Can Women's Empowerment Accelerate Fertility Decline in Angola

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Abstract

Women's empowerment has been associated with lower fertility. Angola, a country in middle Africa has a TFR of 6.2. The purpose of this paper is to examine whether women's empowerment in Angola is associated with fertility preferences. More specifically, we assess which dimensions of empowerment (e.g socio-cultural, control over sexual and reproductive health, and decision making) influence fertility preferences; and if so, do fertility preferences differ by age. Our hypothesis is that empowered women have preferences for smaller families; and that empowerment influence on fertility preferences is more critical for younger women. **We use data from Angola DHS 2015-16 and will redo the analysis with a more recent DH 2023 that will be available in October 2024**. Current results show that only socio-cultural dimensions of empowerment are associated with the desire to have no more children and only among the young (15-34 years of age), even when adjusting for other socio-demographic and reproductive factors. We will assess with more recent data if the results are the same and if not, what has contributed to the changes as data will be 7 years apart.

Introduction

Gender equality and women's empowerment is recognized as key achieving each of the 17 Sustainable Development Goals (UN Women n.d.). An entire field of research dedicated to measuring and capturing women's empowerment as arisen, since Naila Kabeer's seminal work which defined women's empowerment as the process by which those who have been denied the ability make strategy life choices are able to increase their self-efficacy, make life-improving decisions, and gain control over resources (Kabeer 1999). For women to be empowered, they must have key resources, including education and health, access to financial opportunities and employment, as well as autonomy and control to achieve their self-determined goals (Kabeer 2005; Ewerling et al. 2017). Household decision-making has most commonly been used as a proxy for empowerment (Upadhyay et al. 2014), but more recently, women's status has been explored more in depth with other measures in Demographic Health Surveys (DHS). Using DHS data from currently partnered women in 34 African countries, the Survey-based Women's Empowerment (SWPER) index identified three dimensions of empowerment including social

independence, decision making and attitude to violence that had a moderate to high correlation with the Gender Development Index (Ewerling et al. 2017). Social independence was associated with higher coverage of maternal and child interventions; attitude to violence and decision making were more consistently associated with the use of modern contraception.

Increasing women's empowerment has also been associated with lower fertility levels. A study conducted in Timor-Leste found that exposures that indicate women's empowerment in DHS, including the employment status of women, house and land ownership, ownership of the mobile phone, and independent bank account status, contraceptive use, and the attitude of women towards negotiating sexual relations were significantly associated with fertility preferences (Samad et al. 2022). In Mozambique, researchers used a principal component analysis with 2015 DHS data to identify three domains of empowerment: beliefs about violence against women, decision making, and control over sexuality and safe sex (Castro Lopes et al. 2021). The study found that each domain had a different effect over fertility and contraceptive outcomes, while also establishing the key role of control over sexuality and safe sex domain for improving women's decision-making related to fertility and contraceptive practices.

The purpose of this paper is to examine whether women's empowerment in Angola is associated with fertility preferences. More specifically, we assess which dimensions of empowerment (e.g socio-cultural, control over sexual and reproductive health, and decision making) influence fertility preferences; and if so, do fertility preferences differ by age. Our hypothesis is that empowered women have preferences for smaller families; and empowerment influence on fertility preferences is more critical for younger women.

Background: Gender Inequality and Fertility in Angola

Angola is one of the countries in sub-Saharan Africa where fertility transition has yet to occur. A country in central Africa with over 36 million people and a population growth rate of 3.2%. The total fertility rate (TFR) is stalled at 6.2 even though the desired TFR is estimated to be 5.2 (DHS 2015-16). Only 13% of married or cohabiting women are using modern contraceptive methods, and among those using, injectables (5%) are the most popular method. For the 2023 Global Gender Gap Index, Angola ranked 118 out of 146 globally and 27 out of 36 for countries in sub-Saharan Africa (World Economic Forum 2023).

Angola's GDP is projected to grow 3.5% in 2023, leading to low projected GDP per capita growth of 0.2% given high population growth.

Data and Methods

Data for this analysis comes from the Angola most recent DHS 2019-2020. The unit of analysis were all women 15-49 years old excluding the sterilized and the ones declared infecund. Sub-analysis with younger women 15-34 years old were also conducted giving that these women were less likely to have completed their fertility. In addition, only women reporting being married or living with a partner were considered in this analysis; some key questions for this analysis were only asked married or co-habiting women.

