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Knowledge, attitude, and practices of contraception in senior secondary school girls of Banjul

Abstract

Background: Adolescence is a challenging period in the life of every young person, more so for young girls, as they are more vulnerable to early unwanted pregnancies due to lack of adequate knowledge about protecting themselves when they have unprotected sexual intercourse and other romantic relationships with their partners. This study is carried out to determine the knowledge, attitude, and practices of contraception among senior secondary school girls of Banjul, The Gambia.

Method: A cross-sectional survey was conducted using semi-structured self-administered questionnaires among 307 participants aged 13-19 years from three senior secondary schools in Banjul. The data were entered into a computerised database and analysed using SPSS version 26.

Results: The mean age of the participants was 17.9 years ± 1.2 years. All the participants knew the female sex organ, while only 98.7% knew the male sex organ correctly. Nearly all (99%) knew that pregnancy occurs due to unprotected sex, but only 15% knew that pregnancy is likely to occur in the middle of the menstrual cycle. Less than half (42.7%) agreed that contraception can prevent pregnancy. The majority of the participants (64.5%) were strongly against high school girls practicing contraception, and 34.9% believed that religion and culture have a negative impact on contraception practices.

Conclusion: There is good knowledge of contraception within the young population, but its use is still low, and it could be due to socio-cultural factors.

Keywords: knowledge, attitudes, practices, contraception, family planning, Gambia

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Abbreviations: KMC, Kombo Municipal Council; WCR, West Coast Region; BCC, Banjul City Council; NBR, North Bank Region; WHO, World Health Organization; STIs, sexually transmitted infections; KAP, knowledge, attitudes and practices

Introduction

Rapid population growth is a critical issue worldwide. Currently, one-fifth of the world's population is between ten and nineteen years, suggesting an increased number of adolescents worldwide.[1] Adolescence is a period marked by bodily changes that begins with a sense of independence and self-awareness, alongside sexual and reproductive maturity due to hormonal changes in the body. At this stage, girls are faced with several risks, including pregnancies and health and social consequences associated with it.[2] Therefore, it is important to sensitise adolescents to mitigate the risk of unintended pregnancies. Contraception is a voluntary method of preventing pregnancy due to coital activity, and it includes temporary or permanent methods.[3] Family planning is defined by WHO as "a way of thinking and living that is adopted voluntarily, upon the basis of knowledge, attitudes and responsible decisions by individuals and couples, in order to promote the health and welfare of the family group and this contribute effectively to the social development of a country".[4]

Contraception has been used since ancient times, but effective and safe methods of birth control became available in the 20th century. Adolescent fertility regulation and pregnancy prevention are some of the most important focuses of most family planning strategies. More than 15 million girls between the ages of 15 and 19 give birth every year worldwide, and an additional 5 million have abortions. In the United States, there are nearly 1 million adolescent pregnancies each year, with over 450, 000 ending in abortion.[5] In Central America, 18% of all births are to women in their teens and in Africa, this figure is 23%.[5] In many African countries, greater than 20% of women between the ages of 14 and 19 have given birth at least to one child.[6] Thus, family planning supports the rights of the girl child to remain unmarried and childless until she is physically, psychologically and economically ready and desires to bear children.[7]

SDGs 3.7 and 5.6 support universal access to sexual and reproductive healthcare services, including for family planning and universal access to sexual and reproductive health and reproductive rights respectively.[7] Family planning is not just a human right; it affects adolescents in other ways, such as preventing STIs, unintended pregnancies, reducing rates of school dropout.[7,8]

Contraceptive services are confidential and mostly free in many parts of the world,[9] including The Gambia, through supplementation programs that help expand the coverage of family planning services. However, the uptake and usage of contraception is low in The Gambia and other parts of the developing countries and it is influenced by factors such as socio-economic status, knowledge about contraception, attitudes related to the issues associated with contraception, residential area, educational status, cultural values, counselling received and the attitudes of contraceptive providers.[8,10] While research has been conducted in other parts of Africa and the world, a critical gap remains in The Gambia regarding the specific experiences, knowledge and attitudes of adolescents towards contraceptive use and to identify local barriers. Therefore, this study aims to evaluate the knowledge, socio-cultural attitudes and contraceptive practices among adolescent girls in the capital city of Banjul, The Gambia, providing the evidence

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required for the development of adolescent-friendly health policies and services.

Research methodology

Study design

A prospective descriptive cross-sectional study was conducted in three main senior secondary schools in Banjul, The Gambia, between September and October 2019.

Study population

This study was conducted in the capital city, Banjul, The Gambia and the participants included all registered high school girls between the ages of 13 and 19 years attending senior secondary school in the academic-year 2019/2020.

