

DOI: <https://dx.doi.org/10.18203/2320-1770.ijrcog20214349>

Systematic Review

Knowledge and attitude towards contraceptive use among adolescents in Africa: a systematic review

Shallon Atuhaire*, Jonas Ngendakumana, Ali Galadima,
Ayoub Adam, Rodrigue B. Muderhwa

Department of Public Health, Cavendish University Uganda, Kampala, Uganda

Received: 12 September 2021

Revised: 12 October 2021

Accepted: 13 October 2021

***Correspondence:**

Dr. Shallon Atuhaire,

E-mail: satuhaire@cavendish.ac.ug

Copyright: © the author(s), publisher and licensee Medip Academy. This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

ABSTRACT

A 46% rate of unintended pregnancies among adolescents in Africa is a glaring notification of the barriers to contraception. There is little documentation of the knowledge and attitude towards contraceptive use among adolescents in Africa especially from systematic review perspective, which purposed this study. An E-literature search of the studies on the topic was conducted through PubMed, and Google Scholar, considering a period between January 2015 to August 2021. The search strategy used; “knowledge and attitude towards contraceptive use among adolescents in Africa”, which was sorted by date. The search resulted in 14,468 journal articles: 14,300 from Google Scholar, and 168 from PubMed but only 27 studies qualified for inclusion. Results indicate inadequate knowledge of contraception but this varies by age, level of education, marital status and geographical distribution. The majority of adolescents are aware of emergency contraception and traditional methods such as abstinence, lactational amenorrhea, and coitus interruptus. Even with this knowledge, a larger proportion of adolescents do not use contraception due to limited access, misinformation on side effects and the negative attitude shaped by religious and socio-cultural beliefs and attitude of health care providers to them. Adolescent boys have more knowledge of contraception than the adolescent girls do but their use of contraceptives is not well documented. The low level of knowledge and negative attitude limits the use of these services and could be addressed by a well-informed approach on sexuality literacy and contraception that involves not only adolescents but also parents, the community and health care providers.

Keywords: Adolescents, Attitude towards contraception, Contraception, Contraceptive use, Knowledge of contraception, Systematic review

INTRODUCTION

Low contraceptive use among adolescents has received global attention in the recent years, as an issue arising from several reports on contraceptive use.^{1, 2} Despite the risks associated with early pregnancies, various surveys indicate that sexually active adolescents, who are 15-19 year old, rarely use contraceptives. Globally, there are about 1.2 billion adolescents aged between 10 to 19 years and 86% of them live in developing countries. Approximately, 23 million of them have an unmet need

for modern contraception and they risk getting unintended pregnancy. Whereas a half of the women aged, 15 to 19 are victims of unintended pregnancies on a global map, 46% of them live in Africa.^{3,4} This is closely associated with poor access and utilization of contraceptive services.² Contraceptive use refers to the intentional prevention of pregnancy while using either chemicals, devices, natural or surgical procedures.⁵ Traditional methods for example; rhythm/calendar method, withdrawal, abstinence and lactation amenorrhea are commonly used but also modern methods such as; male and female condoms, oral contraceptive pills

(OCs), injectable, implants, Intra uterine devices (IUDs), and sterilizations.^{2,3} The use of contraception among adolescents is hinged on the desire to maintain a physical relationship free of fear of unwanted pregnancies and it allows freedom of when to have children, spacing and the number. However, contraceptive prevalence rate is currently as low as 25% in Middle and Western Africa, about 43% in East Africa and above 70% in Europe, and America. Again, the African regions have high adolescent birth rates at 115 per 1,000 girls compared to the global rate 92 per 1000 births among girls aged 15 to 19 years.⁶ Besides contraception, adolescents and youth in the developing world still face relatively similar challenges around sexual and reproductive health including access to these services and age appropriate information. The impact has been observed in socio-cultural aspects such as child marriage, teenage pregnancies that are unintended, HIV transmission and low coverage of modern contraceptives.⁷ This indicates a wide gap between regions hence contraceptive use remains an issue of great public health concern in Africa. In North America, adolescents have a considerable knowledge of contraception about etonogestrel implants, natural family planning and intra uterine devices (IUDs).⁶ This study also indicated that there was inadequate knowledge regarding other methods of contraception and the misinformation about side effects. In Africa, one among every five women still has an unmet need for family planning, which has contributed to high levels of unintended pregnancies, maternal and child morbidity, and mortality in the region.⁶ The use of contraceptives is greater among married adolescents than those who are not in union. In Kenya, contraceptive use among adolescents was 19.6% in 2015, and during that same period, about 36% of adolescents gave birth before reaching 19 years.⁸

A systematic study conducted in Sub-Saharan Africa noted that misconceptions regarding the side effects of contraceptives, disapproval of the male partner, and cultural norms around the use of contraceptives prohibited the use of contraception.⁹ These factors had earlier been mentioned in another study conducted among adolescents in selected Senior Secondary Schools in Ghana. The study indicated that the youth and adolescents are highly exposed to unprotected sexual intercourse that may result in unintended pregnancies. Unprotected sex could also result in short and long-term consequences including reduced social status, social stigma, and violence (forced marriage, rejection, and physical forms of violence by family members) and other health consequences such as obstetric fistula, infections, eclampsia, puerperal endometritis and Disability-Adjusted Life Years (DALYs). It is perplexing how complex barriers that increase adolescent vulnerability to poor sexual and reproductive outcomes are still extensive in developing countries two decades into the 21st Century.¹⁰ Adolescent knowledge and attitude are pertinent in the prevention of unintended pregnancies. In

fact, health literacy has been known to increase the ability to seek health information and to make informed choices regarding reproductive health.¹¹⁻¹³ Whereas several studies highlight an unmet need for modern contraception among adolescents, and the weighty risks involved, several of them are contextualized. A paucity of documentation of the knowledge and attitude towards contraceptive use among adolescents on a continental scale is until to date glaring which purposed this study. The study answered the following specific research questions: what knowledge of contraceptive use do adolescents in Africa have? What is the attitude of adolescents towards contraceptive use in Africa? The findings of this study provide a generalized documentation of the subject and could be a benchmark for stakeholders to provide relevant sexual and reproductive health services to improve adolescent health and contribute Sustainable Development Goals (SDGs) especially goal 3.

