9,980
Respondent's average years of education (mean ± SD)		1.84 ±3.5	10,204
Frequency of reading newspaper or magazine	Yes		10,193
Not at all	88.9%		
Less than once a week	8.8%		
At least once a week	2.3%		
Frequency of watching television			10,193
Not at all	62.1%		
Less than once a week	25.9%		
At least once a week	12.0%		

Finally, in the multivariate analysis, the four indicators of women empowerment were modelled as continuous variables. In the model, we also controlled for a number of socio-demographic characteristics which the literature indicates as likely to influence women's status and their reproductive behaviour, including respondent's age, employment status, level of education, inter-spousal education difference, and wealth index.

3.3. Data Analyses

We conducted analyses in three phases. In the first phase, respondents' characteristics were described and the distribution of the dependent and independent variables were explored.

Factor Analysis

We employed a factor analysis to uncover the underlying structure of the observable data from the survey responses. Since there is no prior theory on the structure of these responses, we assumed that any individual indicator may be associated with any factor. Therefore, the correlation coefficients between the factor and original variable (factor loadings) were used to understand the structure of latent factors in the model. In the analysis, the Varimax technique was used to maximize the variance and minimize the correlation among different factors. The Varimax method of rotation also facilitates the interpretation of factor analysis results since it reduces the possibility of loadings of the same variable on different factors.

Multivariate Analysis

To examine the effects of women's empowerment on women's contraceptive use, we fitted a series of logistic regression models. In the first model, the gender-related and socio-demographic characteristics of the respondents were included. In the second model, the empowerment indicators were fitted onto contraceptive use in addition to these other independent variables. We fitted the models sequentially to assess the relative importance of empowerment indicators in explaining contraceptive use. The likelihood-ratio test was used to check the overall fit of the models and compare both models. Odds ratio and 95% confidence intervals (CIs) were calculated for the final model. All analyses were conducted in SPSS version 19.

4. RESULTS

4.1. Basic Characteristics of Respondents

A description of the characteristics of currently married women used in this analysis is presented in Table 2. Approximately one-third (29%) of women were using a method of contraceptive, 18% were urban and 36% of women were currently working. The average age of currently married women in the study was 30.7 years and the average age for co-habitation was 16.4 (SD[1]=3.8) years. The mean number of living children and ideal number children were 3.4 (SD=2.4) and 4.9 (SD=3.0), respectively. About two-thirds of currently married women had no formal education and only 7% had secondary and higher level of education. Forty-eight per cent of currently married women had the same level of education as their partners and 12% had more education than their partners.

Table 2: Socio-demographic characteristics of currently married women, Ethiopia 2011

Variables	Percent	Unweighted Number of Cases
Dependent Variable		
Currently using a contraceptive	28.6%	10,204
Independent Variables		
Place of residence		10,204
Urban	17.9%	
Rural	82.1%	
Respondent's education		10,204
No education	65.5%	
Primary	27.8%	
Secondary	6.7%	
Husband's education		10,089
No education	49.2%	
Primary	39.8%	
Secondary	11.0%	
Inter-spousal education difference		10,083
Wife and Husband have same level of education	47.9%	
Husband has MORE education	39.7%	
Wife has MORE education	12.4%	
Respondent currently working - Yes	35.8%	10,190
Current age (Mean ± SD)	30.7 ± 8.4	10,204
Age at first cohabitation (Mean ± SD)	16.4 ± 3.8	10,204
Ideal number of children (Mean ± SD)	4.9 ± 2.8	10,198

SD = Standard deviation

[1] Standard deviation

4.2. Current Contraceptive Use and Measures of Empowerment

Table 3 presents the distribution of contraceptive use by measures of women's empowerment. With regard to acceptance of domestic violence, the proportion of contraceptive users among those who said that wife beating is not justified is higher compared to the proportion of contraceptive users who said wife beating is justified. For instance, 35% of currently married women who said wife beating is not justified if she goes out without telling her husband used contraceptive methods compared to 22% who said wife beating is justified if she goes out without telling husband. Similarly, contraceptive use among currently married women who reported that they were involved in decision making alone or jointly with their partner was higher than those who were not involved in decision making. For instance, 32% of those who were involved in decision making about their own health care used a contraceptive method compared to 20% of those who were not involved in decision making regarding their own health care.

The proportion of contraceptive use was higher for women with more education, knowledge of the law against domestic violence/wife beating, frequent readers of newspapers, those who watched television frequently, and women from wealthier households. However, contraceptive use was lower for currently married women who reported that they own a home or land alone or jointly with their partner compared to those who do not own a home or land (see Table 3).

