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The Usage of Contraceptive among Adolescent School Girls in a Semi-Urban Settlement, Cameroon

Basil KUM MEH*, Favour TANGWE ANDEH, Quevine NGUEMBONG MATCHINDA, Angel BISONG-EBEN TARANG, Gratitude LEKUNKENG NCHINJU, Ruth ACHOU MBONG, Mary Progress SIH FUNG, Harry MBACHAM FON
Department of Health Sciences, STEM Higher Institute of Health and Business Douala, Cameroon
* Email: mehbasil90@gmail.com

Abstract
Background: Adolescent sexual activity, unwanted pregnancy, unsafe abortion and high number of HIV/AIDS infection have become the main reason of concern in urban and semi-urban areas Douala, Cameroon. More so, teenage pregnancy is a risk factor for poverty, unemployment, poorer educational achievements and poor mental health. The aim of this study was to assess the knowledge, attitude and practices on the usage of contraceptive among adolescent school girls in Mbanga, Littoral region-Douala.**Methods**: A cross sectional study was conducted in Mbanga, Littoral region-Douala during the month of February to march 2023 among 201 adolescent school girls to evaluate the knowledge, attitude and practices of contraception. Data was collected with the used of structured questionnaires and inputted in Microsoft excel and analyzed using SPSS version 23. With a 5% confidential interval. **Results**: 95.5% (192/201) of adolescent school girls had knowledge of contraceptives. Most of them (41.8%) got the information from health workers in hospitals. With respect to attitude, they had a negative attitudes towards contraceptives use; 43.3% declared that after using contraceptives it is difficult to get pregnant, 42.8% said pills and contraceptive injections affects female health, 37.3% said sex with condoms reduces pleasure. 56.7% of the participants were sexually active and 38.8% had used a contraceptive method. 16.4% and 15.9% of the participants used condom and calendar methods respectively. **Conclusion**: Adolescent school girls in Mbanga, littoral region-Douala had good knowledge of contraceptives usage. The attitude and practices on the usage of contraceptive was low among the study population. This study recommends that more sensitization on the attitude and practices on the usage of contraceptive should be carried out by local government and school authorities.
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Background

Adolescent is generally seen as a period of good health. However, adolescent face health ricks and especially in relation to sexual practices. There are particularly vulnerable to unintended pregnancy and unsafe abortions (Denno *et al*., 2015). Teenage pregnancy is a health promotion problem that does not only affect adolescent but also their families and communities at large. According to the world health organization, adolescents are define as individual's age 10 to 19 years old. This period is characterized by age spurts and development of secondary sexual characteristics such as pubic hair, enlarge breasts, wider hips and facial hair in boys (Onyeonoro *et al.,* 2011). There are 1.3billion of adolescent in the world today more than before making up to 16% of the world's population (United Nations, 2022). Increasing number of sexual activities among adolescents is a public health concern because it can lead to increase in relative poverty (that is making a minimum income), unemployment, poorer educational achievements and poor health of the unborn child (Onyeonoro *et al.,* 2011).

A total of 16million female adolescent age (15 -19) give birth each year worldwide, this account for the 11% of all birth, 95% of which is from developing countries [1] half 50% of this figure is from sub Saharan countries (Morris *et al.,* date). In CAMEROON, the (UNFPA, 1994) reported an adolescent birth rate of 119 birth per 1000 adolescent girls aged 15-19 years. Also, the UNICEF reported 128 birth per 1000 adolescent girls in Cameroon (UNFPA, 2015). According to the Cameroon medical council, 25% of pregnancies in the country occurs in girls of school going age, and 20% of pregnant teen do not return to school (UNFPA, 2015). In sub Saharan Africa young women (15-19) years are at increasing risk of unwanted pregnancy owing to unmet contraceptive needs (United Nations, 2012).

According to WHO in 2009, pregnant adolescent are more likely than their older counterparts to have unsafe abortions. Approximately 3 billion unsafe abortion are done globally each year on female adolescent age 15-19 which contribute substantially to health problem, child and maternal death worldwide (WHO, 2009). In lower and middle income countries, complications during Adolescent pregnancy is the major cause of death among girls (WHO, 2009).

Unwanted pregnancy is associated with socio-economic and health outcome such as mortality, morbidity, unsafe abortion and depression which are all public health problems or issues (Politi *et al*, 2016). Contraceptive

use promote health reproductive health as it reduces the chances of unwanted pregnancy and high pregnancy rate which may lead to child mortality and morbidity (WHO, 2018) and can also improve overall health and wellbeing by protecting against adverse pregnancy effect (Politi *et al*, 2016). Contraceptive may also decrease the rate of adolescent school dropout and reduce mortality and morbidity associated with unwanted pregnancy (Jain and Muralidhar, 2011). According to statistics, contraceptive use in Cameroon has increase from 16.1% in 1991 to 23.4% in 2011and traditional method decreases from 11.8% in 1991 to 8.9% in 2011. The use of modern contraceptives has increase from 4.3% in 1991 to 14.4% in 2011 (Agbor, Dickson and Nsagha, 2021).