METHODS

An E-literature search of the studies on the topic was conducted through PubMed, and Google Scholar. A triangulation of studies that had approached the topic using various methods, considering a period between 2015 to August 2021 was done. The search strategy used was; knowledge and attitude towards contraceptive use among adolescents in Africa, which was sorted by date. The search resulted in 14468 studies; whereby, 14,300 were found on Google Scholar, and 168 on PubMed. Using Cochrane review protocol, the quality and relevance of the collected studies were assessed systemically, and eventually, 14300 studies were screened for eligibility. A total of 360 studies were further screened and only 27 studies qualified for analysis. The inclusion and exclusion criteria are indicated in (Figure 1). The analysis covered the year of publication, the purpose of study, the method used, knowledge of contraception and attitude towards its use, as indicated in (Table 1).

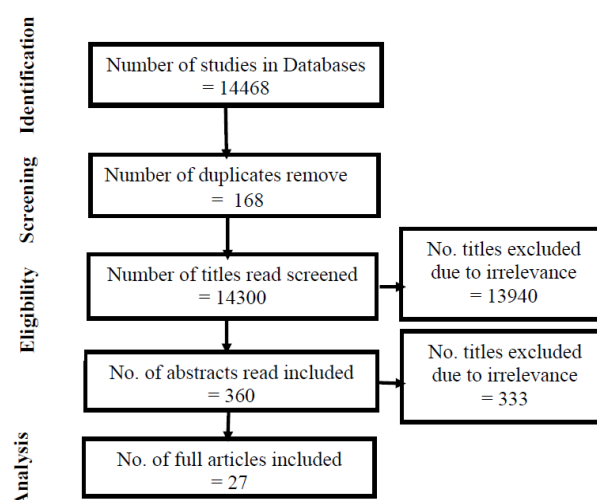


Figure 1: PRISMA flowchart of reviewed studies.

RESULTS

Adolescents' knowledge of contraceptive use

Adolescents' sexual and reproductive health needs remain largely unmet.¹³ Over 20 million of them are not able to access and use a modern contraceptive method. Even when the level of knowledge of contraception is high, it does not necessarily translate into high utilization of these services. For instance, a study carried out in Zimbabwe in 2017, found that knowledge about modern contraceptives was high and universal among adolescents but contraceptive use was 21%.¹⁴ Contraceptive use among adolescents is generally not universal across Africa and other low and middle-income countries.¹⁵ A study that was conducted in Kenya by Kinaro et al, in 2015 found that contraceptive use among adolescents was 8.6%. The low contraceptive use was attributed to unfavourable perceptions among not only adolescents but also the parents, and community members.⁸ The discussion around the topic between a parent and her/his child is considered inappropriate and in some communities it is a taboo.^{16,17} Again, the teachers and parents have inadequate information and skills to guide discussions with adolescents sexuality.

The quality of the youth-friendly services offered, the information shared and approaches used affect contraceptive uptake and use among the adolescents. Even with information, parent and sexual partners may not be supportive to the use of contraception among adolescents.¹⁸ A study carried out in Democratic Republic of Congo (DRC) reported relative similar results indicating that premarital sexual debut was majorly sanctioned by peers and that adolescents had inaccurate information that certain pharmaceutical products such as decaris could prevent pregnancy.¹⁹

A study conducted in Nigeria found that 85.6 % of the adolescent participants had knowledge of emergency contraception, its ability to prevent unwanted pregnancy and the duration of its efficacy. However, they did not have adequate knowledge of other contraceptive methods.²⁰ The same study did not show a correlation between levels of knowledge and utilization of the contraceptive method they were familiar with. Another study in Demographic Republic of Congo, reported that 90% of the participants had adequate knowledge of at least a given contraceptive method.²¹ In Ethiopia, less than 50% had adequate knowledge of contraception.²² Relatively similar findings were reported later in the same country with a slight increase in the knowledge of contraception.²³

A study by Crawford et al also reported increased levels of knowledge on contraception generally and its use among adolescents in South western Nigeria. However, sexually active adolescents had greater level of knowledge compared to their counterparts who were less sexually active.²⁴ Another study yet in Nigeria,

highlighted that, overall, adolescent boys were more knowledgeable on matters pertaining contraception compared to adolescent girls. Nonetheless, 61.5% of adolescent girls who participated in the study had sufficient knowledge of contraceptives. This orientation was linked to proper and adequate sex education, and provision of outreach services. The same study did not find a significant difference in adolescent girls' age categories and contraceptive use.²⁵ Like Ezenwaka's study which indicated high level of awareness for contraceptive use, a study that was conducted in Tanzania by Kara et al indicated the same. However, participants indicated low utilization of contraception services because they felt embarrassed to ask for these services.²⁶

Table 1: The knowledge and attitude towards contraceptive use among adolescents in Africa.