Table 3 Percent of current use of contraceptive methods by women's autonomy and other socio-economic characteristics

	%	%
Wife beating is justified if wife …	No	Yes
goes out without telling husband	35.1	22.1
neglects the children	35.8	23.4
argues with husband	34.6	23.0
refuses to have sex	35.2	20.8
burns the food	36.6	21.7
Knowledge of law against wife beating	22.8	35.2
Owns house alone or jointly	42.2	25.5
Owns land alone or jointly	40.2	23.6
Respondent involved in decisions (alone or jointly) about …	Alone/Jointly	Husband/Other
her health care	31.8	19.5
major household purchases	32.1	21.7
visits to family and relatives	30.9	20.6
how her husband's earnings are used	31.5	21.2
Frequency of reading a newspaper		
Not at all		25.5
Less than once a week		51.0
At least once a week		60.3
Frequency of watching TV		
Not at all		22.4
Less than once a week		33.4
At least once a week		50.8
Inter-spousal education difference		
Same level of education		22.4
Husband has MORE education		33.3
Wife has MORE education		37.7
Respondent's education level		
No education		22.17
Primary		35.69
Secondary and higher		62.17
Wealth Index		
Poor/Poorest (Bottom 40%)		17.8
Middle		24.3
Rich/Richest (Top 40%)		42.2

4.3. Factor Analysis

Four factors measuring women empowerment were extracted from the fifteen variables in the factor analysis and these factors accounted for 61% of total variance explained. The majority of the variables used in the factor analysis have high loadings (in most cases greater than 0.6), confirming that the rotated factors reasonably represent the original variables. The component matrix and factor loadings are presented in table 4. We obtained factor scores for each respondent on the four factors extracted from the fifteen variables and these were used as the key independent variables in the final multivariate model. We named the four factors representing women's empowerment indicators as follows:

Acceptance of subordinate gender norms –women's attitudes towards domestic violence*:*

The five items measuring women's acceptance of domestic violence in different circumstances loaded heavily on this factor. These variables include whether wife beating is justified if the wife; goes out without telling the husband (0.771), neglects the children (0.797), argues with the husband (0.800), refuses sex (0.755), and burns the food (0.758).

Household decision making*:*

Measures of the degree of control a woman had over household decisions loaded on this factor, specifically, women's decision making role in her health care (0.757), visits to her family or relatives (0.631), major household purchases (0.758), and use of her husband's earnings (0.753).

Knowledge exposure:

Measures assessing woman's awareness, educational attainment, and exposure to media loaded on this factor: knowledge of laws against domestic violence (0.426), respondent's educational attainment (0.788), frequency of reading newspapers (0.791) and watching television (0.667).

Ownership of assets:

Measures of woman's ownership of a house (0.831) and of land (0.826) loaded on this factor. Although this factor does not permit full exploration of women's economic status, it can provide a good indication of women's economic empowerment and financial resources.

Table 4: Factor loadings based on factor analysis with Varimax rotation for 15 items measuring aspects of women's empowerment, Ethiopia 2011

		Attitudes towards domestic violence	Household decision making	Knowledge exposure	Ownership of assets
Wife beating is justified if wife…:	0-Yes\Don't know, 1-No				
goes out without telling husband		.771			
neglects children		.797			
argues with husband		.800			
refuses to have sex		.758			
burns food		.753			
Who usually makes decisions about…:	0-Someone else 1-Husband/ Partner alone 2- Respondent and Other Person 3- Respondent and husband/Partner 4-Respondent alone				
respondent's health care			.780		
major household purchases			.786		
visits to family or relatives			.675		
the use of husband's earnings			.748		
Knowledge of law against domestic violence	0-Yes, 1-No			.426	
Respondent's education in single years				.788	
Frequency of reading newspaper	0-Not at all 1-Less than once a week 2-At least once a week			.791	
Frequency of watching TV				.667	
Owns a house alone or jointly	0-Does not own 1-Alone only 2-Jointly only 3-Both alone and jointly				.831
Owns land alone or jointly					.826

4.4 Multivariate Analysis of Women's Empowerment Indicators on Current Contraceptive Use

Two models were fitted to examine the effects of women's empowerment on contraceptive use. Table 5 presents the estimates (coefficient), adjusted odds ratios (AOR), and 95% Confidence Intervals (CI) of the two models. In the first model, socio-economic and gender-related indicators were entered and in the second model, these control measures were entered with women's empowerment factor scores to assess their net effect on women's current use of contraception.