It is estimate that more than 220 million women globally each year have an unmet need for contraceptive but there is little progress in increasing the uptake. Although the uptake among adolescent female has been slightly higher than for women, the former are more prone (Morris *et al.,* date). However, to contraceptive failure and the use of traditional method, the consequences of this unmet need are high level of unsafe abortion and complications during childbirth and comprise the leading cause for death among adolescent girls worldwide (Morris *et al.,* date).

There are many barriers perpetuating the non-use of contraceptives amongst female adolescent. Some are deep rooted political issues that filter down into education and health system. Culture and religious norm and practice can also create a negative attitude around the use of contraceptive,

Thus limiting access. Lack of funds and physical access are further restrictions to contraceptives. Naidoo, argues that even if adolescent have knowledge of numerous contraceptive method, it does not follow that they will use them especially if they do not know how to access then (Nsubuga *et al.,* 2016).

In addition, adolescent are prone to poor decision making which may be influence by their peer and sexual partners. An increase in knowledge will lead to positive attitude about contraceptive and then Leads to an increased use of contraceptive (Nsubuga *et al.,* 2016). Therefore, identifying the knowledge, attitude concerning contraceptive will provide a useful measure of the success of educational programmers and health initiative to identify areas that need strengthening. Adolescent requires adequate knowledge of contraceptive because poor knowledge may lead to ineffective, Norris, and Berlan contraceptive use (Müller *et al.,* 2016). Miss contraception may lead to irrational fear that then affects attitude (Pritt *et al.,* 2017) which may lead to non-use of contraceptive to avoid supposed side effect.

In Cameroon, 36% of women who want to avoid pregnancy do not use a modern method of contraceptive. Each year, approximately half a million Cameroonian women have an unintended pregnancy. Low level of modern contraceptive use is taking a toll on women in Cameroon, their families and country's health care system (Guttmarcher institute, 2021).

In 2013, approximately 2.3 million sexually active Cameroonian women wanted to delay having a child (72%) or wanted no more children (28%) however, it was founded that just 37% of these women were using a modern contraceptive method, another 18% relied on traditional methods. and 45% used no method at all. This low level contraceptive use result to high rate of unwanted pregnancy and fuels the country alarming rate of maternal mortality and illness (Guttmarcher institute, 2021)

Contraceptive empower girls with the ability to make informed decisions about their fertility as well as greatly reducing female mortality and morbidity (Chersich *et al.,* 2014).

Despite freely available contraception and accessible reproductive health policies, a majority of adolescent still report unplanned pregnancies. This study aim on finding out adolescents girls knowledge about contraceptive and their attitude toward its use and how they practice it.

Materials and Methods

Study Area.

This study was carried out in Mbanga, Littoral region Douala created in 1954. Mbanga is located 70km from NKONSAMBA, capital of the department of MOUNGO and about 65km from Douala, between the parallels $4^0$20 and $4^0$31 of latitude North and the meridians $9^0$30 and $9^0$35 East longitude. It is located in the department of Moungo, Littoral region of the Republic of Cameroon. The municipality of Mbanga had a population of 35,415 inhabitants currently population is estimated to be 70,000 inhabitants based on the result of the general population and housing census of 2005 and with regard to the national population estimated at 2.7% until 2009 and 2.6% in 2010. Mbanga is a cross roads city with a diversity of ethnic groups and cultures due to its strategic position.