Sample size

Sample size was calculated using the modified Leslie Kish Formula,[11,12] which states that $N=4pq/e^2$ where N is the "sample size required", p is the "prevalence", q is "1-p (prevalence)", and e is "error for precision for the estimate (which is 0.05)". A study conducted in the subregion showed prevalence of contraceptive use is 13.0%.[13] Substituting these values into the formula $N = 4(0.13x0.87)/(0.05)^2$, a sample size of 180.96 was obtained and rounded up to 181. Assuming a nonresponse rate of 10%, (18.1), a final sample size of 199 was obtained. However, data were collected from 307 participants, with at least 84 participants from each school.

Sampling technique

Stratified sampling technique was used to recruit the participants from grade 11 and grade 12 of the participating schools.

Data collection tool

A self-administered structured questionnaire was used to collect data from the participants, and it was adopted from similar studies.[4,14,15] The questionnaire was pilot tested with 10 students to ensure clarity and reliability before rolling it out for data collection. The questionnaire had four sections:

1) The first section consisted of demographic information such as age, sex, year of study, ethnicity, religion, region, nationality, marital status, father's occupation, father's level of education, mother's occupation, and mother's level of education
2) The second section consisted of questions regarding knowledge about ways of conceiving and awareness about contraception methods
3) The third section assessed their attitude towards contraception
4) The last section dealt with respondents' utilization of contraceptives.

Procedure

After obtaining ethical approval from the ethics committee of School of Medicine and Allied Health Sciences, University of the Gambia, the principals of the schools concerned were contacted, and an explanation about the research and its purpose was provided. The principals of each school gave permission for the research to be conducted in their schools. One of the authors also explained the purpose of the research to the teachers at the schools.

The participating students were also informed about the purpose of the research and their wish to participate or not to participate was respected. After obtaining consent, each participant was given a printed questionnaire to answer, which took 20 minutes on average. No identification of the participants was made, but each of the questionnaire and the consent form were serial numbered, and the same serial numbered questionnaire was given to the person with the same serial numbered consent form.

The questionnaire was prepared in English, and assistance from the Science teacher(s) at the schools was sought in administering the questionnaire.

Inclusion and exclusion

Contraceptive usage is mostly associated with married women, but this study focuses on the teenage population, which is often overlooked because of the social phenomenon associated with sex before marriage and their sexual needs and desires are left out. Therefore, participants are required to be adolescent girls attending high school in Banjul from various towns and villages around the greater Banjul area, irrespective of their race, tribe, religion, socio-economic or marital status, but are willing to participate. Girls up to the age of 24 will be considered, as they will still meet the criteria for young people, however, they are secondary in focus. Anyone outside the inclusion criteria and not willing to participate is left out of the study.

Statistical analysis

The data were analysed using Statistical Package for Social Sciences (SPSS) for Windows version 26. The results are presented in tables. The chi-squared test, where necessary, was used and a p-value <0.05 was considered to indicate statistical significance.

Ethical consideration

Ethical approval was obtained from the ethics committee of School of Medicine and Allied Health Sciences, University of the Gambia. No personal information that could be used to identify the participants was obtained. Approval to conduct the research at the participating schools was also obtained. Information about the study was thoroughly explained to participants, and informed written consent was sought from each student, and parental approval for participants who were less than 18 years. No personal information that could be used to identify the participants was obtained. The information received from the participants was treated with utmost confidentiality and privacy. Participation was voluntary, and participants could withdraw from the study at any time during the data collection process.

Results

Demographic information

In this study, a total of 307 high school girls participated by answering the questionnaire. Most of the girls were above the age of 15 and fell into the 16-18 age category with a mean age of 17.9 years ± 1.2 years, and most of the participants were from grade 12. The Mandingo ethnic group was the most represented, with 31.3%, and 88% of the participants were Muslims. See Table 1.

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Table 1 Demographic information

Variable	Parameters	Frequency (n=307)	Percentage
Age category	13-15	4	1.3
	16-18	207	67.4
	19-21	95	30.9
	22-24	1	0.3
Ethnicity/Tribe	Mandingo	96	31.3
	Wolof	36	11.7
	Fula	53	17.3
	Jola	44	14.3
	Serrer	30	9.8
	Serahule	15	4.9
	Manjago	12	3.9
	Others	18	5.9
	No response	3	1
Religion	Islam	271	88.4
	Christianity	34	11
	No response	2	0.6
Region	BCC	55	17.9
	KMC	161	52.4
	WR	76	24.8
	NBR	15	4.9
Grade	11	131	42.7
	12	176	57.3
Nationality	Gambian	299	97.4
	Non-Gambian	7	2.3
	No response	1	0.3
Marital status	Married	1	0.3
	Single	301	98
	No response	5	1.6
Father's occupation	Physical labour	30	9.8
	Skilled labour	140	45.6
	Productive labour	86	28
	Not working	27	8.8
	No response	6	2
	Do not know	18	5.9
Mother's occupation	Physical labour	33	10.7
	Skilled labour	46	15
	Productive labour	78	25.4
	Not working	136	44.3
	No response	9	2.9
	Do not know	5	1.6
Father's level of education	Primary school	15	4.8
	Junior school	18	5.8
	Senior secondary	71	23.1
	Tertiary level	59	19.2
	Quranic	19	6.2
	Non-formal education	73	23.7
	Do not know	28	9.1
	No response	25	8.1

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Table 1 Continued...