In the first model, most of the socio-economic and gender-related controls included in the analysis were significantly associated with contraceptive use. Women's age was not associated with contraceptive use whereas household wealth, respondent's education, inter-spousal education difference, and respondent's current employment status were all found to have a significant positive association on contraceptive use. On the other hand, age at cohabitation, ideal number of children, and place of residence were significantly negatively associated with current contraceptive use. The odds of contraceptive use for women from middle or higher (top 40%) wealth quintiles were 1.8 and 2.5 times higher, respectively, than those from the poor/poorest (bottom 40%) wealth quintiles. The likelihood of contraceptive use increases with respondent's education level, AOR=1.4; 95% CI = (1.19, 1.57) and AOR=1.9; 95% CI = (1.56, 2.33) for primary and, secondary and higher level of education, respectively. In addition, women who had more education than their partners (AOR = 1.4; 95% CI = (1.21, 1.55)) and women whose partners are more educated than themselves (AOR = 1.3; 95% CI = (1.07, 1.54)) were significantly more likely to use contraception than women who have the same level of education as their partners. The likelihood of contraceptive use was almost 40% greater for women who were currently working. On the contrary, women from rural areas were less likely to use contraceptives than their urban counterparts (AOR=0.58; 95% CI = (.50, .66)). Finally, the likelihood of contraceptive use declined with an increasing ideal number of children and an increasing age at first cohabitation.

In the second model, all of the empowerment indicators were significantly associated with women's current contraceptive use. The factors representing women's attitude towards domestic violence, women's involvement in household decision making, and exposure to sources of knowledge were positively associated with contraceptive use. For instance, the indicator for women's attitude towards domestic violence, that is, women who reject the notion that wife beating is justified, —was associated with a 20% increase in the likelihood of current contraceptive use. Similarly, women's involvement in household decisions was associated with a 28% increase in the likelihood of contraceptive use. Contrary to expectations, the factor representing ownership of assets was negatively associated with contraceptive use (AOR=0.86; 95% CI = (.86, .96)). In this model, most of the socio-economic and other gender-related variables remained significantly associated with contraceptive use in the presence of empowerment indicators. Only respondents' educational attainment was not significantly associated with contraceptive use when fitted in the presence of women's empowerment indicators.

Table 5: Logistic regression analyses assessing the association between socio-demographic and women empowerment indicators and current contraceptive use

	Model 1			Model 2		
	Coefficient (β)	AOR	95% Confidence Interval	Coefficient (β)	AOR	95% Confidence Interval
Respondent's current age	-.006	.99	(.99, 1.00)	-.008*	.99	(.98,1.00)
Respondent's age at first cohabitation	-.033**	.97**	(.95, .98)	-.036**	.96	(.95,.98)
Respondent's ideal number of children	-.110**	.90**	(.88, .91)	-.099**	.91	(.89,.92)
Respondent currently employed (ref: Not employed)	.310**	1.36**	(1.23, 1.52)	.267**	1.31	(1.17,1.45)
Respondent can refuse to have sex (Ref: No)	.355**	1.43**	(1.28, 1.59)	.249**	1.28	(1.15,1.43)
Respondent's education level (ref: No education)						
Primary	.312**	1.37**	(1.19, 1.57)	.042	1.04	(.89,1.22)
Secondary and higher	.646**	1.91**	(1.56, 2.33)	-.112	.89	(.68,1.18)
Inter-spousal education difference (ref: Wife and husband have same level of education)						
Wife has MORE education	.312**	1.37**	(1.21, 1.55)	.329**	1.39	(1.23,1.57)
Husband has MORE education	.250**	1.28**	(1.07, 1.54)	.262**	1.30	(1.08,1.56)
Wealth index (ref: poor/ poorest (bottom 40%))						
Middle	.565**	1.76**	(1.50, 2.06)	.539**	1.71	(1.46,2.01)
Rich/Richest (Top 40%)	.913**	2.49**	(2.17, 2.87)	.808**	2.24	(1.94,2.59)
Rural residence (ref: urban)	-.552**	.58**	(.50, .66)	-.311**	.73	(.62,.86)
Women's empowerment indicator						
Attitudes towards domestic violence				.184**	1.20	(1.14,1.27)
Household decision making				.230**	1.26	(1.19,1.33)
Knowledge exposure				.295**	1.34	(1.24,1.45)
Ownership of assets				-.095**	.91	(.86,.96)