Knowledge	Attitude
Low level of knowledge of contraception	A larger proportion indicate favourable attitude towards contraception but this is not matched with the use of contraception
Knowledge of contraception was universal in some communities. Determined by the level of education and communication with a male partner	Negative perceptions related to long term infertility and infections
Use of contraception depends on personal knowledge	Influenced by health worker's attitude
More educated girls had more knowledge on contraception	Mothers', provider and community judgmental attitude shape adolescents' attitude towards contraception
Community health volunteers (CHVs) discuss condom use only	It is culturally not appropriate among the Massai for parents to discuss sexuality with their children
CHVs are not supportive	
Incorrect knowledge of ovulation/safe days	Women's misconceptions of contraceptive side effects
Some level of knowledge about traditional contraceptive methods	Negative perception on modern contraceptives
	Sociocultural norms and religion affect attitude towards contraception

A study conducted in Ghana reported an association between knowledge, use of contraceptives and adolescent pregnancy. The study indicated that, 61.2% of the adolescent girls had knowledge about traditional

contraceptive methods. Non-pregnant girls had more knowledge about contraceptives than those who were pregnant. Despite the level of knowledge of contraception, there was no significant relationship with their use.¹⁶ Another study conducted in Kenya indicated a relationship between the levels of education and use of modern contraceptive methods as well as the use of long-acting reversible contraceptive.¹² A study carried out among 29 African Countries in 2020 reported that adolescents aged 15-19 generally, have inadequate knowledge of ovulation hence may not be able to use calendar method and are at risk of getting unintended pregnancy than older women. The study recommends improvement in the dissemination of fertility knowledge and providing community-based forums for the adolescents to share their experiences.²⁷ Other studies carried out in the Sub-Saharan Africa noted that the level of a women's education influences contraceptive use.^{9,28} In Zambia, contraceptive use among adolescents remains low despite the often-reported high levels of unwanted pregnancies among adolescents. Findings of a study by Chola et al indicated that contraceptive use among adolescents was significantly associated with the level of education among other factors. Nonetheless, older adolescent girls with a higher level of education were more likely to use contraception compared to younger adolescent girls with the same level of education.² Another study conducted in Uganda among the Somali community indicated that the use of modern contraceptive method was independent of the level of education. The participants obtained information on contraception from the health workers.²⁹

A study conducted among the university students in Uganda by Nsubuga et al indicated that 93% had a high level of knowledge of contraception and 46.6% reported that they were using a given type of contraception at the time with condom being the commonest method. The use of contraception was greater among those in second year of academic study and above compared to those in year one. Condom use was the most known and predominantly used.³⁰ The other methods were: safe days and withdrawal.¹ Some adolescents have inadequate knowledge of any of these methods and this could be attributed to lack of awareness of contraception, access, poor parent-child communication and fear of likely side effects.^{9,25} The noted side effects were irregular menstrual cycle and changes in body weight. Lack of awareness of contraceptives as well as information on where to obtain them was generally associated with the low level of education. However, some adolescents may not be bold enough to seek sexual and reproductive health services even when they have adequate knowledge about them.²⁵

Adolescents' attitude towards contraceptive use

Adolescents and youth are considered the most important group in a society, but given their social demographic characteristics, the majority go through their reproductive years with very little if any access to sexual and

reproductive health (SRH) services.²⁰ The attitude of adolescents towards contraception is not well documented. However, a few studies on adolescents and contraception indicate that adolescents have negative perceptions towards modern contraception due to the perceived side-effects and misinformation around them.⁹ Other limiting factors in relation to perception included shame, stigma and judgmental attitudes of health providers.¹⁹ A study that was carried out in Nigeria in 2016 reported that adolescents largely have a positive attitude towards the use of emergency contraception. This was reported among 51% of the participants who indicated that they could use them in case of need. In the same study, some young girls considered the use of emergency contraceptive pills to be for promiscuous girls. They never thought that married women should take them. In this study therefore, adolescents considered the use of emergency contraception to be a sin. Parental attitude towards contraceptive use was reported as a significant factor that determined adolescent girls' use of contraceptives.²⁰ Contrary to Onasoga's study where adolescents did not think that married women should use contraception, a study done in Kenya in KEEA Municipality reported that adolescent girls perceived the use of contraceptives to be for only married adults and that it could lead to infertility. In this study, there was an association between attitudes and use of contraceptives as well as attitude towards contraceptives and adolescent pregnancy. Such perceptions as adolescents who use contraceptives are a bad character that should be avoided was high among non-pregnant adolescents. The majority of the non-pregnant adolescents also reported that it feels awkward to receive and share such information with parents.¹⁶ A study by Ezenwaka et al., (2020), reported that adolescents feel shy to open up and share with adults about Sexual and Reproductive Health (SRH) issues. Many of them have a nonchalant behaviour, which makes them to miss-out on opportunities that provide right information and services. Different factors contribute to this kind of attitude among them include parent attitude, communication on such issues, and opinion towards sexuality education. In addition, health workers' judgmental attitude, and societal shaming affect adolescents' efficacy to visit clinics for contraception.²⁵ Providers' perceptions and negative attitude are reported in several studies as the main barriers to contraceptive use at the health service level. Religious intolerance of young girls who are known to be involved in fornication preclude such young girls from freely and openly accessing and using contraceptive services. Other factors include; negative peer influence and tabloids, inadequate sexuality education in schools, and lack of supportive social networks.^{18,25,31}

Community perspectives may also limit contraceptive use among adolescents. In a study conducted in Kenya, adolescents showed low scores to the need for open discussions with their parents and close relatives about contraceptives. The study suggested open talks with adolescents, peer support and integration of programmes

that encompass comprehensive sexuality education in various adolescents and youth projects and curriculum. This would probably increase access, provision and utilization of SRH information and services.¹⁷ Some parents may be unapproachable and this makes it difficult for adolescents to seek SRH advice. A group of Community Health Volunteers (CHV) in Kenya preferred to share information on condom use than any other modern method of contraception because condom use does not only protect against pregnancy but also Sexually Transmitted Infections (STIs). The CHV reported that it is culturally inappropriate for Maasai parents to share such information with their young daughters.¹⁷ Besides culture, this attitude is also shaped by religion.¹ In another study conducted in Kenya, maternal approval was associated with higher odds of contraceptive use among adolescents. Therefore, the social and physical environment has a great influence on the perceptions on reproductive health and contraceptive use.⁸ Contrary to

