JOGECA Journal of Obstetrics and Gynecology of East and Central Africa

ORIGINAL RESEARCH

Family planning and Contraception

Religion and contraceptive use among sexually active adolescent girls in Kenya: A 2014 Demographic Health Survey analysis

Ondieki D.K[1*], Penfold S[2]

[1] Department of Obstrics and Gynecology, University of Nairobi, Nairobi, Kenya.
[2] Department of Public Health, London School of Hygiene and Tropical Medicine, London, United Kingdom.

***Correspondence**: Ondieki D.K, ondiekidk@gmail.com

Received: 29 January 2021; Revised: 11 March 2021; Accepted: 30 March 2021; Available online: April 2021

Abstract

Background: In Kenya, according to the 2014 Kenya Demographic Health Survey (KDHS), 50% of women aged 20-49 had their sexual debut by 18 years. Early sexual initiation is associated with adverse health outcomes such as unwanted adolescent pregnancies, Sexually Transmitted Infections (STIs), and cervical cancer. Modern contraceptive use could reduce the level of unwanted pregnancy. However, not much is known of the association between religion and modern contraceptive use in Kenya.

Objective: To determine whether the type of religion is associated with modern contraceptive use among sexually active adolescent girls in Kenya.

Methods: A cross-sectional study design was utilized to conduct a secondary analysis of the Kenyan DHS 2014 female dataset. Participants included 732 sexually active adolescent girls 15-19 years of age. The primary outcome measure was the current use of a modern contraceptive method. Descriptive, bivariate, and multivariate logistic regression analyses were done. Weighting for the sampling probabilities was done for all calculations.

Results: The proportion of sexually active adolescent girls reporting current use of modern contraception was 30.2%. By religious group, 30.7% of Christians and 21.1% of Muslims were currently using modern contraception. However, when comparing Muslims and Christians, the type of religion adjusted for demographic and socioeconomic factors was not associated with the current use of a modern contraceptive method [OR=0.66(95% CI 0.29,1.49)]. There was a strong association between the current use of a modern contraceptive method and having had children [OR=8.40(95% CI 4.45,15.84)] compared to those with no children. However, there was no difference in modern contraceptive use between religions in this sub-group between religions [OR=1.45(95% CI 0.46,4.63)].

Conclusion: Modern Contraceptive Prevalence Rate (CPR) was low among sexually active adolescent girls between 15 and 19 years in Kenya. There was no difference in modern contraceptive use between adolescents of different religions.

Keywords: Adolescent, Religion, Sex, Contraceptive use, Kenya

Conflict of Interest: None
Funding: None

Introduction

Every year, an estimated twenty-one million adolescents between 15 - 19 years get pregnant, of whom sixteen million give birth in developing countries. For the majority of them, pregnancy and childbirth tend neither to be planned nor wanted. Yet, in developing countries, twenty-three million adolescent girls have an unmet need for modern contraception (1). In Kenya, according to the 2014 Kenya Demographic Health Survey (KDHS), 50% of women aged 20 - 45 had already had sex by the age 18, yet only 10% of the girls aged 15 - 19 were using contraception (2). The adolescent fertility rates in Kenya are among the highest in East-Africa, with approximately 106 births in 1 000 females aged 15 - 19, compared to a global fertility rate of 44 births in 1 000 females of the same age group (3). Most adolescent mothers drop out of school because of the pregnancy, and after delivery, take care of their newborn (1). Limited education places the adolescent mothers at a disadvantage of being engaged in meaningful employment (4). Also, adolescent mothers are at risk of experiencing health-related issues due to unsafe abortion and birth-related complications (1).

