

Focusing on Angolan youth: Understanding fertility preferences and modern contraceptive use to accelerate the demographic transition

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I. Introduction

Sub-Saharan African (SSA) is comprised of a proportionally large youth cohort. In fact, for 15 countries in SSA, half the population is under the age of 18 (Das Gupta et al., 2014). Youth fertility is particularly important for several sub-Saharan African countries because without a decrease in fertility, sustainable development might remain a distant goal. However, if governments make the reproductive health and human capital investments now, these countries will be primed to experience a demographic dividend benefit that can accompany a demographic transition (Das Gupta et al., 2014; *Demographic Dividend*, 2017; Groth and May, 2017; Philipose, 2016; Prata, 2017).

Given the known importance of youth fertility in determining Angola's future, there must be higher priority placed on understanding fertility practices and preferences in this age group, as well as specific interventions tailored to younger individuals (*Adolescent Sexual and Reproductive Health Evidence Gap Map*, 2017). Understanding factors that contribute to pregnancy and childbearing among young women in Angola is vital to the countries' progress towards achieving key Sustainable Development Goals (SDGs) such as SDGs 3, 4, and 5 (*Transforming our world: the 2030 Agenda for Sustainable Development*, 2015).

This study aimed to explore the fertility preferences and practices of sexually active Angolan youth (15-24 years old), as well as to investigate associations between fertility indicators and modern contraceptive method use. Improving knowledge on predictors of modern method use among youth is an important step in shifting Angola's fertility landscape towards a demographic transition.

II. Literature Review and Theoretical Framework

Investments in the health of young people, specifically sexual and reproductive health services, is instrumental in ensuring a healthy transition from adolescence to adulthood, as well as

achieving a demographic transition and improving maternal and infant outcomes (*Adolescent Pregnancy Fact Sheet*, 2018; Das Gupta et al., 2014). Adolescent fertility is intrinsically tied to modern contraceptive use (*Adolescent Pregnancy Fact Sheet*, 2018). At the same time, many factors affect uptake of modern contraception by young people, with fertility aspirations being particularly influential (O'Regan and Thompson, 2017). For married adolescents, there is often external pressure to bear children early on, meaning an increase in access alone would be insufficient to ensure contraceptive use and subsequently lower fertility (Bankole Akinrinola and Malarcher Shawn, 2010; Chandra-Mouli et al., 2014, p.; Rivera R. et al., 2001). As a result, parity and desire for more children act as major influences in contraceptive use among young women in SSA (Adebowale et al., 2014; Stephenson et al., 2007). Previous research has also indicated that many adolescents have misconceptions about the immediate and long-term side effects of contraceptive methods on their health and on their future ability to bear children (Chandra-Mouli et al., 2014; Ochako et al., 2015; Wood and Jewkes, 2006).

Fertility transition in Angola has not yet begun. The country is one of the 15 countries in SSA with a predominantly young population: 47% of the population was 14 years old in 2016 ("Population ages 0-14 - 1960 and 2016," 2018). Angola also has considerably high rates of adolescent pregnancy and childbirth, with age specific birth rates of 163 births and 261 births per 1,000 women aged 15-19 and 20-24, respectively (*Key Findings of the 2015-16 Angola IIMS.*, 2017). Total fertility rate in the country is 6.2 with wide variation based on residence, education and wealth. Among married women, 7.5% of 15-19 year olds and 13.2% of 20-24 year olds were using any method of modern contraception at the time of the 2015-16 DHS (*Key Findings of the 2015-16 Angola IIMS.*, 2017). The rates were substantially higher among unmarried and sexually active women at 20.1% among 15-19 year olds and 36% among 20-24 year olds; however, condoms were most popular at 18.5% and 28%, respectively. There was greater method diversity among young married women (*Key Findings of the 2015-16 Angola IIMS.*, 2017).

Despite the growing youthful population, Angola is at a potential turning point after decades of war and instability. Angola is considered one of the top African economies, providing a unique opportunity for development (*Demographic Dividend*, 2017). A fast decline in fertility in Angola, especially adolescent fertility, could create a demographic window of opportunity for the country to benefit from its first demographic dividend (Groth and May, 2017). However, strategic investments in young people are still necessary in Angola. Meeting the needs and aspirations of this young cohort will be crucial for future development (Das Gupta et al., 2014).

The primary objectives set forth by this paper were to fill the missing gaps in knowledge on fertility practices and preferences of Angolan women aged 15-24 years. We examined number of births, number of living children, and desire for children to inform our understanding of young women's fertility aspirations, and investigated their potential influence on modern contraceptive method use. Current evidence on youth fertility and contraceptive practices could inform sexual and reproductive health programs and policies, paving the way for a demographic shift and developmental transformation in Angola.