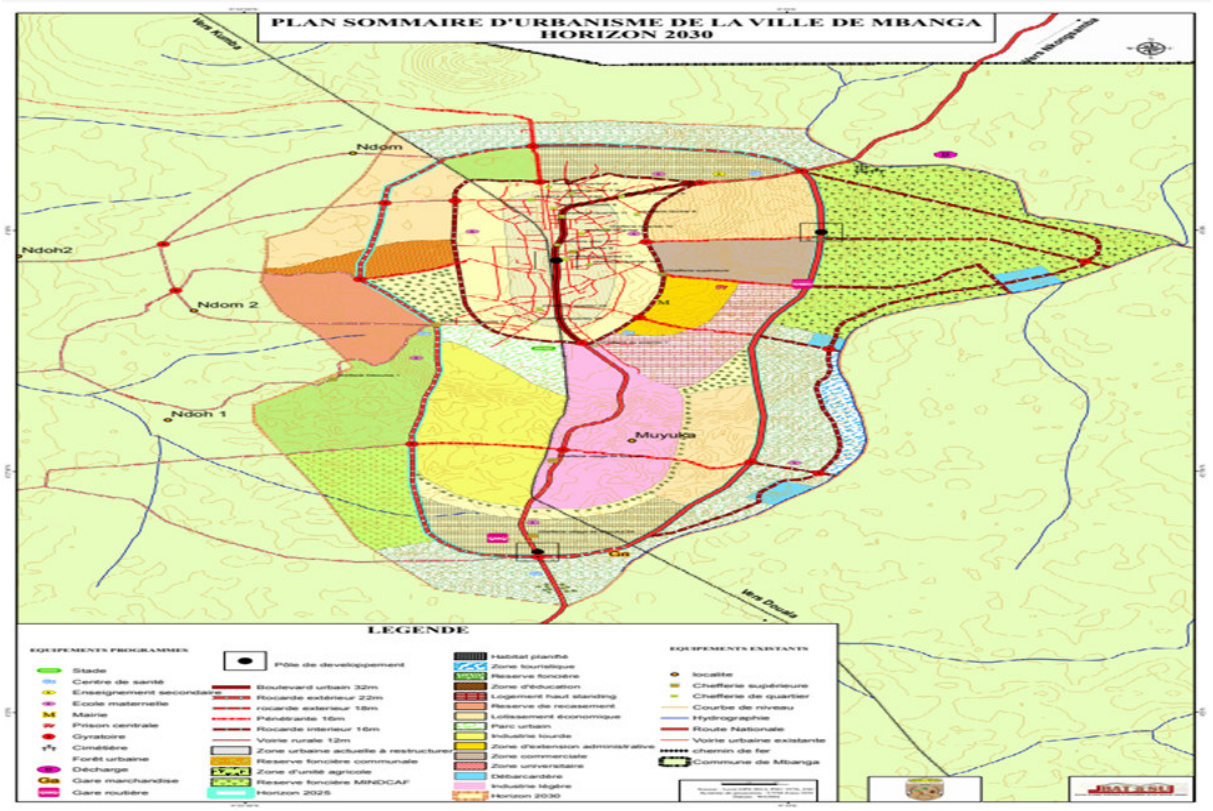

Figure 1: The summary plan of Mbanga Horizon. (Mbanga council, Douala)

Study design, research setting and participants

A cross sectional study was conducted in Mbanga, Littoral region-Douala during the month of February to march 2023 among 201 adolescent school girls to evaluate the knowledge, attitude and practices of contraception. The study targeted adolescent school girls of age 10-20 years old in Mbanga, Littoral region Douala who agreed to participant in the study by signing the consent form. Were excluded in the study adolescent who were not willing to take part in this study and refused to sign the concern forms.

We opted for a non-probability sampling of convenient type, provided participants were recruited according to their availability.

After a thorough review of literature, the questionnaire was drafted and adopted by the researchers, and the questionnaire was then pretested.

Data Collection:

Administrative authorizations were obtained from the Douala regional delegation of public health and from the different school administrators. Informed consent from participants were also ascertained before data collection. Consents of the adolescent girls were recommended, and only those who signed the consent form were administered the questionnaires.

Data on the demographics, knowledge, attitude with respect to the use of contraceptives and contraceptive practices.

Ethical considerations

Authorization to conduct the study was obtained from the Regional Delegation of Public Health, Littoral region 0157/AAR/MINSANTE/DRSPL/BCASS and also from the principles in the various schools. Consent was obtained from the participants, and they were made to understand that their participation was voluntary and the students were also assured regarding secrecy and confidentially of their information. All information collected was kept confidential through physical and electronic barriers.

Data management and analysis

After collecting the data, they were checked for accuracy, then coded and entered into a MS Excel 2016 spread sheet. The data were analyzed using the Statistical Package of Social Sciences version 23 (SPSS Inc., Chicago, IL, USA). Descriptive analysis was used to assess knowledge, attitude and practices of contraceptives. Results were presented on tables and figures, while data analysis was done at $p < 0.05$, and at a 95% confidence.

Results

Socio Demographic Characteristics of a Study Population

Table 1 explored the Socio-demographic characteristics of the study participants and statistical analysis. A total of 201 participants were recruited and from statistical analysis, the majority of the participants within the age group 16-20 years (64.7%), single (99.0%), most had just FSLC (45.8%), attended PBCHS (27.9%) and majority were Christians (98.0%). Also, a host of the participants came from quarter 2 (22.9%).

Table 1: Socio demographic characteristics of a study population

FACTOR	CATEGORY	FREQUENCY (n)	PERCENTAGE (%)
AGE GROUPS (Years)	**10-15**	71	35.3
	16-20	130	64.7
MARITAL STATUS	**MARRIED**	2	1.0
	SINGLE	199	99.0
LEVEL OF EDUCATION	**A' LEVEL**	45	22.4
	O' LEVEL	63	31.3
	FSLC	92	45.8
	NONE	1	0.5
SCHOOL	**EBCHS**	47	23.4
	GBHS	44	21.9
	LYCEE TECHNIGUE	33	16.4
	PBCHS	56	27.9
	PROGRESSIVE EVERNING SCHOOL	21	10.4
RELIGION	**CHRISTAIN**	197	98.0
	MUSLIM	2	1.0
	NONE	2	1.0

Knowledge on the usage of contraceptives among adolescent schools girls in Mbanga literal Region Douala

A descriptive statistical analysis was used to evaluate the knowledge of students about the usage of contraceptives in Mbanga schools girls and from statistical analysis, it was revealed that, majority of the students had heard about contraceptives (95.5%), in which they got information about contraceptive from health workers (41.8%) and most of them revealed that to get a contraceptive, an individual can go to a hospital (51.7%) (Table 2). Most participants also revealed that, contraceptive is a medication used to prevent pregnancy (88.1%) (Figure 1).