Contraceptive use is a complex issue within a religious context. Doctrines between religions differ, especially when it comes to the use of contraception by adolescents. Over the years, the Catholic Church has maintained a strong stance against contraceptives, which has negatively influenced the attitude of contraceptive use among individuals (5). Protestant Christians do not prohibit any form of contraceptive use within marriage. However, Evangelical and Fundamental Protestants, who are thought to be conservative in their practice, consider contraceptive use a contravention of God's law on procreation (6). Amongst Muslims, there is no central authoritative structure that guides religious interpretation. Therefore, instruction varies across cultures and religious sects (7). Many socio-demographic factors have been associated with modern contraceptive use among sexually active adolescents (8,9). However, less is known of the association between religion and the use of contraception in this population. This study, therefore, sought to determine whether the type of one's religion was associated with modern contraceptive use among sexually active adolescent girls in Kenya.

Methods

Study design

A secondary analysis of this cross-sectional survey of the KDHS 2014 data was used in this study.

Study population

The participants eligible for recruitment were sexually active adolescent girls 15 - 19 years surveyed in the 2014 KDHS. Those sexually active were those reporting sexual activity in the 12 months preceding the survey. Anyone not fitting the criteria was excluded from the study. Of note, despite an adolescent being defined as a person between 10 - 19 years, only those aged 15 - 19 were looked into because these were the ones captured in the DHS data.

Data collection and management

Quantitative variables of interest included religion, age, education level, marital status, number of children, wealth status, and residence. The primary exposure of interest was religious affiliation which was categorized into Catholic, Protestant, Muslim, Other, and no religion. Those with other and no religion were dropped. The remaining were recoded into a binary variable, with Roman Catholics and Protestants being grouped as Christians and Muslims remaining as-is. Roman Catholics and Protestants were categorized into one group because there was insufficient power to assess for an association with modern contraceptive use in the three different religious groups. The outcome of interest was the current use of a modern contraceptive method. Current meaning using a method of contraception at the time of the survey. Age was categorized using the mean age to come up with the two groups (<18 years and those 18 years and above). The level of education and the number of children were recoded to avoid data sparsity. Wealth was recoded into three groups from five groups to facilitate interpretation of the data.

Data provided by the DHS program was downloaded from the DHS website and stored in a password-protected computer. The dataset of interest from the KDHS 2014 was the female dataset (the women's file) which contained individual data collected from all women aged 15-49. For this study's purposes, the dataset was further recoded to include only those aged 15 - 19. It was then checked for completeness. Confidentiality was maintained as there were no identifiers to the participants recruited in the initial primary survey.

Data analysis

A power calculation was employed as the study sample size was already fixed. In the study, there

were 742 sexually active adolescents. Excluding nine respondents with no religion and one respondent with other religion, that left a sample of 732 sexually active adolescents. In a study by Abdulla, the Contraceptive Prevalence Rate (CPR) among Kenyan women between 15 - 49 years was 44% among Christians (Catholics and Protestants) and 21% among Muslims (10). Therefore, using these proportions to calculate power against the sample of 732 sexually active adolescent girls under 5% significance level gave a power of 100%.

Analysis was done using STATA software, version 14.2. Univariate, bivariate, and multivariate levels of statistical analysis were carried out. All variables were checked for missing data. Bivariate analyses were done using chi-square tests and logistic regression to check for associations. Likelihood ratio tests were used to check for departures from linear effects for categorical variables. Weighting, clustering, and stratification of the sample were accounted for during calculations to mitigate the sampling method's impact. Weighting corrected the standard errors hence improving on significance testing. This was done by use of the svyset and svy commands on STATA.

Ethical consideration

Authorization to download and use the KDHS data was given by the DHS program on 18 February 2019. The London School of Hygiene and Tropical Medicine Ethics Committee approved this study on 18 April 2019, reference number 16760.

Results

A sample of 732 sexually active adolescent girls was utilized from the KDHS 2014. The weighting of this sample was done, factoring the survey design used in the original KDHS 2014. This produced a new sample of 715 sexually active adolescent girls with a mean age of 17.7 (±0.12) years.

A majority of the population (74.6%) were protestants, and upon re-categorization by the religious group, Christians were the majority (94.8%). Only 30.2% of the girls were using modern contraception at the time of the survey. Depo-Provera injection was the most popular kind of modern contraceptive used, 101(14.2%), followed by condoms, 72(10.0%). Contraceptive use was further re-categorized into 2: none-use and current use of modern contraception (Table 1).