III. Data and Methods

Data for this analysis were obtained from the 2015-2016 Demographic and Health Survey (DHS) for Angola. Data collectors used the questionnaire from the 2015-16 Multiple Indicator and Health Survey (IIMS), which collected information on various health and socio-demographic indicators. According to the IIMS summary, data were collected using a three-stage sampling strategy stratified by province and locale (urban vs. rural). The first stage selected a proportional number of sampling units based on the number of households in each stratum, for a total of 627 primary sampling units. The same proportional probability was applied to the second stage, which selected 26 households in the urban and rural primary sampling units. The final stage selected 16,302 households to participate in the survey. A nationally representative sample of 14,379 women aged 15-49 were interviewed.

For this analysis, we restricted the sample to fecund, sexually active women aged 15-24 years, for a final sample size of 5,060 respondents.

Variables

The dependent variable of interest was current use of modern methods, categorized dichotomously as “yes” for those using condoms, oral pill, injectable, implant, or IUD, or “no” for those using traditional methods or no method. The primary independent variables included three fertility indicators: number of total births, number of living children, and desire for children. Number of total births and number of living children were each categorized into four groups: 0, 1, 2, and 3 or more. The desire for children variable initially had four categories: wants children within 2 years, wants children in two or more years, unsure of timing or undecided, or does not want any more children. The final variable was ultimately categorized into a binary variable: wants children within two years and does not want children within two years. The justification for this final categorization was based on the assumption that women who want children within 2 years wants more children and even though may be practicing spacing might not be using modern methods; those who do not want children within 2 years are either postponing or attempting to limit their fertility should be using a modern contraceptive method (Moultrie et al., 2012).

For the final adjusted models, we also included other covariates known to be common confounders in analyses of modern contraceptive use. We categorized age as 15-19 and 20-24, marital status as currently married or not currently married (including single individuals and divorced/widowed respondents), and education as none, primary, secondary, or higher education. Religion was grouped into three categories: Catholic, Protestant / Other Christian, and Islamic / Other religion. We also controlled for locale (urban v. rural) and used the DHS-constructed wealth index as a proxy for socioeconomic status, with quintiles ranging from poorest to richest.

Statistical Analysis

We used chi-square analysis to assess bivariate associations between each of the independent variables and current use of a modern method. We then used generalized linear models to estimate the relative risk of each fertility indicator (total births, living children, and desire for children) on current use of a modern method. We constructed unadjusted models to calculate the crude measures of association, and then incorporated all covariates that were known to be common confounders into the final, adjusted model. We ran a final model with all three fertility indicators and covariates included. All analyses were performed in Stata 14.2 (*Stata Statistical Software: Release 14*, 2015).

IV. Results

Tables 1.1 - 1.3 display the bivariate relationships between all covariates and each fertility indicator.

Table 1.1 shows there was a significant difference at $p < 0.05$ between categories of all covariates and the independent variable, number of total births, except for religion. Among women who had never given birth or had given birth once, the majority in each category were aged 15-19 (68.40% and 51.87, respectively).

In Table 1.2, we see a similar trend in bivariate associations. All covariates, except for religion, demonstrated a significant association with number of living children at $p < 0.05$. Women in the highest wealth quintile consistently had the lowest representation in the categories of one or more living children. Only 22.60% of women who had 3 or more children completed secondary school or higher education, as compared to 32.62% women with no education.

Table 1.3 displays the proportions of each covariate with the final variable for desire for children. The majority of women (60.46%) who wanted children within the next two years were married or cohabitating at the time of the survey, while most (65.33%) of the women who did not want children within the next two years lived in an urban setting. Catholics were the group with the highest proportion of respondents (48.37%) reporting wanting children within the next two years.

Chi-square results demonstrated that all covariates had significant associations with desire for children at $p < 0.05$.

After assessing the bivariate associations between covariates and primary independent variables, we ran chi-square analysis for each of the fertility indicators and covariates with type of contraceptive method used. Table 2.1 shows that most women (86.98%) reported using no method and less than 1% of respondents were using a long-acting reversible contraceptive (LARC), the implant or IUD. The most commonly used modern method was the condom, followed by the oral pill and the injectable. Among women who were not using any method, 84.44% reported not wanting children within the next two years. Over half (52.51%) of condom users were aged 20-24, and 80.67% were not married or in a union. There was a significant difference at $p < 0.05$ across all covariate categories between one or more types of contraceptive methods, except for religion.