Mother's level of education	Primary school	25	8.1
	Junior school	32	10.4
	Senior school	44	14.3
	Tertiary level	31	10.1
	Quranic	11	3.6
	Non-formal education	109	35.4
	Do not know	24	7.8
	No response	32	10.4

Knowledge of reproduction

All the participants knew the vagina to be the female sexual organ, while 1.3% got the male sexual organ wrong. Nearly all (99%) of the participants agreed that the main cause of pregnancy was unprotected sexual intercourse, whereas only 15% knew that pregnancy was likely to occur in the middle of the menstrual cycle. See Table 2.

Table 2 Knowledge of reproduction

Variable	Parameters	Frequency (n=307)	Percentage
Which of the following is a female sex organ	Mouth	0	0
	Vagina	307	100
	Rectum	0	0
	Penis	0	0
Which of the following is a male sex organ	Penis	303	98.7
	Anus	2	0.7
	Mouth	1	0.3
	Vagina	1	0.3
Which of the following ways can pregnancy occur	Holding hands	1	0.3
	Kissing	2	0.7
	Unprotected sexual intercourse	304	99
Which of the following stages of the menstrual cycle is pregnancy likely to occur?	At the beginning of the cycle	63	20.5
	In the middle of the cycle	46	15
	At the end of the cycle	103	33.5
	Do not know	89	29
	No response	6	2

Knowledge of contraception

Most of the participants (44.6%) considered themselves to be slightly aware of contraception, and 33.3% knew only one form of contraception, while 42.7% agreed that contraception could prevent teenage pregnancy, and 37.1% agreed that contraception is important in preventing unwanted pregnancies in a follow-up question. Most (54.5%) of the participants agreed that none of the contraceptive methods was suitable for students, but 65.1% were in favour of high school girls discussing contraception with health professionals, while one quarter (29.3%) of the participants discussed contraception with their parents and 79.8% of the participants knew that contraception could be obtained from health facilities. See Table 3.

Table 3 Knowledge of contraception

Variable	Parameters	Frequency (n=307)	Percentage
Are you aware of family planning/contraception?	Not at all	66	21.5
	Slightly aware	137	44.6
	Somewhat aware	21	6.8
	Moderately aware	15	4.9
	Extremely aware	67	21.8
	No response	1	0.3
Does contraception prevent unwanted pregnancies?	Not at all true	17	5.5
	Slightly true	40	13
	Not sure	100	32.7
	Moderately true	16	5.2
	Very true	131	42.7
	No response	3	0.9

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Table 3 Continued...

Is contraception important in preventing unintended teenage pregnancy?	Not at all	62	20.2
	Slightly important	55	17.9
	Neither unimportant nor important	57	18.7
	Moderately important	15	4.9
	Extremely important	114	37.1
	No response	4	1.2
Is it necessary for high school students to have some knowledge of contraception?	Not necessary	39	12.7
	Slightly necessary	35	11.4
	Neither necessary nor unnecessary	21	6.8
	Moderately necessary	11	3.6
	Extremely necessary	200	65.1
	No response	1	0.3
Have your parents ever talked to you about contraception?	Yes	90	29.3
	No	216	70.4
	No response	1	0.3

Attitude towards contraception

The majority of the participants (64.5%) were strongly against high school girls using contraception, and 37.8% agreed that contraception was only meant for married people. More than half (51.5%) of the girls very strongly agreed that it is the responsibility of women and girls to practice contraception, while 45.6% of the participants said it's very true that good sexual and reproductive health knowledge will increase contraception practices. Almost half of the participants (47.2%) moderately agreed that it is normal to visit a doctor to discuss contraception, while 34.2% of the participants strongly disagreed that better sexual education will lead to more sexual behaviours. Nearly one third of the participants (34.9%) agreed that religion and culture have a negative impact on contraception practices. See Table 4.