Table 1: Distribution of sexually active adolescent girls by religion and current contraceptive use, KDHS 2014 (N=715)

	n(%)
Religion	
Roman Catholics	144(20.2)
Protestants	534(74.6)
Muslims	37(5.2)
Religion re-categorized	
Christians	678(94.8)
Muslims	37(5.2)
Current use of contraception	
Not using any contraception	476(66.6)
Use of a traditional method	23(3.2)
Periodic Abstinence	18(2.6)
Withdrawal	4(0.6)
Use of modern contraceptives	216(30.2)
Oral Contraceptive Pill	13(1.9)
Depo-Provera injections	101(14.2)
Condom	72(10.0)
Implants/Norplant	29(4.1)
Other modern methods	1(0.1)
Current use of modern contraception re-categorized	
None use	499(69.8)
Use of modern contraceptives	216(30.2)

The majority of the participants (35.3%) were 19 years of age, 63.7% being 18 to 19 years. Only 2.6% had no form of education, with most higher education (50.9%). Most of the girls (61.4%) had never been in a union, and a majority (71.2%) did not have any children. At least 42.8% were rich regarding their wealth status, and 61.1% were from rural Kenya (Table 2).

Modern CPR among Christians was 30.7% and among Muslims 21.1%. No evidence of an association was seen between modern contraceptive use and religion [OR=0.60(95% CI 0.26-1.38), p=0.23]. However, strong evidence of an association was seen with modern contraceptive use and having children [OR=5.39(95% CI 3.36,

8.63), p<0.001]. Those currently in a union were also more likely to be using modern contraceptives than those who had never been in a union [OR=1.82(95% CI 1.13, 2.94), p=0.01]. One's wealth status was also seen to be associated with modern contraceptive use, with the rich being more likely to use than the poor [OR=1.71(95% CI 1.06, 2.76), p=0.03]. An association was also seen with urban compared to the rural areas [OR=1.62(95% CI 1.05,2.52), p=0.03]. The education variable before recoding was found to be associated with the current use of modern contraception. However, the small numbers seen in the baseline category of no education generated confidence intervals that were too wide, necessitating the variable's recoding (Table 3).

Table 2: Distribution of sexually active adolescent girls by demographic and socioeconomic characteristics, KDHS 2014

	n(%)
Age (years)	
15	53(7.4)
16	82(11.5)
17	124(17.4)
18	203(28.4)
19	252(35.3)
Age re-categorized	
< 18years	260(36.3)
=> 18 years	455(63.7)
Education level	
No education	19(2.6)
Primary	332(46.4)
Secondary	320(44.7)
Tertiary	45(6.2)
Education re-categorized	
No education + Primary education	351(49.1)
Secondary + tertiary education	364(50.9)
Marital status	
Never in union	439(61.4)
Currently in union	253(35.4)
Formerly in union	23(3.2)
Number of living children	
0	509(71.2)
1	163(22.8)
2+	43(6.0)
Number of living children re-categorized	
0	509(71.2)
1+	206(28.8)
Wealth status	
Poorest	116(16.2)
Poorer	144(20.1)
Middle	149(20.9)
Richer	145(20.3)
Richest	161(22.5)
Wealth status re-categorized	
Poor	259(36.3)
Middle	149(20.9)
Rich	306(42.8)
Residence	
Rural	437(61.1)
Urban	278(38.9)

A majority of the respondents, Muslims (70.3%) and Christians (63.3%), were 18 years and above. Muslims were 67% less likely to have obtained higher education than the Christians [OR=0.33(95% CI 0.14, 0.75), p=0.01]. According to marital status, Muslims were almost four times more likely to currently be in a union when compared to the Christian [OR=4.27(95% CI 1.95, 9.35), p<0.001]. Also, as regards wealth status, the Muslims were 83% less likely to be in the middle class [OR=0.17(95% CI 0.04, 0.66), p=0.01 and 64% less likely to be rich when compared to Christians [OR=0.36(95% CI 0.16, 0.78), p=0.01 (Table 4).