Table 2.2 displays these results with type of contraceptive method collapsed into the final, binary variable: current use of a modern method. Overall, only 12.10% of respondents were using a modern method. Age no longer demonstrated a significant association ($p = 0.125$) with use of a modern method. Almost all (92.30%) of women using a modern method did not want children within the next two years, while only 8.03% of those using a modern method had three or more living children.

Based on the significant results of these chi-square analyses, we constructed generalized linear models to estimate relative risk of current use of a modern contraceptive method.

Given these significant bivariate associations, we constructed multivariate models with the aforementioned covariates. Table 3 shows the results of the generalized linear models. Model A examined the association between number of total births and current use of a modern method, demonstrating no significant association between the fertility indicator and current use of a modern method after adjusting for common confounders. The same was observed with Model B, which examined the same relationship but with number of living children. Model C included desire for

children as the fertility indicator, which maintained a positive significant association with current use of a modern contraceptive method after adjusting for potential confounders. Women who did not want children within the next two years were 1.34 times more likely to use a modern method as women who wanted children within the next two years ($p = 0.037$). Age was also significantly associated with the outcome in Model C; women aged 20-24 years old were 1.17 times as likely to use a modern contraceptive method as their adolescent counterparts were ($p = 0.041$).

We constructed a final model, Model D, with all primary fertility indicators and covariates included. The results did not vary greatly from the previous models; women who wanted children within the next two years were 1.36 times more likely to be using a modern method, and women aged 20-24 were 1.17 times as likely to do so as compared to adolescents aged 15-19 ($p < 0.05$). Number of total births and living children were not significantly associated with the outcome.

Model D also demonstrated there was an increased likelihood of modern method use with higher socioeconomic status. Women in the highest wealth category were 4.07 times more likely to be using a modern method as compared to women in the lowest wealth category ($p < 0.001$). Locale also seemed to be a determining factor, with women living in rural areas having 0.47 times the likelihood of using a modern method as compared to urban women ($p < 0.001$). Higher education was a predictor of modern contraceptive use, as women who completed secondary school or higher were 4.13 times more likely to use a modern method as compared to women who had no education ($p < 0.001$). These results provide insight into the various factors that have a significant relationship with modern contraceptive use in this young Angolan population.

V. Discussion

The results from this analysis demonstrated that of the primary fertility indicators studied, desire for children was the only one that maintained a significant association with current use of a modern contraceptive in adjusted models. Young women who did not want children within two years were 1.36 times more likely to be using a modern method as compared to their counterparts

who wanted children within two years. It is unsurprising that women who did not wish to get pregnant in the near future would be more likely to use a modern contraceptive method. However, given the known rates of high fertility and unmet need among this age group, it is likely that there were respondents who did not wish to get pregnant but were still not using a contraceptive method. In addition, the difference in modern method use between the age groups was notable; those aged 20-24 years old were 1.17 times more likely to be using a modern contraceptive method as compared to their adolescent counterparts. Being married or cohabitating was not significantly associated with the outcome, implying sexually active 15-19 year olds of any marital status were not as likely to be using modern methods. These results demonstrate a need for family planning programs specifically for adolescents, seeing as their fertility practices will play a major role in Angola's future fertility and resulting fertility shifts.

Condoms were the most common modern method that youth reported using. In Angola, condoms are the most widely accessible and most commonly used modern method (Nieto-Andrade et al., 2017). Prior studies have demonstrated similar results in various settings, particularly among youth and adolescents; the fact that condoms are affordable, accessible, and discrete make them a highly popular choice among youth (Benson et al., 2017; Ross et al., 2015). This observed preference for condoms may have also been related to the study population's fertility aspirations and limited use of hormonal methods due to fear of effects on future fertility. Prior studies have shown that fear of infertility is a barrier to use of hormonal methods (Ochako et al., 2015; Williamson et al., 2009). Rarely do women report achieving their desired family size in this young of an age group in SSA, so concerns surrounding infertility could have certainly influenced method choice in this study population (Fertility et al., 1993). In addition, unmarried women often face stigmatization when obtaining contraceptives from providers, leading to a preference for condoms, which offer more discretion (Darroch and Singh, 2013). This information, coupled with the knowledge that hormonal and LARC methods are not as widely available in Angola, may have also

contributed to the lack of significant association between parity and modern method use in our analysis (Asiimwe et al., 2014; Nieto-Andrade et al., 2017). The binary nature of the desire for children variable did not allow us to investigate these associations among women wanted to have their next child beyond two years; regardless, highly effective methods, namely hormonal and LARC methods, are still recommended for women who wish to space their births, not only limit their fertility (Hillard, 2013; Kaneshiro and Salcedo, 2015; McNicholas and Peipert, 2012). Family planning programs and policies in Angola must prioritize making hormonal and LARC methods more easily accessible to young women and ensure proper training to provide accurate knowledge on all various methods. Otherwise, misinformation coupled with known inconsistencies in condom use will prevent the steady decline in fertility rates that Angola requires to achieve a fertility transition.