several studies reporting negative attitude towards contraceptive use among adolescents, a study in South Africa indicated that 98.4% had positive attitude.³² This was backed up by another study in Ethiopia which indicated that adolescents had favorable attitude towards contraceptive use.²³ Those who disapprove contraceptive use, do so on religious grounds.³² Indeed religious and social beliefs influence attitude greatly. This is further highlighted in a study carried out in Uganda in 2016 where the Seventh Day Adventist girls aged 15 to 19 perceived contraceptive use as a wrong behaviour that young girls of their age should not indulge in.³⁰ Also, the fact that sexual debut before marriage is an unacceptable social behaviour, sexuality education is not given which results in low contraceptive use.¹⁴ A summary of these findings is indicated in (Table 1). The general metadata from which the summarised information in (Table 1) is derived is indicated in Table 2.

Table 2: Metadata on the knowledge and attitude towards contraceptive use among adolescents in Africa.

Author /Country	Aim	Methods	Knowledge of contraceptive use among adolescents	Attitude of adolescents towards contraceptive use
Chola et al 2020 Zambia	To examine the patterns, trends, and factors associated with contraceptive use among adolescents in Zambia over 1996-2014	Descriptive statistics and estimation of multilevel logistic regression models	Generally low from 1996 to 2014 in Zambia Determined by the level of education	Influenced by health worker's attitude
Bekele et al 2020 Ethiopia	To assess the level of knowledge and attitudes towards family planning, associated factors among reproductive age women in emerging regions of Ethiopia	A communitybased crosssectional study structured questionnaire	Less than half, 43.4% of the participants had adequate knowledge of contraception	A larger proportion 52.3% had favourable attitude towards contraception
Semachew Kasa et al 2018	To assess the knowledge and attitude regarding family planning and practice of family planning among women of reproductive age group in South Achefer Dist. Northwest Ethiopia, 2017	A communitybased crosssectional study using a questionnaire	Though with proper knowledge of contraception but it was relatively low compared to other studies	Positive attitude towards contraceptive use
Paquette et al 2018 Kenya	To examine the association between three social determinants wealth, education, and residence and two contraceptive outcomes use of long-acting reversible contraceptive use	Quantitative survey	Use of contraception depends on personal knowledge. More educated girls had more knowledge on contraception	Negative perceptions related to longterm infertility and infections
Mwaisaka et al 2021 Kenya	To explore and compare adults'/parents' and adolescent girls' narratives and perspectives about contraception in Narok and Homa Bay counties, Kenya	Qualitative using indepth interviews FDGs	Poor contraceptive knowledge. Community Health Volunteers CHVs discuss condom use only. CHVs are not supportive	Attitude is a stringent factor. Community attitude. Mothers' judgmental attitude. Provider attitude. It is culturally not appropriate among Massai. Parenting and

Continued.

Author /Country	Aim	Methods	Knowledge of contraceptive use among adolescents	Attitude of adolescents towards contraceptive use
				family related attitude. Adults' knowledge of contraception and communication skills
Kinaro et al 2015 Kenya	To understand the roles of perceptions and barriers on contraceptive use	Mixed method study	Low level of knowledge of contraception	Unfavorable perceptions among adolescents, parents and teachers contributed to low contraceptive use. Youth friendly services are offered on days when adolescents are at school. Maternal approval is significant in the adolescents' attitude and use of contraception
Ahinkorah et al 2021 Ghana	To assess the linkages between knowledge, attitudes, and use of contraceptives and adolescent pregnancy in one of the highly affected Municipalities in Ghana	Quantitative using adjusted and unadjusted odds ratios	Low knowledge of modern contraception Some level of knowledge about traditional contraceptive methods	Sociocultural norms affect attitude towards contraception
Blackstone et al 2017 Sub Saharan Africa	To systematically review the literature regarding factors influencing contraceptive use in subSaharan Africa between 2005 and 2015	Systematic review of all studies	Level of education influences contraceptive use positively. Communication with a male partner	Women's misconceptions of contraceptive side effects. Negative perception on modern contraceptives
Kwabena et al 2019 Sub Saharan Africa	To investigate the prevalence and determinants of unintended pregnancies among women in sub Saharan Africa	Quantitative using logistic regression analysis	Women with a higher level of education have less odds of unintended pregnancy	Not discussed
Iyanda et al 2020 29 countries in Africa	To examine the association between incorrect knowledge of ovulation and unintentional pregnancy and child among young women in Africa countries	Quantitative methods using Pearson's Chisquare, ttest, multiple logistic regression, and likelihood ratio test	Incorrect knowledge of ovulation/safe days	Not discussed
Sserwanja et al 2021 Uganda	To determine the factors associated with utilization of modern contraceptives among female adolescents in Uganda	A crosssectional study involving multivariable logistic regression	High level of education is associated with knowledge and utilization of contraception	Not discussed
Onasoga et al 2016 Nigeria	To assesses the adolescents' knowledge, attitude and utilization of emergency contraceptive pills ECP in Amassoma Community, Bayelsa State, in the Niger	Quantitative methods	High level of knowledge about emergency contraceptives	High positive attitude

Continued.