All demographic and socioeconomic variables were taken into the final logistic regression analysis model. Religion was still not associated with the use of modern contraception among sexually active adolescent girls after adjusting for the other variables [OR=0.66(95% CI 0.29,1.49), p=0.32]. The only variable in this model associated with the use of modern contraception, after adjusting for the other factors, was the number of children. Those with at least one child were 8.4 times more likely to use modern contraceptive methods when compared to those without children [OR=8.40(95% CI 4.45,15.84), p<0.001] (Table 5).

Discussion

In this study, the modern CPR among sexually active adolescent girls in Kenya was 30.2%, with 30.7% of the Christians and 21.1% of the Muslims using modern contraception. This was similar to a study done among Nigerian undergraduate students, which found a prevalence of 34.2% (11). In Ghana, the CPR was lower at 18.3% among adolescent girls aged 15 - 19 (12). However, in a study done in Cape Verde, the modern CPR among adolescent girls between 15 - 19 was 50.6%, which was significantly higher than the range seen in most sub–Saharan African countries of 15% to 32% (13).

In this study, no association was found between the type of religion and modern contraceptive use among the sexually active adolescent girls, even on adjusting for other demographic and socioeconomic factors [OR=0.66(95% CI 0.29,1.49), p=0.32]. This meant that there was no evidence to reject the null hypothesis of there being no difference in modern contraceptive use between Christian and Muslim sexually active adolescent girls in Kenya. Therefore, the null hypothesis used in this study still stood. Similarly, no significant association was seen between religious affiliation

Table 3: Association between selected characteristics of sexually active adolescent girls and current use of modern contraceptives, KDHS 2014

Variable	Categories	Total (N)	Not using modern contraceptives n(%)	Currently using modern contraceptives n(%)	Odds Ratio of the prevalence of modern contraceptive use (95% CI)	P-value*
Religion	Christians	678	470(69.3)	208(30.7)	1.00	
	Muslims	37	29(78.9)	8(21.1)	0.60(0.26, 1.38)	0.23
Age (years)	<18	260	194(74.6)	66(25.4)	1.00	
	=>18	455	305(67.1)	150(32.9)	1.44(0.90, 2.32)	0.13
Education level	None	19	18(96.1)	1(3.9)	1.00	
	Primary	332	234(70.5)	98(29.5)	10.22(1.63,64.28)	0.01
	Secondary	320	214(66.8)	106(33.2)	12.15(1.92,76.88)	*0.01*
	Tertiary	45	33(74.4)	11(25.6)	8.42(1.03,69.22)	0.05
Education level	None/Primary	351	252(71.9)	99(28.1)	1.00	
	Secondary/tertiary	364	247(67.8)	117(32.2)	1.22(0.77,1.93)	0.40
Marital status	Never in union	439	328(74.6)	111(25.4)	1.00	
	Currently in union	253	156(61.7)	97(38.3)	1.82(1.13, 2.94)	0.01
	Formally in union	23	15(66.8)	8(33.2)	1.46(0.35, 6.12)	0.60
Children	0	509	410(80.5)	99(19.5)	1.00	
	1+	206	89(43.4)	117(56.6)	5.39(3.36,8.63)	<0.1
Wealth status	Poor	259	195(75.3)	64(24.7)	1.00	
	Middle	149	108(72.0)	41(28.0)	1.19(0.66, 2.15)	0.57
	Rich	306	196(64.1)	110(35.9)	1.71(1.06, 2.76)	0.03
Residence	Rural	437	322(73.8)	114(26.2)	1.00	
	Urban	278	177(63.5)	102(36.5)	1.62(1.05,2.52)	0.03

*OR p-values

Table 4: Association between selected characteristics of sexually active adolescent girls and religious affiliation