Reducing adolescent pregnancy is critical to achieving the future development of Angola. The impacts extend beyond the adolescents to their families, communities, and broader society (Ganchimeg et al., 2014). A fertility transition is achievable in Angola if the right investments are made now in improving knowledge and access to modern contraceptive methods, especially among young people. Family planning policies should also be tailored to address the specific needs of different age groups of women. Investing in LARC programs will be particularly beneficial in Angola where young women are relying on condoms. In fact, the 2015-16 DHS found that approximately half of married and unmarried women knew of implants or IUDs (*Key Findings of the 2015-16 Angola IIMS.*, 2017). At the same time, with condoms the primary method of family planning among unmarried young people in Angola, the underlying gender dynamics need to be addressed in programming. A study from Ghana highlighted gender differences in condom use and concluded with the importance of designing gender-specific sexual risk reduction programs (Teye-Kwadjo et al., 2017). Family planning programs should also tailor their messaging for young people. Given the influence of desired fertility on current contraceptive use, it is important to dispel

myths about hormonal contraception affecting future fertility, as well as to highlight benefits of waiting for first birth and spacing in between children. A study from Kenya highlighted that young women often get information through their social networks; thus, peer educators could be an important complementary activity for existing family planning programs (Ochako et al., 2015).

One limitation of this study was the fact that the DHS estimates used for this analysis were nationwide estimates, meaning our observed results and subsequent policy recommendations may not be applicable to all regions or groups in Angola. Future studies will need to explore the specific needs of adolescents in various settings, such as urban vs. rural and different socioeconomic classes, in order to ensure FP programs are successful given these different contexts. In addition, the question on number of total births was self-reported. Though unlikely, there may have been underreporting of this number if women lost a child and did not want to address such a sensitive subject by providing a number different from the number of living children she reported. However, the integrity of DHS data has been well established and we feel confident that our analyses provide an accurate portrayal of youth fertility practices in Angola.

VI. Conclusion

The study intended to shed light on adolescent and youth fertility in Angola to provide insight for future family planning programs and policies. Understanding the fertility preferences and behaviours of young women will have the greatest impact in decreasing nationwide fertility rates, and improving modern contraceptive method use is the first step in achieving this goal. While our study demonstrated that certain indicators might be associated with relatively higher use of a modern method, the overall current use was still very low at about 12%. Even though having no desire for children within the next two years was associated with higher use of a modern method, most women (84.44%) who did not want children in the immediate future were not using any method at all. Barriers to use in SSA include misinformation, lack of access to health centres, and difficulties in ability to negotiate contraceptive use among young women (Ochako et al., 2015;

Teye-Kwadjo et al., 2017). These results indicate a need for programs that increase contraceptive knowledge and access among adolescents and young adults, while emphasizing the importance of spacing and delaying births to reduce overall fertility rates. If family planning programs and policies succeed in lowering fertility, Angola would be primed to make more investments in development and social programs. Alternatively, if the population growth continues as it is, the government will not be able provide education, healthcare, food, and future employment for all, making it near impossible to break the cycle of poverty, high infant mortality and high fertility rates (*Demographic Dividend*, 2017; Philipose, 2016). Focusing on improving modern method uptake among youth is a crucial first step to begin fertility transition in Angola.

Besides being one of the most cost-effective health interventions to reduce maternal mortality, provision of contraceptives through family planning programs can accelerate fertility decline (Campbell and Graham, 2006; Cleland et al., 2006). In Angola, this fact remains extremely important for young people as changes in the age structure of the population could provide the country with a demographic window of opportunity (Philipose, 2016). Decreasing fertility rates would ultimately encourage economic growth for the country as a whole and increase its ability to benefit from a first demographic dividend (*Demographic Dividend*, 2017). Our results reinforce the notion that in order to achieve this, there must be improved access to correct information on family planning, as well as expansion of the range of available modern contraceptive methods. These efforts will accelerate fertility decline and simultaneously help to improve women's health, ultimately allowing Angola to develop at a faster rate.