Dependent variables. We use two outcomes in the analysis: i) ideal number of children, as a continuous variable; and ii) desire for more children, as categorical (1=wants no more children; 0=wants more children).

Women's empowerment Index. Three dimensions of empowerment were constructed using PCA informed by the literature and taking into consideration the Angolan context: (1) **Sociocultural index** – addresses the domestic violence believes rooted in socio-cultural underpinnings (beating justified=0; beatings not justified=1; *for going out without telling husband; neglects children; argues with husband/partner; refuse to have sex; and burns food*); (2) **Control over sexual and reproductive health index** – captures the *decision to use contraception or not use contraception* (self=1), *ability to refuse* sex (yes=1), and *ability to ask partner to use a condom* (yes=1); (3) **Decision making Index** – *included household purchases, respondent's health, visit family/friends, spend respondent's money and spend husband's money* (self=1; joint with husband=0; joint with others=-1). In each empowerment dimension only variables with eigenvalues more than 1 were considered significant and kept; Kaiser-Meyer-Olkin measure of sampling adequacy was estimated to ensure all were above 0.5. Predicted values from PCA results were divided into terciles, resulting in coding the indices into low, moderate and high empowerment.

Covariates for this study includes: age in 5-year age groups, urban/rural residence, level of education, wealth index, age at first child, number of living children, employment status and contraceptive use and intention – all self-explanatory.

Data analysis. Study population characteristic and a descriptive analysis of the empowerment dimensions and the dependent variables was performed with Chi-squared test for significance. Logistic regression models to assess associations between each empowerment dimension and desire for more children were conducted on the entire study sample and among women 15-34 years old; crude and adjusted ORs with 95% CI are presented. Negative binomial regression models of ideal number of children (as continuous variable) and empowerment dimensions were conducted on the entire study sample and among women 15-34 years old; crude and adjusted coefficient estimates with 95% CI are presented. Statistical significance using p-values was established at <1%, <5% and between 5%-10% as marginally significant.

Results

Of the 2,405 women 15-49 years old surveyed, 2,290 were included in this analysis. Of those 68.5% were 15-34 years old. Table 1 shows that in addition to being young, women in the study

sample majority urban (64.37%); only 35% have secondary or higher education; 40% are poor; only 48% are employed year-round; 12% are using modern contraceptive methods and 59% does not intend to use a method (Table 1). The majority reported 5 or more children as the ideal number of children and that they want more children (Table 2).

While most women were considered to be highly empowered socio-culturally (71.2%), the same was not true with the other 2 dimensions of empowerment. Almost 48% of women scored low empowerment in decision making and only 33% of women scored high in control over reproductive health (Table 2). Overall, the empowerment dimensions significantly associated with ideal number of children were socio-cultural ($p=0003$) and control over sexual and reproductive health ($p<0.001$). With respect to desire for more children, only the decision-making index was significantly associated ($p=0.0291$).

Results from the logistic regression models for all women 15-49 assessing the crude relationship between wanting no more children and empowerment dimensions, show statistical significance for decision making, with high empowered women more likely to desire no more children. However, once adjusted for the co-variates the decision-making index is no longer statistically significant (data not shown). The same analysis with only younger women 15-34 years old shows that the only empowerment dimension with statistically significant results is the socio-cultural index. Younger women in Angola with moderate to high empowered are two times more likely to desire no more children. This association maintains even when adjusted for the co-variates; socio-culturally moderately empowered and highly empowered younger women are more likely to desire no more children (aOR 2.59 [95% CI 1.13-6.00] and aOR 1.94 [95%CI 0.90-4.29] respectively (Table 3).

Results from the negative binomial regression of ideal number of children show that for all women all three dimensions of empowerment show negative and significant associations. However, those become non-significant once the models are adjusted for the covariates (data not shown). Similar results are fund for younger women 15-34 (Table 4). In the adjusted models, variables such as higher than secondary education, being rich, older age at first child and number of living children are significantly associated with ideal number of children.

Implications

Angola's population continues to grow rapidly. Its GDP is projected to grow 3.5% in 2023, leading to low projected GDP per capita growth of 0.2% given high population growth. Some of the reasons for high fertility include lack of contraceptive use and poor knowledge about contraceptive methods. However, younger and empowered women seem to be more likely to want to have smaller families and have a higher desire to stop childbearing. More exploration of the factors associated with modern contraceptive use and empowerment will be done in further analysis, as well as exploration of the role of education, wealth and number of living children. Angola's child mortality is 69 per 1,000 live births way above the 38/1,000 globally and far away from the goal of 25 deaths per 1,000 live births by 2030.