Variable	Categories	Total (N)	Christians n(%)	Muslims n(%)	Odds Ratio (95% CI)	P-value*
Age (years)	<18	260	249(36.7)	11(29.7)	1.00	
	=>18	455	429(63.3)	26(70.3)	1.48(0.76,2.89)	0.25
Education level	None/Primary	351	324(47.7)	27(75.0)	1.00	
	Secondary/tertiary	364	355(52.3)	9(25.0)	0.33(0.14,0.75)	0.01
Marital status	Never in union	439	428(63.1)	11(29.7)	1.00	
	Currently in union	253	228(33.6)	25(67.6)	4.27(1.95,9.35)	<0.001
	Formally in union	23	22(3.2)	1(2.7)	1.94(0.45,8.45)	0.38
Children	0	509	484(71.4)	25(67.6)	1.00	
	1+	206	194(28.6)	12(32.4)	1.25(0.63,2.46)	0.53
Wealth status	Poor	259	236(34.8)	23(65.7)	1.00	
	Middle	149	147(21.6)	2(5.7)	0.17(0.04,0.66)	0.01
	Rich	306	296(43.6)	10(28.6)	0.36(0.16,0.78)	0.01
Residence	Rural	437	412(60.8)	25(67.6)	1.00	
	Urban	278	266(39.2)	12(32.4)	0.75(0.39,1.46)	0.40

*OR p-values

Table 5: Multivariate logistic regression model for the association of religion and current use of modern contraception among sexually active adolescent girls adjusted for other demographic and socioeconomic factors: KDHS 2014

		Adjusted OR (95%CI)	P-value
Religion	Christians	1.00	
	Muslims	0.66(0.29,1.49)	0.32
Other variables in the model			
Age	<18	1.00	
	=>18	0.78(0.47,1.31)	0.35
Education level	No education/Primary	1.00	
	Secondary/tertiary	1.71(0.94,3.10)	0.08
Marital status	Never in union	1.00	
	Currently in union	0.82(0.43,1.55)	0.54
	Formerly in union	0.59(0.14,2.48)	0.47
Number of living children	0	1.00	
	1+	8.40(4.45,15.84)	<0.001
Wealth status	Poor	1.00	
	Middle	1.30(0.65,2.58)	0.46
	Rich	1.40(0.71,2.74)	0.33
Residence	Rural	1.00	
	Urban	1.42(0.80,2.51)	0.23

and contraceptive use in the Ghanaian adolescent study (12). However, different findings were reported in studies done on all women of reproductive age. Abdulla found evidence of an association between religion and the use of modern contraception (p<0.001), with Muslims being 50% less likely to use modern contraception when compared to Christians (10). In another study done in Ethiopia among all women of reproductive age, religion was also associated with modern contraceptive use. The Muslims were less likely than the orthodox Christians to use modern contraception [aOR=0.35(95% CI 0.21-0.60)] (14). In this 2014 KDHS analysis, there was evidence to suggest that Muslims were less educated and poorer than Christians (p=0.01). Similar findings were found in the studies by Abdulla and Wusu (10,15). This is thought to explain the lower modern CPR in Muslims compared to Christians.

As regards the other socio-demographic factors, on bivariate analysis, a strong association was seen between modern contraceptive use and having children [OR=5.39(95% CI 3.36, 8.63), p<0.001]. Similarly, in Zimbabwe, the percentage of adolescent women with at least one child using modern contraception was eight times higher than those with no children (61% vs. 7.6%), p<0.001 (16). The reason being once the adolescent girls had proven their fertility, they were more likely to start using contraception. In the 2014 KDHS analysis, those currently in a union were also more likely to use modern contraception than those who had never been in a union [OR=1.82(95% CI 1.13, 2.94), p=0.01]. The Ghanaian study had similar findings, with married adolescents being four times more likely to use contraceptives compared to the unmarried ones [OR=4.75(95% CI 2.48,4.86), p<0.001] (12). The 2014 KDHS analysis found that girls' wealth status was also associated with modern contraceptive use, with the rich being more likely to use than the poor [OR=1.71(95% CI 1.06, 2.76), p=0.03]. It was also seen that those living in urban areas were 1.6 times more likely to use modern contraceptives compared to their rural counterparts [OR=1.62(95% CI 1.05,2.52), p=0.03]. However, in a Ghanaian study, no significant relationship was found between the girls' wealth status and place of residence and their modern contraceptive use (12). In Zimbabwe, the wealth index and education level of the adolescent girls did not show any significant association with the use of modern contraception (16).