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Tables and Figures

Table 1.1. Number of total births by socio-economic characteristics among 15-24 year olds in Angola, 2015-2016.

	Number of Total Births										p-value
	0		1		2		3+		Total		
	N = 1,522	%	N = 1,604	%	N = 1,111	%	N = 823	%	N = 5,060	%	
Age											< 0.001
15-19	1041	68.40	832	51.87	223	20.07	32	3.89	2128	42.06	
20-24	481	31.60	772	48.13	888	79.93	791	96.11	2932	57.94	
Marital Status											< 0.001
Not currently married	1319	86.66	876	54.61	382	34.38	174	21.14	2751	54.37	
Currently married / cohabitating	203	13.34	728	45.39	729	65.62	649	78.86	2309	45.63	
Locale											< 0.001
Urban	1101	72.34	986	61.47	654	58.87	443	53.83	3184	62.92	
Rural	421	27.66	618	38.53	457	41.13	380	46.17	1876	37.08	
Wealth Quintiles											< 0.001
1 (poorest)	217	14.26	319	19.89	225	20.25	185	22.48	946	18.70	
2	235	15.44	418	26.06	334	30.06	287	34.87	1274	25.18	
3	362	23.78	404	25.19	317	28.53	234	28.43	1317	26.03	
4	355	23.32	282	17.58	164	14.76	89	10.81	890	17.59	
5 (richest)	353	23.19	181	11.28	71	6.39	28	3.40	633	12.51	
Education											< 0.001
No education	191	12.55	344	21.45	276	24.84	257	31.23	1068	21.11	
Primary school	408	26.81	537	33.48	429	38.61	375	45.57	1749	34.57	
Secondary school or higher	923	60.64	723	45.07	406	36.54	191	23.21	2243	44.33	
Religion											0.371
Catholic	622	40.87	686	42.77	460	41.40	328	39.85	2096	41.42	
Protestant / Other Christian	781	51.31	779	48.57	565	50.86	439	53.34	2564	50.67	
Islamic / Animist / Other	119	7.82	139	8.67	86	7.74	56	6.80	400	7.91	

Table 1.2. Number of living children by socio-economic characteristics among 15-24 year olds in Angola, 2015-2016.

	Number of Living Children										p-value
	0		1		2		3+		Total		
	N = 1,605	%	N = 1,641	%	N = 1,115	%	N = 699	%	N = 5,060	%	
Age											< 0.001
15-19	1083	67.48	821	50.03	201	18.03	23	3.29	2128	42.06	
20-24	522	32.52	820	49.97	914	81.97	676	96.71	2932	57.94	
Marital Status											< 0.001
Not currently married	1361	84.80	873	53.20	377	33.81	140	20.03	2751	54.37	
Currently married / cohabitating	244	15.20	768	46.80	738	66.19	559	79.97	2309	45.63	
Locale											< 0.001
Urban	1152	71.78	1002	61.06	658	59.01	372	53.22	3184	62.92	
Rural	453	28.22	639	38.94	457	40.99	327	46.78	1876	37.08	
Wealth Quintiles											< 0.001
1 (poorest)	234	14.58	323	19.68	234	20.99	155	22.17	946	18.70	
2	260	16.20	439	26.75	328	29.42	247	35.34	1274	25.18	
3	384	23.93	420	25.59	322	28.88	191	27.32	1317	26.03	
4	371	23.12	274	16.70	162	14.53	83	11.87	890	17.59	
5 (richest)	356	22.18	185	11.27	69	6.19	23	3.29	633	12.51	
Education											< 0.001
No education	210	13.08	351	21.39	279	25.02	228	32.62	1068	21.11	
Primary school	442	27.54	559	34.06	435	39.01	313	44.78	1749	34.57	
Secondary school or higher	953	59.38	731	44.55	401	35.96	158	22.60	2243	44.33	
Religion											0.656
Catholic	661	41.18	700	42.66	457	40.99	278	39.77	2096	41.42	
Protestant / Other Christian	817	50.90	804	48.99	571	51.21	372	53.22	2564	50.67	
Islamic / Animist / Other	127	7.91	137	8.35	87	7.80	49	7.01	400	7.91	

Table 1.3. Desire for children by socio-economic characteristics among 15-24 year olds in Angola, 2015-2016.