Table 2: Knowledge of contraceptives among adolescent school girls in Mbanga, literal Region Douala

QUESTIONS	RESPONSE	FREQUENCY (N)	PERCENTAGE (%)
HAVE YOU HEARED ABOUT CONTRACEPTIVE	**YES**	192	95.5
	NO	9	4.5
WHERE DID YOU GET INFORMATION ABOUT CONTRACEPTIVE FROM	**TELEVISION**	18	*9.0*
	HEALTH WORKERS	84	41.8
	FRIENDS	55	27.4
	INTERNET	4	2.0
	PARENT	31	15.4
	NONE	9	4.5
WHERE CAN YOU GET CONTRACEPTIVES	**CHURCH**	1	0.5
	CLINIC	13	6.5
	HOSPITAL	104	51.7
	PHARMACY	58	28.9
	MARKET	14	7.0
	TRADITIONAL HEALERS	2	1.0
	NONE	9	4.5

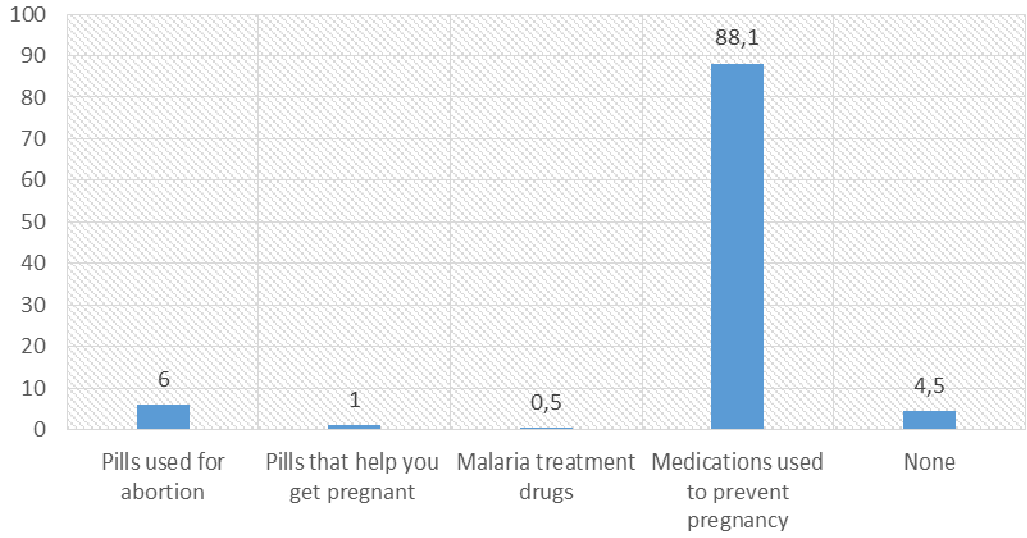

Figure 1: Definition of Contraceptive pills

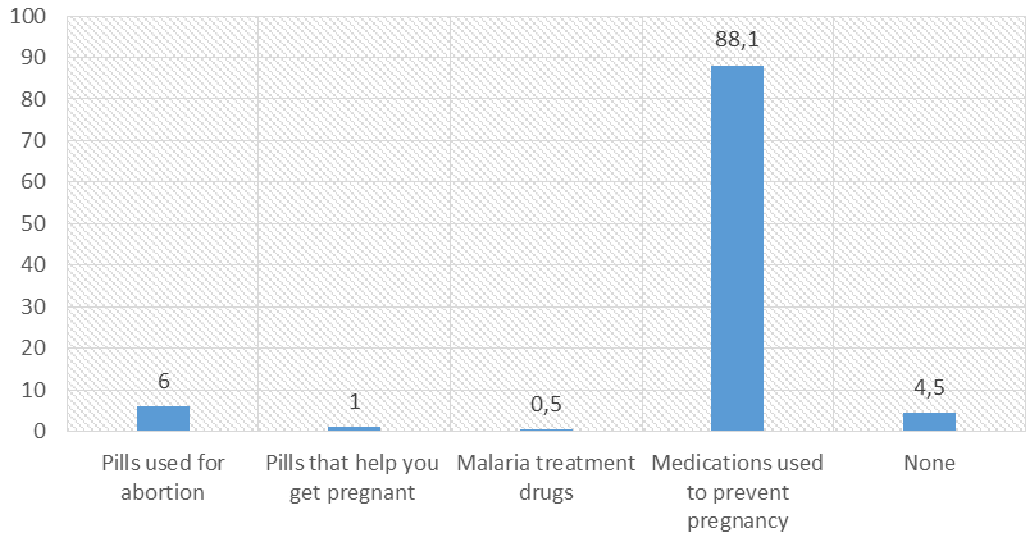

Figure 1: Definition of Contraceptive pills

Attitude towards the use of contraceptives among adolescent school girls in Mbanga, literal Region Douala