Author /Country	Aim	Methods	Knowledge of contraceptive use among adolescents	Attitude of adolescents towards contraceptive use
	Delta region of Nigeria.			
Ezenwaka et al 2020 Nigeria	To explore perceived barriers to utilization of contraceptive services by adolescents	Qualitative study using in depth interviews and focus group discussions	Inadequate awareness and poor knowledge of contraception Poor parental communication on SRH information	Nonchalant attitude of adolescent. Health workers' negative attitude is a reason for low turnout of adolescents and youth in youth friendly centers – such attitude includes; yelling, scolding, and refusal/denial of services
MA & BA, 2018 Nigeria	To investigate the knowledge and use of contraceptives among female adolescents in selected secondary Schools in Ife Central Local Government Area of Osun State	Survey	adequate level of adolescent knowledge	Attitude is shaped by cultural and religious factors
Crawford et al 2021 Nigeria	To identify sexuality, fertility and contraceptive use characteristics of young unmarried girls in South Western Nigeria	A crosssectional baseline survey using quantitative methods	Increased level of knowledge	Increased positive attitude and behavior towards use of contraception
Jonas et al 2020 South Africa	To investigate perceptions of contraception services among AGYW who had been recipients of a combination HIV prevention intervention, to better understand factors affecting their access to and use of contraception services	Qualitative methods used in this study included focus group discussions FGDs and indepth interviews IDIs	SRH education, counselling, and provision of contraceptives are effective in increasing knowledge of sexuality and, contraceptive use.	Provider's attitude affects the adolescents attitude
Hlongwa et al 2021 South Africa	To assess knowledge and perceptions of healthcare providers regarding the use of modern contraceptives among adolescent girls in Umlazi township, KwaZuluNatal province.	Descriptive study using a structured questionnaire	Modern contraceptive users have good knowledge of different contraceptive methods	Providers' attitude may likely discourage younger women from seeking contraceptive methods in primary healthcare clinics, for fear of being judged
Tshitenge et al 2018 Botswana	To investigate the knowledge, attitude and practice KAP of HCPs towards the use of contraceptives in adolescents	Quantitative methods using a questionnaire	HCPs require sufficient knowledge to make an impact among adolescents	Adolescent's attitude is influenced by the HCPs positive attitude towards contraceptive use among adolescents so that they can easily prescribe for them
Bongongo et al, 2019 South Africa	To determine the knowledge, attitudes and practices of contraceptive methods among women seeking VTOP	A crosssectional survey was taken using a piloted, structured and self-administered questionnaire	Low	Positive attitude exhibited among the majority of participants
Kara et al	To assess the knowledge,	A cross-sectional	96% of the	64.6% feel

Continued.

Author /Country	Aim	Methods	Knowledge of contraceptive use among adolescents	Attitude of adolescents towards contraceptive use
2019 Tanzania	attitude, and practice of contraception among female undergraduates in Dodoma, Tanzania	study using descriptive static	participants were aware of contraception	embarrassed to buy or ask for contraception
Dennis et al 2017 Rwanda, Kenya and Uganda	To describe changes over time in contraceptive need, use, and sources of care among young women in four East African countries	Method mix	Knowledge has increased especially the use of injectable and this has gradually reduced the unmet need in East Africa	The poor attitude of health care providers limits adolescent capability to use contraception
Casey et al 2020a Democratic Republic of Congo	To analyse contraceptive use among sexually active young women aged 15–24 in the health zones served by the partners	Crosssectional population based survey –quantitative	Participants had knowledge of at least one method of contraception	Provider attitudes and reduce bias related to unmarried and adolescent women’s access to SRH services
Abdulahi et al 2020 Somalia	To describe modern contraceptive use and associated factors among married Somali women living in Kampala	A cross sectional survey quantitative	Use of a modern method was dependant on the level of education	Not indicated but was indicated as an area for future research
Moyo & Rusinga, 2017 Zimbabwe	To investigate knowledge, attitudes, beliefs and practices KABP pertaining to contraceptive use among adolescents	Triangulated both quantitative and qualitative methods	Knowledge of contraception is high	Attitude is shaped by religious faith and social cultural beliefs.
Deitch & Stark, 2019 Low and Middle Income Countries	To review the published literature in order to better understand the level of adolescent demand for contraception in LMICs and to explore what demand related indicators are being measured	A systematic review using a quantitative approach	Poor sexual and reproductive health knowledge. Knowledge of contraception is dependent on the level of education	Attitude determines which contraceptive method to use
Mbadu Muanda et al 2018 DRC	To contribute to the available evidence by examining adolescents’ and young people’s insights on their cultural norms, practices and attitudes towards SRH services	Qualitative methods	Low knowledge of contraceptive use	They feel ashamed and stigmatized. They also fear judgmental attitudes of health providers
Nsubuga et al 2016 Uganda	To determine knowledge, attitudes, perceptions and practices towards modern contraceptives and, sexual and reproductive health especially among the young female university students	Quantitative methods	Knowledge of contraception was universal	Perceived acceptability and contraceptive use were nearly universal

DISCUSSION

Access to contraception and age appropriate reproductive health information is a human right. It enables adolescents, youth and anyone else to make informed

choices, live healthy and productive lives and attain gender equality. The acceptance and use of a given method of contraception is dependent on one’s health literacy in the same arena.¹² However, a considerable proportion of adolescents and youth in Africa have an

unmet need for contraceptive use, signaling that probably their knowledge of contraceptive use could be low and perhaps their attitude could be negative.¹