	Desire for Children						p-value
	Wants within 2 years		Does not want within 2 years		Total		
	N = 736	%	N = 4,324	%	N = 5,060	%	
Age							< 0.001
15-19	240	32.61	1888	43.66	2128	42.06	
20-24	496	67.39	2436	56.34	2932	57.94	
Marital Status							< 0.001
Not currently married	291	39.54	2460	56.89	2751	54.37	
Currently married / cohabitating	445	60.46	1864	43.11	2309	45.63	
Locale							< 0.001
Urban	359	48.78	2825	65.33	3184	62.92	
Rural	377	51.22	1499	34.67	1876	37.08	
Wealth Quintiles							< 0.001
1 (poorest)	229	31.11	717	16.58	946	18.70	
2	210	28.53	1064	24.61	1274	25.18	
3	149	20.24	1168	27.01	1317	26.03	
4	90	12.23	800	18.50	890	17.59	
5 (richest)	58	7.88	575	13.30	633	12.51	
Education							< 0.001
No education	239	32.47	829	19.17	1068	21.11	
Primary school	278	37.77	1471	34.02	1749	34.57	
Secondary school or higher	219	29.76	2024	46.81	2243	44.33	
Religion							< 0.001
Catholic	356	48.37	1740	40.24	2096	41.42	
Protestant / Other Christian	327	44.43	2237	51.73	2564	50.67	
Islamic / Animist / Other	53	7.20	347	8.02	400	7.91	

Table 2.1. Contraceptive method use across fertility indicators and socio-economic characteristics of 15-24 year olds in Angola, 2015-2016.

	Type of Contraceptive Method																		p-value		
	No method		Traditional		Condom		Pill		Injectable		Implant		IUD		Emergency / Other modern method		Male sterilization			Total	
	N = 4,401	%	N = 49	%	N = 419	%	N = 101	%	N = 71	%	N = 4	%	N = 1	%	N = 13	%	N = 1	%		N = 5,060	%
Total Births																				< 0.001	
0	1,247	28.33	19	38.78	236	56.32	16	15.84	0	0.00	0	0.00	0	0.00	3	23.08	1	100.00	1,522	30.08	
1	1,409	32.02	13	26.53	114	27.21	34	33.66	25	35.21	4	100.00	0	0.00	5	38.46	0	0.00	1,604	31.70	
2	984	22.36	12	24.49	48	11.46	35	34.65	29	40.85	0	0.00	0	0.00	3	23.08	0	0.00	1,111	21.96	
3+	761	17.29	5	10.20	21	5.01	16	15.84	17	23.94	0	0.00	1	100.00	2	15.38	0	0.00	823	16.26	
Living Children																				< 0.001	
0	1,322	30.04	19	38.78	244	58.23	16	15.84	0	0.00	0	0.00	0	0.00	3	23.08	1	100.00	1,605	31.72	
1	1,441	32.74	14	28.57	114	27.21	36	35.64	27	38.03	4	100.00	0	0.00	5	38.46	0	0.00	1,641	32.43	
2	993	22.56	11	22.45	42	10.02	37	36.63	29	40.85	0	0.00	0	0.00	3	23.08	0	0.00	1,115	22.04	
3+	645	14.66	5	10.20	19	4.53	12	11.88	15	21.13	0	0.00	1	100.00	2	15.38	0	0.00	699	13.81	
Desire for children																				< 0.001	
Wants children within 2 years	685	15.56	4	8.16	32	7.64	10	9.90	4	5.63	0	0.00	0	0.00	1	7.69	0	0.00	736	14.55	
Does not want children within 2 years	3,716	84.44	45	91.84	387	92.36	91	90.10	67	94.37	4	100.00	1	100.00	12	92.31	1	100.00	4,324	85.45	
Age																				< 0.001	
15-19	1,877	42.65	12	24.49	199	47.49	23	22.77	10	14.08	2	50.00	0	0.00	4	30.77	1	100.00	2,128	42.06	
20-24	2,524	57.35	37	75.51	220	52.51	78	77.23	61	85.92	2	50.00	1	100.00	9	69.23	0	0.00	2,932	57.94	
Marital Status																				< 0.001	
Not currently married	2,313	52.56	27	55.10	338	80.67	46	45.54	18	25.35	3	75.00	0	0.00	5	38.46	1	100.00	2,751	54.37	
Currently married / cohabitating	2,088	47.44	22	44.90	81	19.33	55	54.46	53	74.65	1	25.00	1	100.00	8	61.54	0	0.00	2,309	45.63	
Locale																				< 0.001	
Urban	2,585	58.74	36	73.47	382	91.17	100	99.01	62	87.32	4	100.00	1	100.00	13	100.00	1	100.00	3,184	62.92	
Rural	1,816	41.26	13	26.53	37	8.83	1	0.99	9	12.68	0	0.00	0	0.00	0	0.00	0	0.00	1,876	37.08	
Wealth Quintiles																				< 0.001	
1 (poorest)	924	21.00	5	10.20	15	3.58	0	0.00	2	2.82	0	0.00	0	0.00	0	0.00	0	0.00	946	18.70	
2	1,222	27.77	6	12.24	30	7.16	9	8.91	7	9.86	0	0.00	0	0.00	0	0.00	0	0.00	1,274	25.18	
3	1,157	26.29	12	24.49	93	22.20	31	30.69	16	22.54	1	25.00	0	0.00	7	53.85	0	0.00	1,317	26.03	
4	678	15.41	19	38.78	135	32.22	30	29.70	24	33.80	0	0.00	0	0.00	3	23.08	1	100.00	890	17.59	
5 (richest)	420	9.54	7	14.29	146	34.84	31	30.69	22	30.99	3	75.00	1	100.00	3	23.08	0	0.00	633	12.51	
Education																				< 0.001	
No education	1,045	23.74	4	8.16	11	2.63	4	3.96	4	5.63	0	0.00	0	0.00	0	0.00	0	0.00	1,068	21.11	
Primary school	1,636	37.17	9	18.37	66	15.75	19	18.81	18	25.35	0	0.00	1	100.00	0	0.00	0	0.00	1,749	34.57	
Secondary school or higher	1,720	39.08	36	73.47	342	81.62	78	77.23	49	69.01	4	100.00	0	0.00	13	100.00	1	100.00	2,243	44.33	
Religion																				0.152	
Catholic	1,823	41.42	24	48.98	186	44.39	36	35.64	20	28.17	2	50.00	0	0.00	5	38.46	0	0.00	2,096	41.42	
Protestant / Other Christian	2,219	50.42	22	44.90	205	48.93	58	57.43	50	70.42	1	25.00	1	100.00	7	53.85	1	100.00	2,564	50.67	
Islamic / Animist / Other	359	8.16	3	6.12	28	6.68	7	6.93	1	1.41	1	25.00	0	0.00	1	7.69	0	0.00	400	7.91	