A structure questionnaire of perception was used to assess the participant's attitude towards the use of contraceptives in Mbanga school girls. Their perception was classified as agreed, strongly agreed, disagreed and strongly disagreed. From statistical analysis, most of the participants agreed (37.3%) that sex with condoms is not good, as well as pills and injections affect female health (42.8%). Also, most of the participants agreed that after using contraceptive it is difficult to get pregnant (43.3%) and strongly agreed that getting pregnant may affect a woman's educational career (35.3%). Most of the participants strongly disagreed that taking pills regularly is a good contraceptive method and a majority agreed that they know that contraceptives cause infertility (38.8%) (Table 3).

Table 3: Attitude towards the use of contraceptives among adolescent school girls in Mbanga, literal Region Douala

QUESTIONS	AGREED	STRONGLY AGREED	DISAGREED	STRONGLY DISAGREED
	Frequency (n)/ percentage (%)	Frequency (n)/ percentage (%)	Frequency (n)/ percentage (%)	Frequency (n)/ percentage (%)
1) SEX WITH CONDOM IS NOT GOOD	73/ (37.3)	68/(33.8)	37/(18.4)	21/(10.4)
2) THE PILLS AND INJECTION AFFECT FEMALE HEALTH	86/(42.8)	83/(41.3)	19/(9.5)	13/(6.5)
3) AFTER USING CONTRACEPTIVE, IT IS DIFFICULT TO GET PREGNANT	87/(43.3)	64/(31.8)	32/(15.9)	18/(9.0)
4) GETTING PREGNANT MAY AFFECT YOUR EDUCATION COMPLETELY	51/(25.4)	71/(35.3)	42/(20.9)	37/(18.4)
5) TAKING PILLS REGULARLY IS A GOOD CONTRACEPTIVE METHOD	36/(17.9)	23/(11.4)	68/(33.8)	74/(36.8)
6) DO YOU KNOW CONTRACEPTIVE CAUSES INFERTILITY	78/(38.8)	42/(20.9)	54/(26.9)	27/(13.4)

Respondents practice on the use of Contraceptives among adolescent school girls in Mbanga, literal Region Douala

Table 4 explored the practice of contraceptives and it statistical analysis revealed that 56.7% of the participants were sexually active and a few of them (38.8%) had used a contraceptive before. They were further ask which method of contraceptive had they used before and a majority revealed that they used condoms (16.9%). They further revealed that they have been using contraceptives for 1-3 months (13.9%) and their main reason for using it was prevention of pregnancy (23.9%). The main factor that supported the choice of contraceptive the participants used most was that it had fewer side effects (17.0%). The participants were then asked which contraceptive type they don't use most and they revealed that it was EPI (24.9%) while 18.9% said they don't use condoms (Figure 2) and their main reason for not using it was because they were afraid of the side effects (45.3%). Some of the participants (20.4 %) of the participants revealed that using contraceptives was against their religion.

Table 4: Practice on the use of Contraceptives among adolescent school girls in Mbanga, literal Region Douala

QUESTIONS	RESPONSE	FREQUENCY (N)	PERCENTAGE (%)
ARE YOU SEXUALLY ACTIVE	**YES**	114	56.7
	NO	87	43.3
HAVE YOU USED CONTRACEPTIVE BEFORE	**YES**	78	38.8
	NO	123	61.2
IF YES WHAT METHOD	**Calendar method**	31	15.4
	Condom	34	16.9
	Implant	3	1.5
	Injection	3	1.5
	Intrauterine device	2	1.0
	Pills	2	1.0
	Poll out method	4	2.0
	None	122	60.7
FOR HOW LONG HAVE YOU BEING USING CONTRACEPTIVE	**1 month to 3 months**	28	13.9
	1 year to 2 years	10	5.0
	2 years to 3 years	9	4.5
	3 months to 6 months	12	6.0
	3 years to 5 years	6	3.0
	5 years and above	9	4.5
	6 months to 1 year	4	2.0
	3 years to 5 years	6	3.0
	None	123	61.2
WHAT ARE YOUR REASONS FOR USING CONTRACEPTIVE	**I want to have healthy children**	6	3.0
	To prevent pregnancy	48	23.9
	To prevent sexual transmitted infections/ HIV	24	11.9
	A doctor/nurse advised me to use it	1	0.5
	None	122	60.7
WHAT FACTOR SUPPORT YOUR CHOICE TO USE CONTRACEPTIVE	**It is free**	20	10.0
	It has less side effect	34	17
	My parent advised me to use it	12	6.0
	I heard about it from friends/traditional healers	14	7.0
	None	121	60.2
WHAT ARE YOUR REASONS FOR NOT USING CONTRACEPTIVES	**It is against my religion**	41	20.4
	I want to have children	31	15.4
	I am using the pull-out method	2	1.0
	I am afraid of the side effect	91	45.3
	My parents/families do not allow me to use it	31	15.4
	None	5	2.5