Adolescents' knowledge of contraceptive use

Over all, findings of this study reported inadequate knowledge of contraceptive use among adolescents.^{13,25,27} Aligned with this study, are findings of a study conducted in Kenya where the overall use of contraceptives among adolescents was so low.⁸ Much as these studies report inadequate knowledge of contraception, other studies reported a high level of knowledge among adolescents.^{26,31} Nonetheless, a greater proportion of the participants in Kara's study noted that they could not use the contraceptives because they felt embarrassed to seek out these services. This implies that knowledge of contraception does not necessarily translate in its effective use. The use of contraception is not uniform across various sociodemographic characteristics.^{22,23} There are variations in age, place of residence, marital status, level of education, occupation, social economic status and exposure to social or mass media. The other variation lays in age at first sexual debut and in the general knowledge of contraceptive use. Accordingly, adolescents from the poorest households have a greater unmet need for contraception; hence a greater risk for unwanted teenage pregnancies.¹⁷ However, this need has been reducing over the years.³³ These studies were carried out in different settings but in the African region. Again, the variations in the knowledge of contraceptive use are between rural and urban areas with urban areas having a slightly higher level of contraceptive use.^{2,23} According to Chola, another variation lays between married adolescents and unmarried adolescents. The knowledge and use of modern contraceptive methods is greater among married adolescents aged 15 to 19 years compared to their unmarried counterparts. This implies that married adolescents acquire this knowledge from health care providers when they go for antenatal services and in the process of seeking to limit the number and space their children. Married adolescents are more confident in seeking these services. Another study indicated no significant difference in the knowledge and contraceptive use among unmarried adolescent girls of different age categories.^{1,14} This implies that unmarried adolescents have the same fears concerning seeking contraception. For example, they feel ashamed to seek such services due to misinformation and the fact that society perceives these services to be for married women.^{24,25} Apart from the discussed socio-demographic characteristics, other factors that affect knowledge of contraceptive use include policy, culture, religion and economic factors. According to Bekele et al adolescents who listen to radios and watch television are more exposed to such information. Therefore, access to such information and services from the parents, health care providers or mass media could improve utilization.²³ A study carried out in North America, on the knowledge on contraception and familiarity with different methods indicated that the

sexually active adolescents are familiar with long acting reversible contraceptives. The study highlighted internet connectivity as the main source of information.³⁴ In the United States of America (USA), people below the age of 20 are more concerned about unintended pregnancies, even when effective contraceptive methods are available and accessible. Comprehensive reproductive health counseling is highly recommended in the USA to encourage the use of a dual method strategy; for pregnancy prevention through a hormonal birth control procedure and the consistent use of male latex condoms to prevent sexually transmitted infections (STIs).³⁵

The low use of contraception among adolescents in developing countries has been linked to unfavorable perceptions and low support from peers, parents and teachers. Teachers and parents lack adequate information on sexuality issues and are not well equipped with the approaches to its discussion especially with their own children. Nonetheless, some studies reported a considerable level of knowledge of contraception among adolescents especially the emergency contraception²⁰ and traditional methods.¹⁶ However, adolescents with divergent knowledge and views on sexual and reproductive health and for the trainings to have in more cases undergone training in some aspect of sexual and reproductive health. For the trainings to making a lasting impact, they should have used more positive, age appropriate and acceptable approaches to adolescent.¹⁷ These studies were contextualized to particular settings. Onasoga's focus was on knowledge and attitudes towards emergency contraception.²⁰ Ahinkorah's focus was on adolescents' knowledge and attitudes with teenage pregnancy while Mwaisaka explored the parents' and adolescents' perceptions towards contraception.^{16,17} Unlike these studies which are contextualized, this very study covered a wider geographical area and amalgamates all these studies to explore mainly adolescents' knowledge and attitude towards contraceptive use. The inadequate knowledge of barrier and hormonal contraceptives expose adolescents to risky sexual behaviour. The adolescents' knowledge is also dependent on the providers' knowledge. However, less than half of the health care providers for contraception have sufficient knowledge.³¹ When providers are knowledgeable and are able to transfer the knowledge to adolescents. A greater proportion of those that have been trained will be able to train their peers. A study by Tshitenge et al found that 91.2% of respondents had adequate knowledge of the various methods of contraception and were confident to explain to fellow adolescents which methods to use and how.³⁶ A study conducted in Nigeria in 2019, reported that unintended pregnancies are not only common among adolescent girls and young women but all age categories of women.¹¹ The study noted that married women were 6 times more likely to report unintended pregnancy than those that are not in union. However, adolescent girls in low developed countries are more vulnerable and at a greater risk of getting unintended pregnancies, early marriages, and

unsafe abortion. In 2015, for example, 13 million adolescents were not able to access contraception and of these more than 30% resided in Africa.³⁷ The study discusses adolescent girls' rights to family planning and highlights how unintended pregnancies could apprehend one's educational goals other than adolescents' knowledge towards contraceptive use. Studies show evidence of a correlation between education and contraceptive use.¹¹ Women who have had no education are more likely to report unintended pregnancies, compared to those who have attained a certain level of education. Therefore, increased health literacy that covers contraceptive use is important to young girls to enable them make a correct assessment of the risk of becoming pregnant at a young age.¹²

Parents note that they often relegate the responsibility of discussing sexuality issues with their adolescent children to other adults in the community. This is because they lack knowledge of the concept, approach and skills of communicating with adolescents.¹⁷ This implies that projects that aim to train adolescents on sexual and reproductive health should include parents and the community to improve skills along content and effective communication.

Adolescents' attitude towards contraceptive use

Besides knowledge of contraception and its use, positive attitude towards contraception contributes significantly towards its use to protect against pregnancy in all age groups including adolescents. The findings indicated a considerable degree of positive attitude towards mainly emergency contraception and traditional methods.²⁰ However, some studies reported that contraception is for promiscuous girls.^{20,23} According to Bekele et al., (2020), positive attitude towards contraceptive use is determined by age, partner's level of education, listening to mass media such as radio and television, and adequate knowledge of contraception. However, this study does not cover adolescents only but all women of reproductive age.²³

In several other studies, adolescents perceive contraception to be for married women,^{2, 16, 23} hence this has affected the degree of use of contraception among adolescents. Again, adolescents are shy to share such information with adults and their courage to use them depends on community, peers, parents and health workers perceptions and supports.²⁵

According to Crawford et al social support is critical in ensuring that adolescents and youth utilize contraception. For example in their study in 2021 in Nigeria, adolescents who were not aware of where to access contraception and or who did not have anyone to confide in regarding this matter were less likely to use modern contraception. In addition, those who perceive their husbands and friends to be less supportive of the use of modern contraception

have lower odds of using modern contraception compared to those who have social support.²⁴