Table 2.2. Current use of a modern method across fertility indicators and socio-economic characteristics of 15-24 year olds in Angola, 2015-2016.

	Current Use of a Modern Method						p-value
	No		Yes		Total		
	N = 4,450	%	N = 610	%	N = 5,060	%	
Total Births							< 0.001
0	1,266	28.45	256	41.97	1,522	30.08	
1	1,422	31.96	182	29.84	1,604	31.70	
2	996	22.38	115	18.85	1,111	21.96	
3+	766	17.21	57	9.34	823	16.26	
Living Children							< 0.001
0	1,341	30.13	264	43.28	1,605	31.72	
1	1,455	32.70	186	30.49	1,641	32.43	
2	1,004	22.56	111	18.20	1,115	22.04	
3+	650	14.61	49	8.03	699	13.81	
Desire for children							< 0.001
Wants children within 2 years	689	15.48	47	7.70	736	14.55	
Does not want children within 2 years	3,761	84.52	563	92.30	4,324	85.45	
Age							0.125
15-19	1,889	42.45	239	39.18	2,128	42.06	
20-24	2,561	57.55	371	60.82	2,932	57.94	
Marital Status							< 0.001
Not currently married	2,340	52.58	411	67.38	2,751	54.37	
Currently married / cohabitating	2,110	47.42	199	32.62	2,309	45.63	
Locale							< 0.001
Urban	2,621	58.90	563	92.30	3,184	62.92	
Rural	1,829	41.10	47	7.70	1,876	37.08	
Wealth Quintiles							< 0.001
1 (poorest)	929	20.88	17	2.79	946	18.70	
2	1,228	27.60	46	7.54	1,274	25.18	
3	1,169	26.27	148	24.26	1,317	26.03	
4	697	15.66	193	31.64	890	17.59	

5 (richest)	427	9.60	206	33.77	633	12.51	
Education							< 0.001
No education	1,049	23.57	19	3.11	1,068	21.11	
Primary school	1,645	36.97	104	17.05	1,749	34.57	
Secondary school or higher	1,756	39.46	487	79.84	2,243	44.33	
Religion							0.198
Catholic	1,847	41.51	249	40.82	2,096	41.42	
Protestant / Other Christian	2,241	50.36	323	52.95	2,564	50.67	
Islamic / Animist / Other	362	8.13	38	6.23	400	7.91	

Table 3. Generalized Linear Models: Relative risk of current use of a modern contraceptive method.