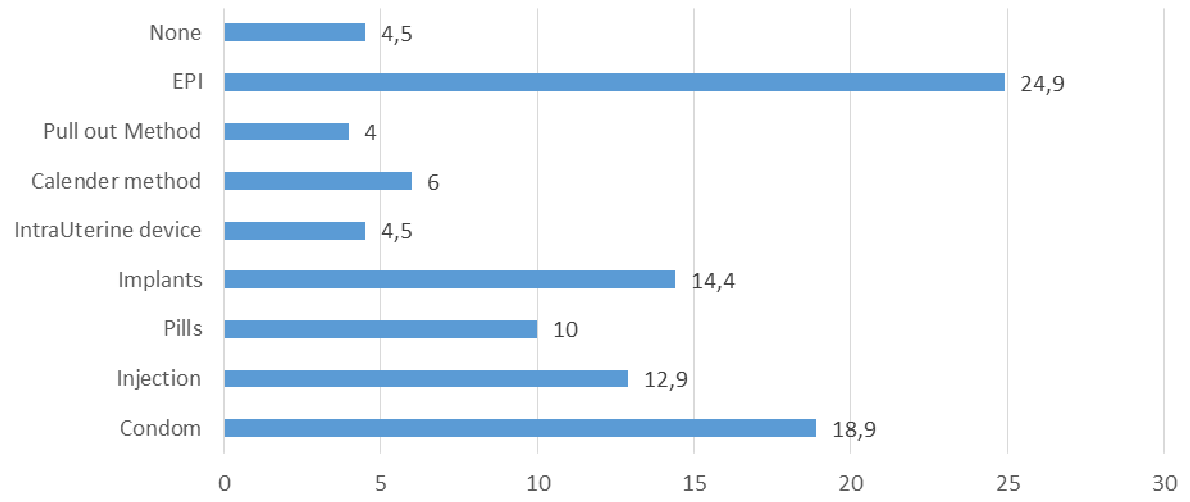

Figure 2: Types of contraceptives except

Discussion

Based on the Socio demographic characteristics, the respondent were adolescent's school girls aged 10-20. The study size was calculated to be 147 participants in which 201 questionnaires were administered and all of them were answered. Majority of the participants were age group 16-20 which had (64.7%), and (35.3%) was age group 10-15. A majority of the student came from PBCHS with (27.9%) and live in quarter 2 (two) (22.9%). Most of them reported to be single 99.0% and have had FSLC 45.8%. Majority of them also reported to be Christians (98.0%) and only (1.0%) were Muslims. Which was similar to that of [18] which reported 180 participants, and most of the participant were between the age 15-19 years 127 (65%) and only 63 (35%) were 10-14 years old. Majority of the study respondents were Christians 174 (97%) and only 6 (3%) were Muslims.

To evaluate the knowledge of adolescent school girls in Mbanga the study found out that most of the adolescent school girls had knowledge of what contraception's are as it was reported to be (95.5%). The study is in line with that of 2011 Demography and health survey in which 94% of adolescent school girls had knowledge of contraceptives. The source which they got their knowledge was from health workers (41.8%), which is contrary to the study conducted in Ethiopia 2019 which reported that adolescent school girls heard about contraceptive from the media. also from friends (27.4%). (15.4%), came from parents whereas, (9.0%) came from the television. Lastly, from the internet (2.0%) and was reported that, they can get contraceptives from the hospital (51.7%), also from the pharmacy (28.9%), and clinics (6.5%) others said from the market (7.0%) some said from traditional healers (1.0%) lastly from church (0.5%). Majority of them define contraceptive pills as medication used to prevent pregnancy (88.1%), others said pills are used for abortion (6.0%).

The results are also similar to the findings of the study by (Ellen et al., 2014) in MALAWI which reported that adolescent's girls had general knowledge regarding modern contraception as a majority reported 73.9% knowledge.

Furthermore, to determine the attitude of adolescent school girls towards the usage of contraceptives in mbanga, this study found out that, majority of the respondents had a negative attitude towards the usage of contraceptive as it was reported that most of them agreed that sex with condom is not good 37.3%. Based on this result, the negative attitude is seen for not using condoms during sex. Also, the negative attitude were observed around the use of pills and injection. Respondents said that contraceptive affect female health 42.8%. This study was in line with other cross sectional studies among university students at Adama University in Ethiopia and Buea University in Cameroon respectively, also found out that most student had a negative attitude towards contraceptives (Tilahun et al., 2010).