Significance level: * $p < .05$; ** $p < .01$

AOR = Adjusted Odds Ratio

5. DISCUSSION

The study employed a nationally representative data set to examine the relationship between women's empowerment and their contraceptive use in Ethiopia. The study conceptualized women's empowerment as multidimensional and used a factor analysis to outline these dimensions. Furthermore, the analysis explored the relationship between each of these dimensions and contraceptive use. We found each dimension of women's empowerment and many of the socio-economic and gender-related control measures were significantly associated with use of contraceptives. Dimensions of women's empowerment representing attitudes towards domestic violence, household decision making and women's knowledge and awareness had a positive association with contraceptive use. These findings were consistent with the previous studies (Gwako 1997; Morgan and Niraula 1995; Woldemicael 2009). Surprisingly, we found ownership of assets was negatively associated with contraceptive use. This may be because this empowerment indicator is not exhaustive enough to sufficiently determine this dimension of women empowerment. Another important finding of the analysis was that women's education was not significantly associated with contraceptive use when fitted with the empowerment indicators. This is in contrast with the literature since educational attainment is often cited as a determinant of contraceptive use (Kritz, Makinwa and Gurak, 2000). Our findings further revealed those woman's current working status, inter-spousal education difference and socio-economic status as measured by wealth index were also positively associated with contraceptive use when fitted with empowerment indicators.

Finally, our study has limitations with respect to construction of universally accepted women empowerment indicators based on the available data from the DHS. Much of the literature on women's empowerment highlights the fact that it's a multidimensional concept and is therefore difficult to get universally accepted objective measures. It is also likely that conceptualization of women's empowerment is dependent on the cultural context and societal norms under which it operates (Upadhyay, 2009; Kishor and Subaiya 2008; Upadhyay and Karasek, 2010). Despite the difficulty in developing consistent and representative indicators, several studies have tried to measure different dimensions of empowerment. In our analysis we constructed a quantitative measure for different dimensions of women empowerment using a factor analysis; nevertheless, it is not an exhaustive representation of a complex subject.

6. CONCLUSION AND RECOMMENDATIONS

The results from our analysis demonstrated that dimensions of women's empowerment are associated with their contraceptive use in Ethiopia and some dimensions, including household decision making and general knowledge and awareness, are positively associated with empowerment. Findings indicated that all the women's empowerment indicators used in this analysis were significantly associated with contraceptive use. We conclude that women's empowerment is an important determinant of contraceptive use. Thus, we recommend that women's empowerment be integrated into family planning programming in Ethiopia. Finally, the questions included in the current EDHS are not exhaustive in explaining the various dimensions of women empowerment indicators, so we recommend additional qualitative research be conducted to gain further understanding on this subject.

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APPENDIX

Table A1: The communalities (percentages of variations explained) by each of the indicators of Women's Empowerment under the Principal Component Analysis

Communalities		
	Initial	Extraction
Goes out without telling husband	1.000	.608
Neglects the children	1.000	.650
Argues with husband	1.000	.658
Refuses to have sex	1.000	.602
Burns food	1.000	.609
Knowledge of law against domestic violence	1.000	.332
Respondent's education attainment	1.000	.731
Frequency of reading news paper	1.000	.676
Frequency of watching TV	1.000	.454
Decides on health care	1.000	.621
Decides on large household purchases	1.000	.631
Decides on family visits	1.000	.469
Decide on husbands earning	1.000	.568
Owns house alone or jointly	1.000	.729
Owns land alone or jointly	1.000	.733
Extraction Method: Principal Component Analysis.		

Table A2: The percentage of total variations (factor loadings) explained by each factor under the Varimax extraction method

Component	Initial Eigen values			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.11	27.43	27.43	4.11	27.43	27.43	3.18	21.22	21.22
2	2.04	13.57	41.00	2.04	13.57	41.00	2.30	15.33	36.55
3	1.79	11.91	52.91	1.79	11.91	52.91	2.01	13.37	49.93
4	1.14	7.57	60.48	1.14	7.57	60.48	1.58	10.55	60.48
5	.86	5.72	66.20						
6	.73	4.90	71.10						
7	.70	4.66	75.76						
8	.57	3.83	79.58						
9	.53	3.56	83.15						
10	.50	3.32	86.46						
11	.47	3.13	89.59						
12	.46	3.06	92.65						
13	.42	2.83	95.48						
14	.36	2.40	97.88						
15	.32	2.12	100.00						

This report presents women's empowerment as a determinant of contraceptive use in Ethiopia based on data from the 2011 Ethiopia Demographic and Health Survey (EDHS). USAID, Irish Aid, ICF International, and MoFED provided support for undertaking the study, the latter through the evaluation and research capacity building programme supported by UNICEF. The Ethiopia Demographic and Health Surveys are part of a worldwide programme that collects data on maternal and child health, nutrition, HIV/AIDS, fertility, family planning, and women's empowerment.