On multivariate analysis, evidence of association with the use of modern contraception was only seen with having children, with those with one or more children being eight times more likely to be on modern contraception compared to those with no children [OR=8.40(95% CI 4.45,15.84), p<0.001]. This was consistent with the Zimbabwean study where adolescent girls with at least one child were more likely to be using modern contraceptives (p<0.001) (16).

Study strengths and limitations

One of this study's strengths was the utility of secondary data from a nationally-representative survey (the KDHS 2014). All the 47 counties of the Republic of Kenya were covered, making the results generalizable to the Kenyan 15-19-year-old adolescent population. During analysis, adjustment for sample weighting and clustering using STATA svy commands was done, further improving the generalizability and precision of the study results. Also, the information collected was factual and not subject to recall bias. Asking the girls about current contraceptive use also mitigated recall bias.

An assumption was made that all Christians were influenced the same way and that Muslims were influenced differently from Christians. Therefore, combining Catholics and Protestants could have been a limitation. Varying religiosity levels could apply to both Christians and Muslims, such that it is not about the doctrine but the application of the doctrine in the various groups (17). This could explain why no difference in contraceptive use was seen between Christians and Muslims. Also, the use of secondary data from the KDHS 2014 was a limitation in that the survey was done for different purpose from this study with different questions in mind. Also, a cause-effect relationship could not be derived from the KDHS data because a cross-sectional study design had been utilized in the KDHS (2). The KDHS 2014 did not collect data on ever use of contraceptive methods and only collected data on current use. Therefore, this could lock out sexually active adolescent girls, who may have had sex in the last 12 months preceding the DHS but were not currently having sex and therefore may not have been on a contraception method at the time of the survey. This could be explained by the fact that teenagers and youth tend to be inconsistent users of contraception depending on whether or not they have a partner and the type of relationship with the sexual partner (18,19). More married adolescents tend to be on contraception, as seen in the study by Hounton et al. (20). However, most of the girls in this study were not in a union at the study's time (64.6%). This could explain the low modern CPR found in our study. Also, the interviews were conducted by adults on adolescent girls. This might have led to underreporting and misreporting by the girls about their sexuality and contraceptive use. Adults have been known to admonish adolescents about their sexuality and refusal to abstain from sex (21).

Conclusion

The modern contraceptive prevalence rate among sexually active adolescent girls between 15 - 19 years in Kenya was low. Also, there was no association between religion and contraceptive use among sexually active adolescent girls when adjusted for socioeconomic and demographic factors, even in sexually active adolescent girls with children.

Recommendations

Efforts to improve modern contraceptive use are required in all religious groups of sexually active adolescent girls in Kenya. This will be in line with sustainable development goal 3, target 3.7 that states 'By 2030, to ensure universal access to sexual and reproductive health-care services, including family planning, information and education, and the integration of reproductive health into national strategies and programs (22). County governments should initiate programs on women empowerment, specifically programs emphasizing the importance of having an empowered young generation. Future research could investigate differences between Protestants and Catholics, which this study did not have sufficient power to do.

References

1. WHO. Adolescent pregnancy. 2018 [Online] Available at: https://www.who.int/news-room/fact-sheets/detail/adolescent-pregnancy [Accessed 6 August 2020].

2. Kenya Demographic and Health Survey 2014. ICF Macro ed. Calverton(Maryland): Kenya National Bureau of Statistics (KNBS) and ICF Macro. 2015.

3. Banke-Thomas A, Banke-Thomas O, Kivunani M, Ameh CA. Maternal health services utilization by Kenyan adolescent mothers: Analysis of the Demographic Health Survey 2014. Sex Reprod Healthc. 2017;12:37-46.