Tables

Table 1. Characteristics of the Study Sample

Characteristics of the study sample		N=2290	%
Age			
	15-19	222	9.17
	20-24	535	22.67
	25-29	508	22.18
	30-34	403	17.26
	35-39	326	14.64
	40-44	203	9.72
	45-49	93	4.35
Residence			
	Urban	1315	64.37
	Rural	975	35.63
Education			
	No education	736	27.39
	primary	855	37.97
	secondary	641	31.17
	Higher	58	3.46
Wealth Index			
	Poorest	471	17.85
	poorer	603	21.61
	middle	557	20.89
	richer	370	20.34
	Richest	289	19.32
Employment status			
	not employed	644	25.87
	employed year round	974	48.06
	temp/ocassional	672	26.07
Age at first child			
	no children	107	4.87
	12-14	202	8.58
	15-19	1299	57.00
	20-24	531	23.67
	25+	151	5.88
Number of living children			
	None	131	5.76
	1-2	733	32.32
	3-4	730	30.83
	5+	696	31.09
Contraceptive use & Intention			
	using modern	206	11.89
	Using traditional	28	0.99
	non-use intend to use	576	27.81
	does not intend to use	1480	59.31

Table 2. Empowerment dimensions and fertility preferences.

Empowerment Dimentions		Ideal number of children					Desire for more children			
		0-2	3-4	5+	% total	p-value	Wants NO MORE	Wants MORE	% total	p-value
Socio-cultural Index										
	low	10.81	5.47	12.49	10.06	0.0003	9.81	10.19	10.06	0.8643
	moderate	18.57	16.54	19.99	18.74		19.48	18.38	18.74	
	high	70.62	77.99	67.52	71.2		70.71	71.44	71.20	
Decision Making Index										
	low	44.07	45.81	49.79	47.97	0.3536	42.05	50.85	47.97	0.0291
	moderate	23.16	18.69	20.36	20.08		21.89	19.21	20.00	
	high	32.77	35.5	29.85	29.85		36.06	29.95	31.95	
Control over RH Index										
	low	42.05	22.65	37.45	33.09	<0.001	34.44	32.44	33.09	0.6905
	moderate	27.91	33.7	35.32	34.1		32.49	34.89	34.10	
	high	30.04	43.64	27.23	32.8		33.07	32.67	32.80	
	N	216	681	1393			642	1648		

Table 3. Logistic regression results of desire for more children and empowerment dimensions.

Empowerment Dimentions		Desire for more children (women 15-34)			
		OR	[95% CI]	aOR	95% CI
Socio-cultural Index					
	low	[1]		[1]	
	moderate	**2.04****	[1.09 - 3.83]	**2.59****	[1.13 - 6.00]
	high	**1.64***	[0.90 - 2.99]	**1.94***	[0.90 - 4.29]
Decision Making Index					
	low	[1]			
	moderate	0.98	[0.63 - 1.53]	n/a	
	high	1.11	[0.72 - 1.71]	n/a	
Control over RH Index					
	low	[1]			
	moderate	0.88	[0.61 - 1.27]	n/a	
	high	0.87	[0.59 - 1.29]	n/a	
	N=1668				

Note: significance levels=***<1%; **1%-<5%; *5%-9%

aOR: age, residence, education, wealth index, age at first child, number of living children; contraceptiveuse and intention, employment status.

Table 4. Negative binomial regression coefficients for ideal number of children and empowerment dimensions.

Empowerment Dimentions	Ideal number of children children (women 15-34)			
	Model 1	[95% CI]	Model 2	95% CI
Socio-cultural Index	**-0.09*** **	[-0.14 - -0.04]	-0.02	[-0.07 - 0.04]
Decision Making Index	**-0.04***	[-0.07 - -0.01]	-0.02	[-0.05 - 0.02]
Control over RH Index	**-.09*** **	[-0.14 - -0.04]	0.01	[-0.04 - 0.06]
Note: significance levels=***<1%; **1%-<5%; *5%-9%				
Model 2 adjusted for: residence, education, wealth index, age at first child, number of living children; contraceptiveuse and intention, employment status.				