	Model A - Number of Total Births			Model B - Number of Living Children			Model C - Desire for Children			Model D - Fully Adjusted Model		
	RR	95% CI	p-value	RR	95% CI	p-value	RR	95% CI	p-value	RR	95% CI	p-value
Current Use of a Modern Method												
Total Births												
0	1 (ref)	-	-	<i>N/A</i>	<i>N/A</i>		<i>N/A</i>	<i>N/A</i>		1 (ref)	-	-
1	0.99	0.83 - 1.18	0.922							1.00	0.53 - 1.90	1.000
2	1.09	0.87 - 1.37	0.471							1.19	0.56 - 2.52	0.649
3+	0.97	0.71 - 1.32	0.850							0.86	0.32 - 2.29	0.757
Living Children												
0		<i>N/A</i>		1 (ref)	-	-		<i>N/A</i>		1 (ref)	-	-
1				1.00	0.84 - 1.19	0.976				0.96	0.51 - 1.82	0.905
2				1.06	0.84 - 1.33	0.646				0.86	0.41 - 1.83	0.697
3+				1.01	0.73 - 1.39	0.956				1.09	0.40 - 2.97	0.861
Desire for children												
Wants children within 2 years		<i>N/A</i>			<i>N/A</i>		1 (ref)	-	-	1 (ref)	-	-
Does not want children within 2 years							1.34	1.02 - 1.76	0.037	1.36	1.02 - 1.80	0.034
Age												
15-19	1 (ref)	-	-	1 (ref)	-	-	1 (ref)	-	-	1 (ref)	-	-
20-24	1.14	0.97 - 1.33	0.110	1.14	0.97 - 1.33	0.109	1.17	1.01 - 1.35	0.041	1.17	1.00 - 1.38	0.049
Marital Status												
Not currently married	1 (ref)	-	-	1 (ref)	-	-	1 (ref)	-	-	1 (ref)	-	-
Currently married / cohabitating	0.85	0.71 - 1.02	0.077	0.85	0.71 - 1.02	0.075	0.87	0.74 - 1.03	0.105	0.88	0.74 - 1.06	0.181
Locale												
Urban	1 (ref)	-	-	1 (ref)	-	-	1 (ref)	-	-	1 (ref)	-	-
Rural	0.47	0.32 - 0.67	<0.001	0.47	0.32 - 0.67	<0.001	0.47	0.33 - 0.68	<0.001	0.47	0.32 - 0.67	<0.001

Wealth Quintiles

1 (poorest)	1 (ref)	-	-	1 (ref)	-	-	1 (ref)	-	-	1 (ref)	-	-
2	1.21	0.67 - 2.19	0.518	1.22	0.67 - 2.19	0.514	1.20	0.66 - 2.16	0.550	1.19	0.66 - 2.15	0.561
3	2.12	1.18 - 3.83	0.013	2.12	1.18 - 3.84	0.012	2.07	1.15 - 3.74	0.016	2.06	1.14 - 3.72	0.017
4	3.23	1.78 - 5.87	< 0.001	3.23	1.78 - 5.87	< 0.001	3.15	1.74 - 5.72	< 0.001	3.13	1.72 - 5.68	< 0.001
5 (richest)	4.25	2.33 - 7.78	< 0.001	4.26	2.33 - 7.78	< 0.001	4.12	2.26 - 7.52	< 0.001	4.07	2.22 - 7.46	< 0.001

Education

No education	1 (ref)	-	-	1 (ref)	-	-	1 (ref)	-	-	1 (ref)	-	-
Primary school	2.35	1.45 - 3.82	0.001	2.35	1.45 - 3.82	0.001	2.32	1.43 - 3.78	0.001	2.32	1.43 - 3.77	0.001
Secondary school or higher	4.22	2.62 - 6.79	< 0.001	4.24	2.63 - 6.82	< 0.001	4.16	2.58 - 6.69	< 0.001	4.13	2.56 - 6.65	< 0.001

Religion

Catholic	1 (ref)	-	-	1 (ref)	-	-	1 (ref)	-	-	1 (ref)	-	-
Protestant / Other Christian	0.95	0.82 - 1.10	0.474	0.95	0.82 - 1.09	0.459	0.94	0.82 - 1.09	0.412	0.94	0.82 - 1.09	0.432
Islamic / Animist / Other	0.84	0.62 - 1.14	0.259	0.84	0.62 - 1.14	0.258	0.84	0.62 - 1.13	0.253	0.84	0.62 - 1.14	0.258