This study was contrary to the study in Lilongwe by (Joyce, 2019). Which reported that majority 91.6% of the youths had positive attitude towards emergency contraceptives. This is because, the researcher carried out it research in a health facility different from the present study. Similar study was also carried by (Lameez, 2019) in CAPE TOWN reported that respondent had positive attitude toward the use of contraceptive which is contrary to the present study. This could be attributed to that fact that the research used a different geographical area with a different cultural belief which was different from the present study. Also, it was reported that the use of

contraceptive might make future pregnancies difficult 43.3%. This attitude maybe contributed to friends and family members as there has been a long- standing misconception that long term use of contraceptive increase fertility or is directly related to infertility (Pritt et al., 2017). Similar study found out that misconception about contraceptive side effects amongst USA adolescent may lead to irrational fears that lead to prevention of contraceptive use. A higher majority of respondents strongly agreed that falling pregnant would affect their schooling or education 35.3%. This indicate that they were aware of the negative consequence that pregnancy could have on them in accessing or completing secondary school. This was seen as a motivation to not get pregnant or use contraceptive to prevent possible pregnancy while at school. Respondents strongly disagreed that taking pills regularly is a good contraceptive method 36.8%. This is seen that they do not have adequate knowledge on the use of contraceptive. Finally, 38.8% of them agreed to the fact that contraceptive cause's infertility.

Lastly, to evaluate the practices towards the usage of contraceptive among adolescent school girls in mbanga, this study shows that 56.7% of the respondent were sexually active. This study reported that majority of those who were sexually active were using condoms 16.9% and calendar method 15.4%. This study was similar to that of (Mushwana et al., 2015) which reported that, condom 50% past, 44.5% present was the most frequent contraceptive that was used among adolescent school girls.

The low use of contraceptive method such as implants 1.5%, injections 1.5%, intrauterine device 1.0%, pills 10% and the pull out method 0, 5% is in regards to the low knowledge and attitude they have towards contraceptives. Similar studies has also reported that. (Tayo et al., 2011) Where in their study only 5% of respondents who had knowledge on contraceptive actually used them. . Respondents who have been using contraceptives has been using it for 1 month -3 months 13.9%. It has be reported that, their reason for using contraceptives is to prevent pregnancy 23.9% and 11.9% said they want to prevent sexual transmitted infections/ HIV. 3.0% said they want to have healthy children and lastly, 0.5% said a doctor/ nurse advised them to use it. Respondents acknowledge the fact that contraceptives are free10.0%. Taking in to consideration that respondent were still in school. Especially condom which was reported that (Godeliver et al., 2013) condoms are highly accessible and comparatively has low cost. Some limitations to contraceptives practices were that, they were afraid of the side effect 45.3%, it was against their religion 20.4%, and their parent/family do not allow them to use it 15.4%. 15.4% said they want to have children lastly 1.0% said they were using the pull out method.

Conclusion

- This study reported that adolescent school girls in mbanga had adequate knowledge on contraceptives.
- They had a negative Attitudes towards contraceptive use, this is because they were afraid of the side-effects of contraceptives especially pills and injections.
- Condoms and calendar method were the most common contraceptives methods practiced by adolescent school girls in Mbanga-littoral region, Douala, Cameroon.

Recommendations

Sexual education should be reinforced in secondary schools. Although schools may promote abstinence, the study clearly shows that adolescent females are engaging in sexual activity and to increase the safety of these learners or decrease their chance of unintended pregnancies, it is important to increase their knowledge on contraceptives especially through social media, in school and their homes.

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Declarations

Ethical consideration

Authorization to conduct the study was obtained from the Regional Delegation of Public Health, Littoral region 0157/AAR/MINSANTE/DRSPL/BCASS and also from the principles in the various schools. Consent was obtained from the participants, and they were made to understand that their participation was voluntary. All information collected was kept confidential through physical and electronic barriers.

Consent for publication

All authors consented and accepted for this article to be submitted for publication.

Availability of data and materials
Most data generated or analysed during this study are included in this article. Also, all findings that support the result of this study are included.

Conflict of Interest
The authors certify there is no conflict of interest.

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Author's contributions
M.K.B: Study conception, design, analysis, results interpretation and writing. F.T.A: Study conception, design, data collection, writing and editing Q.N.M: Study conception, design, writing and editing. G.L: Results interpretation, writing and editing. R.A.M: results interpretation, writing, and editing. M.S.F: data collection, writing and editing. H.M.F: study design, data analysis and editing. All Authors fully reviewed the manuscript.

Abbreviations
- WHO: World Health Organization
- UN: United Nation
- UNICEP: United Nation international Children Emergency Fund
- NUFPA: United Nation Population Fund
- DHS: Demographic and health survey
- IUD: Intrauterine device
- IUS: Intrauterine system
- O'LEVEL: Ordinary Level
- AL: Advanced Level
- FSLC: First School Living Certificate
- EPI: External Program for Immunization
- PBCHS: Providences Bilingual Comprehensive High School
- EBCHS: Efficient Bilingual Comprehensive High School.

Reference
Agbor Nathan Emeh, Dickson Shey Obstetrics and Nsagha, Hermann ngouakam. (11 Feb 2021). Predictors of contraceptive development corporation plantation camps, *pan African medical journal*. Open access article (156), vol 38,

Chersich, M. F., Wabiri, N., Risher, K., Shisana, O., Celentano, D., Rehle, T., Rees, H. (2017). Contraception coverage and methods used among women in South Africa: A national household survey. Contraception. 2014.12.003 *South African Medical Journal*, 107(4), 307.