4. Yardley E. Teenage mothers' experiences of stigma. J Youth Stud. 2008;11(6):671-684.

5. Moreau C, Trussell J, Bajos N. Religiosity, religious affiliation, and patterns of sexual activity and contraceptive use in France. Eur J Contracept Reprod Health Care. 2013;18(3):168-180.

6. Ohlendorf J, Fehring RJ. The Influence of Religiosity on Contraceptive Use among Roman Catholic Women in the United States. Linacre Q. 2007;74: 135-144.

7. Ibrahim HA. Factors affecting the practice of family planning among Muslims. A case study of Majeno, Nairobi, Kenya. Masters dissertation: the University of Nairobi, Department of Philosophy and Religious Studies. 2015

8. Do M, Kurimoto N. Women's empowerment and choice of contraceptive methods in selected African countries. Int Perspect Sex Reprod Health. 2012;38(1):23-33.

9. Nsanya MK, Atchison CJ, Bottomley C, Doyle AM, Kapiga SH. Modern contraceptive use among sexually active women aged 15–19 years in North-Western Tanzania: results from the Adolescent 360 (A360) baseline survey. BMJ Open. 2019; 9(8): e030485

10. Abdulla S. Religious Affiliation and Contraceptive use in Kenya. Research Report: the University of Witwatersrand, Faculty of Humanities, School of Social Sciences, Department of Demography and Population Studies. 2014

11. Arowojolu AO, Ilesanmi AO, Roberts OA, Okunola MA. Sexuality, Contraceptive choice and AIDs awareness among Nigerian undergraduates. Afr J Reprod Health. 2002;6(2):60-70.

12. Nyarko SH. Prevalence and correlates of contraceptive use among female adolescents in Ghana. BMC Women's Health, 2015;15(60):1-6.

13. Tavares CM, Schor N, Junior IF. Contraceptive use and associated factors among adolescents on Santiago Island - Cape Verde - Western Africa. Revista Brasileira de Saúde Materno Infantil. 2010;10(2):229-236.

14. Tigabu S, Demelew T, Seid A, Sime B, Manyazewal T. Socioeconomic and religious differentials in contraceptive uptake in western Ethiopia: a mixed-methods phenomenological study. BMC Women's Health., 2018;18(1):85.

15. Wusu O. Religious influence on the nonuse of modern contraceptives among women in Nigeria: a comparative analysis of 1990 and 2008 NDHS. J Biosoc Sci. 2015;47(5):593-612.

16. Ngome E, Odimegwu C. The social context of adolescent women's use of modern contraceptives in Zimbabwe: a multilevel analysis. Reprod Health. 2014;**11**(1):64. doi: 10.1186/1742-4755-11-64

17. Edwards LM, Haglund K, Fehring RJ, Pruszynski J. Religiosity and sexual risk behaviors among Latina Adolescents: Trends from 1995 to 2008. J Women's Health. 2011;**20**(6):871-877.

18. Mehra D, Agardh A, Petterson KO, Östergren PO. Nonuse of contraception: determinants among Ugandan university students. Glob Health Action. 2012;**5**(1): doi: 10.3402/gha.v5i0.18599.

19. Tamang L, Raynes-Greenow C, McGeechan K, Black K. Factors associated with contraceptive use among sexually active Nepalese youths in the Kathmandu Valley. Contracept Reprod Med. 2017;2(13): https://doi.org/10.1186/s40834-017-0040-y

20. Hounton S, Barros AL, Amouzou A, Shiferaw S, Maïga A, Akinyemi A, et al. Patterns and trends of contraceptive use among sexually active adolescents in Burkina Faso, Ethiopia, and Nigeria: evidence from cross-sectional studies. Glob Health Action. 2015;8:29737. doi:10.3402/gha.v8.29737.

21. Wood K, Jewkes R. Blood Blockages and Scolding Nurses: Barriers to Adolescent Contraceptive Use in South Africa. Reprod Health Matters. 2006;14(27):109-118.

22. The United Nations. Sustainable Development Goals. 2016 [Online] Available at: https://www.un.org/sustainabledevelopment/health/ [Accessed 4 September 2020].