Adolescents' negative attitude towards contraception has been attributed to limit access to well packaged, age appropriate sexual and reproductive health services. In addition, the youth friendly services are offered Monday to Friday, days that the adolescents are at school.⁸ Poor parental communication on the subject makes them shun away from using them. Evidence indicates that a dialogue between a parent and an adolescent is an effective method of instilling values and enabling the effective utilization of sexual and reproductive information, and services.²⁵ To improve contraceptive use among adolescents and change their attitude positively, proper sex and sexuality education, orientation, and outreach services should be carried out.¹ Teachers, parents and health workers should be trained in comprehensive sexuality education to improve their capacity in such information, the youth-friendly services and counseling and guidance.^{8,11}

Limitations of the study

Some of the studies reviewed covered not only adolescents but women of reproductive age. These studies were considered because reproductive age starts from 15 to 49 years of age. Therefore, they provide the knowledge and attitude towards contraception among various age groups including adolescents. There is inadequate documentation of knowledge of contraceptive use among adolescents in North African countries. Therefore, original studies could explore this virgin area. The knowledge of contraceptives among adolescent boys was indicated by only one study of the reviewed and their attitude towards contraceptive use is not well documented, an area that future studies should explore.

CONCLUSION

Knowledge of contraceptive use among adolescents in Africa is inadequate and limited to traditional and emergency contraception. The use of these methods is also low due to socio-cultural beliefs and policy issues. A well-informed approach about sexuality literacy and sexual and reproductive health and rights that involves not only adolescents but also parents community members could be used to enhance support systems and improve the knowledge and attitude towards contraceptive use among adolescents.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: Not required

REFERENCES

1. Tchokossa MA, Adeyemi BA. Knowledge and use of contraceptives among female adolescents in selected senior secondary schools in ife central local

- government of osun state. *J Commu Med Health Edu.* 2018;08(03):1647-61.
2. Chola M, Hlongwana K, Ginindza TG. Patterns, trends, and factors associated with contraceptive use among adolescent girls in Zambia (1996 to 2014): a multilevel analysis. *BMC Womens Health.* 2020;20(1):185.
 3. World Fertility and Family Planning 2020: Highlights. Available at: https://www.un.org/en/development/desa/population/publications/pdf/family/World_Fertility_and_Family_Planning_2020_Highlights.pdf. Accessed on 20 July 2021.
 4. Munakampe MN, Zulu JM, Michelo C. Contraception and abortion knowledge, attitudes and practices among adolescents from low and middle-income countries: a systematic review. *BMC Health Serv Res.* 2018;18(1):909.
 5. Jain R, Muralidhar S. Contraceptive methods: needs, options and utilization. *J Obstet Gynaecol India.* 2011;61(6):626-34.
 6. World Family Planning 2017 Highlights. Economic & Social Affairs. Available at: https://www.un.org/en/development/desa/population/publications/pdf/family/WFP2017_Highlights.pdf. Accessed on 20 July 2021.
 7. Melesse DY, Mutua MK, Choudhury A, Wado YD, Faye CM, Neal S, Boerma T. Adolescent sexual and reproductive health in sub-Saharan Africa: who is left behind? *BMJ Glob Health.* 2020;5(1):e002231.
 8. Kinaro J, Kimani M, Ikamari L, Ayiamba EHO. Perceptions and barriers to contraceptive use among adolescents aged 15-19 years in Kenya: A Case Study of Nairobi. *Health.* 2015;7(1):85-97.
 9. Blackstone SR, Nwaozuru U, Iwelunmor J. Factors Influencing Contraceptive Use in Sub-Saharan Africa: A Systematic Review. *Int Q Community Health Educ.* 2017;37(2):79-91.
 10. Hagan JE, Buxton C. Contraceptive knowledge, perceptions and use among adolescents in selected senior high schools in the central region of Ghana. *J Sociol Res.* 2008;3(2):170-80.
 11. Ameyaw EK, Budu E, Sambah F, Baatiema L, Appiah F, Seidu AA, Ahinkorah BO. Prevalence and determinants of unintended pregnancy in sub-Saharan Africa: A multi-country analysis of demographic and health surveys. *PLoS One.* 2019;14(8):e0220970.
 12. Paquette E, Kamuyango A, Hou WH, Li CY. Trends and contributing factors to contraceptive use in kenya: a large population-based Survey 1989 to 2014. *Int J Environ Res Public Health.* 2020;17(19):7065.
 13. Sserwanja Q, Musaba MW, Mukunya D. Prevalence and factors associated with modern contraceptives utilization among female adolescents in Uganda. *BMC Womens Health.* 2021;21(1):61.
 14. Moyo S, Rusinga O. Contraceptives: Adolescents' Knowledge, Attitudes and Practices. A Case Study of Rural Mhondoro-Ngezi District, Zimbabwe. *Afr J Reprod Health.* 2017;21(1):49-63.
 15. Deitch J, Stark L. Adolescent demand for contraception and family planning services in low- and middle-income countries: A systematic review. *Glob Public Health.* 2019;14(9):1316-34.
 16. Ahinkorah BO, Hagan JE Jr, Seidu AA, et al. Linking Female Adolescents' Knowledge, Attitudes and Use of Contraceptives to Adolescent Pregnancy in Ghana: A Baseline Data for Developing Sexuality Education Programmes. *Healthcare (Basel).* 2021;9(3):272.
 17. Mwaisaka J, Wado YD, Ouedraogo R, Oduor C, Habib H, Njagi J, Bangha MW. "Those are things for married people" exploring parents'/adults' and adolescents' perspectives on contraceptives in Narok and Homa Bay Counties, Kenya. *Reprod Health.* 2021;18(1):48.
 18. Jonas K, Duby Z, Maruping K, et al. Perceptions of contraception services among recipients of a combination HIV-prevention interventions for adolescent girls and young women in South Africa: a qualitative study. *Reprod Health.* 2020;17(1):122.
 19. Mbadu Muanda F, Gahungu NP, Wood F, Bertrand JT. Attitudes toward sexual and reproductive health among adolescents and young people in urban and rural DR Congo. *Reprod Health.* 2018;15(1):74.
 20. Onasoga OA, Afolayan JA, Asamabiriwei TF, Jibril UN, Imam AA. Adolescents' Knowledge, Attitude and Utilization of Emergency Contraceptive Pills in Nigeria's Niger Delta Region. *Int J MCH AIDS.* 2016;5(1):53-60.
 21. Casey SE, Gallagher MC, Kakesa J, Kalyanpur A, Muselemu JB, Rafanoharana RV, Spilotros N. Contraceptive use among adolescent and young women in North and South Kivu, Democratic Republic of the Congo: A cross-sectional population-based survey. *PLoS Med.* 2020;17(3):e1003086.
 22. Semachew Kasa A, Tarekegn M, Embiale N. Knowledge, attitude and practice towards family planning among reproductive age women in a resource limited settings of Northwest Ethiopia. *BMC Res Notes.* 2018;11(1):577.
 23. Bekele D, Surur F, Nigatu B, et al. Knowledge and Attitude Towards Family Planning Among Women of Reproductive Age in Emerging Regions of Ethiopia. *J Multidiscip Healthc.* 2020;13:1463-74.
 24. Crawford EE, Atchison CJ, Ajayi YP, Doyle AM. Modern contraceptive use among unmarried girls aged 15-19 years in South Western Nigeria: results from a cross-sectional baseline survey for the Adolescent 360 (A360) impact evaluation. *Reprod Health.* 2021;18(1):6.
 25. Ezenwaka U, Mbachu C, Ezumah N, Eze I, Agu C, Agu I, Onwujekwe O. Exploring factors constraining utilization of contraceptive services among adolescents in Southeast Nigeria: an application of the socio-ecological model. *BMC Public Health.* 2020;20(1):1162.
 26. Kara WSK, Benedicto M, Mao J. Knowledge, Attitude, and Practice of Contraception Methods Among Female Undergraduates in Dodoma, Tanzania. *Cureus.* 2019;11(4):e4362.
 27. Iyanda AE, Dinkins BJ, Osayomi T, Adeusi TJ, Lu Y, Oppong JR. Fertility knowledge, contraceptive use and unintentional pregnancy in 29 African countries:

- a cross-sectional study. *Int J Public Health.* 2020; 65(4):445-455.
28. Casey SE, Gallagher MC, Kakesa J, et al. Contraceptive use among adolescent and young women in North and South Kivu, Democratic Republic of the Congo: A cross-sectional population-based survey. *PLoS Med.* 2020;17(3):e1003086.
 29. Abdulahi M, Kakaire O, Namusoke F. Determinants of modern contraceptive use among married Somali women living in Kampala; a cross sectional survey. *Reprod Health.* 2020;17(1):72.
 30. Nsubuga H, Sekandi JN, Sempeera H, Makumbi FE. Contraceptive use, knowledge, attitude, perceptions and sexual behavior among female University students in Uganda: a cross-sectional survey. *BMC Womens Health.* 2016;16:6.
 31. Nsubuga H, Sekandi JN, Sempeera H, Makumbi FE. Contraceptive use, knowledge, attitude, perceptions and sexual behavior among female University students in Uganda: a cross-sectional survey. *BMC Womens Health.* 2016;16:6.
 32. Bongongo T, Govender I. Knowledge, attitudes and practices of contraceptive methods among women seeking voluntary termination of pregnancy at Jubilee Hospital, Pretoria, South Africa. *Afr J Prim Health Care Fam Med.* 2019;11(1):e1-5.
 33. Dennis ML, Radovich E, Wong KLM, Owolabi O, Cavallaro FL, Mbizvo MT, Binagwaho A, Waiswa P, Lynch CA, Benova L. Pathways to increased coverage: an analysis of time trends in contraceptive need and use among adolescents and young women in Kenya, Rwanda, Tanzania, and Uganda. *Reprod Health.* 2017;14(1):130.
 34. Sokkary N, Mansouri R, Yoost J, Focseneanu M, Dumont T, Nathwani M, Allen L, Hertweck SP, Dietrich JE. A multicenter survey of contraceptive knowledge among adolescents in North America. *J Pediatr Adolesc Gynecol.* 2013;26(5):274-6.
 35. Brown JL, Hennessy M, Sales JM, DiClemente RJ, Salazar LF, Vanable PA, Carey MP, Romer D, Valois RF, Brown LK, Stanton B. Multiple method contraception use among African American adolescents in four US cities. *Infect Dis Obstet Gynecol.* 2011;2011:765917.
 36. Bongongo T, Govender I. Knowledge, attitudes and practices of contraceptive methods among women seeking voluntary termination of pregnancy at Jubilee Hospital, Pretoria, South Africa. *Afr J Prim Health Care Fam Med.* 2019;11(1):e1-5.
 37. Taylor E, Gilliam ML, Davis SD, Neustadt AB, Levey EJ. Contraceptive attitudes among inner-city African American female adolescents: Barriers to effective hormonal contraceptive use. *J Pediatr Adolesc Gynecol.* 2009;22(2):97-104.

Cite this article as: Atuhaire S, Ngendakumana J, Galadima A, Adam A, Muderhwa RB. Knowledge and attitude towards contraceptive use among adolescents in Africa: a systematic review. *Int J Reprod Contracept Obstet Gynecol* 2021;10:4292-303.