Denno, D. M., H, M. P., Hoopes, A. J., D, M., Chandra-mouli, V., & Sc, M. (2015) Effective Strategies to Provide Adolescent Sexual and Reproductive Health Services and to Increase Demand and Community Support. *Journal of Adolescent Health*; 56(1), S22– S41.

Ellen Chifundo Damson, Prof M. Keraka and Dr. P. Kabue. (2019) 'Level of Knowledge Among Adolescent Girls On Modern Contraception At Tsangano Turnoff Community, Ntcheu District, Malawi' Journal of Health, Medicine and Nursing ISSN 2520-4025 (Online),; Vol.4, Issue 6. No.3, pp 29- 42.

Godeliver A.B. Kagashe and Goodluck Honest. (2013). Knowledge and use of contraceptives among secondary school girls in Dar es Salaam Tanzania. J App Pharm Sci; 3 (01):

Guttmarcher institute. (june 2021). Cost and benefit of investing in contraceptive services in Cameroon. *Accessed 6*, worldcat

Jain R, Muralidhar S. (2011 Dec). Contraceptive methods: needs, options and utilization. J Obstet Gynaecol India.; 61(6):626-34.

Joyce Kainja Malota. (May 2019). Bachelor of Science in Nursing Education, Diploma in Nursing, and University Certificate in Midwifery. Thesis Submitted To The Faculty of Midwfery, Neonatal and Reproductive Health, Kamuzu. College of Nursing, University of Malawi.

LAMEEZ Davids. (2019). Knowledge, Attitudes and Practices of Contraception amongst Adolescent Girls from Selected High Schools in a Low Socio-Economic Community in Cape Town., on publish article.

Los Angeles: SAGE. Müller, A., Röhrs, S., Hoffman-Wanderer, Y., & Moult, K. (2016). "You have to make a judgment call". - Morals, judgments and the provision of quality sexual and reproductive health services for adolescents in South Africa. *Social Science and Medicine*; 148, 71– 78.

Morris, J. L., & Rushwan, H, Barriers to the successful implementation of school health services in the

Mpumalanga and Gauteng provinces. *South African Family Practice*, 52(3), 249–254.

Mushwana, L., Monareng, L., Richter, S., & Muller, H. (2015). Factors influencing the adolescent pregnancy rate in the Greater Giyani Municipality, Limpopo Province - South Africa. *International Journal of Africa Nursing Sciences*; 2, 10–18.

Nsubuga H, Sekandi JN, Sempeera H, Makumbi FE. (2016 Jan 27). Contraceptive use, knowledge, attitude, perceptions and sexual behavior among female University students in Uganda: a cross-sectional survey. *BMC Womens Health*.; 16:6.

Onyeonoro, U. U., Oshi, D. C., Ndimele, E. C., Chuku, N. C., Onyemuchara, I. L., Ezekwere, S., Emelumadu, O. F. (2011). Sources of Sex Information and its Effects on Sexual Practices among In-school Female Adolescents in Osisioma Ngwa LGA, South East Nigeria. Journal of Pediatric and Adolescent Gynecology; 24(5), 294–299.

Pritt, N. M., Norris, A. H., & Berlan, E. D. (2017). Barriers and Facilitators to Adolescents??? Use of Long-Acting Reversible Contraceptives. *Journal of Pediatric and Adolescent Gynecology*; 30(1), 18–22.

Politi, M.C., Estlund, A., Milne, A. *et al.* (2016). Barriers and facilitators to implementing a patient-centered model of contraceptive provision in community health centers. *Contracept Reprod Med;* **1**, 21

Tayo A, Akinola A, Babatunde A, Adewunmi A, Osinusi D and Shittu L. (2011). Contraceptive knowledge and usage amongst female secondary school students in Lagos, Southwest Nigeria J. Public Health Epidemiol. 3(1): 34-37

Tilahun, D., Assefa, T., & Belachew, T. (2010). Knowledge, attitude and practice of emergency contraceptives among Adama University Female Students, Ethiopia. Ethiopian Journal of Health Sciences, 20(3), 195-202

United Nations Population Fund [UNFPA]. (2015). Girlhood, not motherhood: preventing adolescent pregnancy. New York: *UNFPA;* [Cited 2020 March 10].

United Nations, (2012). Case study for effective implementation of the Integrated School Health Programme (ISHP).

United nation population fund (UNFPA). (1994). Programmer of action. Modern contraceptive use among adolescent girls and young women *UNFPA*,

United Nations. (2022) World Population Monitoring. Retrieved from; *http://www.un.org/en/development/desa/population/publications/pdf/fertility/12_66976_adolescents_and_youth.pdf.*

World Health Organisation (WHO). (2009). Discussion papers on adolescence. Contraception, *https://doi.org/10.1590/S1413-81232010000700002*

World Health Organisation (WHO). (October 10, 2018). Health education: theoretical concepts, effective strategies and core competencies. Family planning/Contraception. Retrieved.