Table 4 Attitude towards contraception

Variable	Parameters	Frequency (n=307)	Percentage
Opinion on girls going to school using contraception	Strongly against it	198	64.5
	Moderately against it	12	3.9
	Neutral	57	18.6
	Moderately in favour of	14	4.6
	Strongly in favour of	24	7.8
	No response	2	0.6
Contraception is for married people only	Not true at all	73	23.8
	Slightly not true	23	7.5
	Not sure	77	25.1
	Moderately true	18	5.9
	Very true	116	37.8
Women and girls are the only responsible for using contraception	Not true at all	40	13
	Slightly true	34	11.1
	Not sure	60	19.6
	Moderately true	14	4.6
	Very true	158	51.5
	No response	1	0.3
Good knowledge of SRH in teenagers would increase the use of contraception thus prevent teenage pregnancy	Not true at all	33	10.7
	Slightly true	33	10.7
	Not sure	74	24.1
	Moderately true	26	8.5
	Very true	140	45.6
	No response	1	0.3

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Table 4 Continued...

Do you agree that it is normal for girls to visit a doctor or nurse to discuss contraception	Strongly disagree	42	13.7
	Slightly disagree	14	4.6
	Not sure	27	8.9
	Moderately agree	145	47.2
	Strongly agree	76	24.8
	No response	3	0.9
Do you agree that better sex education will lead to more sexual behaviour?	Strongly disagree	105	34.2
	Slightly disagree	25	8.1
	Not sure	77	25.2
	Agree	72	23.5
	Strongly agree	24	7.8
	No response	4	1.2
Do you agree that religion and culture have a negative impact on the use of contraception?	Strongly disagree	43	14
	Slightly disagree	11	3.6
	Not sure	67	21.9
	Agree	107	34.9
	Strongly agree	75	24.4
	No response	4	1.2

Contraceptive practices

Of all the participants, 92.9% were sexually inactive, while 1.6% had used contraception at some point in their lives, and condoms were the most (2.6%) commonly used contraceptive method. Moreover, 90.5% did not know how difficult it is to get contraceptives. See Table 5.

Table 5 Contraceptive practices

Variable	Parameters	Frequency (n=307)	Percentages
How often do you have sexual Intercourse	Never	285	92.9
	Rarely	3	1
	Sometimes	15	4.9
	Always	1	0.3
	No response	3	0.9
Have you ever used contraception before?	Never	290	94.4
	I cannot remember	3	1
	I do not want to talk about it	6	2
	Yes	5	1.6
	No response	3	1
What methods have you used before?	Condoms	8	2.6
	Injection	4	1.3
	Pills	1	0.3
	None	287	93.5
	Condom, withdrawal	2	0.7
	Condom, injection, pills	1	0.3
	No response	4	1.3
How often do you use contraception	Always	4	1.3
	Often	3	1
	Sometimes	6	2
	Rarely	2	0.6
	Never	288	93.8
	No response	4	1.3
How difficult is it to get contraception?	Very difficult	9	2.9
	Difficult	3	1
	Do not know	278	90.5
	Easy	8	2.6
	Very easy	6	2
	No response	3	1

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Discussion

This study aims to assess the knowledge, attitudes and practices of contraceptive methods among adolescent girls in senior secondary schools in Banjul. This study used a robust sample size of 307 female participants from three different high schools. This was more than the sample size calculated, and it was significantly higher than the sample used by Hagan and Buxton;[15] even though they focused on both males and females, but it was a little less than some other studies such as Kara et al.[12] and Nsubuga et al.,[16] even though these studies were conducted among university students. The participation in this study was higher than the initial calculated sample, because many of the girls were willing to participate in the study out of excitement and curiosity for the topic.

The mean age of the participants was 17.6 years ± 1.2 years, and the age range was between 13 and 23 years. These findings are higher than those found in other studies in the subregions[17] and similar to another study conducted in Ethiopia.[18] Most of the participants (88%) were affiliated with Islam, and this could be because Gambia is a Muslim-dominant country. The largest ethnic tribe in the Gambia is Mandingo (Mandinka), and that could be the reason for the majority of the participants being Mandingo (Mandinka). Being high school students, it was expected that the majority would be single; thus, 98% of the participants were single.

Mothers of many participants (44.3%) were housewives and unemployed, which was similar to the finding of another study conducted in South Africa.[6] However, some of the mothers were involved in business in the form of petty trading such as market vendors, to make ends meet. Finally, 40% of their parents had received some form of formal education, which was impressive and way beyond what was expected. In addition, a handful of their parents have attained university degrees.

All the participants gave 100% answers to the female sex organ, and 98.7 % also got the male sex organ right. These findings can be explained, because the human reproductive system is part of the syllabus in subjects such as general science and biology, and the animal reproductive system is taught in agriculture curriculum. However, the students lack a proper understanding of the menstrual cycle, and these findings were similar to another study conducted in Nigeria.[19] The findings of this study suggest that most girls cannot differentiate their fertile period from a safe period in their menstrual cycle, which could lead to unintended pregnancies.

More than three-quarters of the participants (78.1%) demonstrated good knowledge of contraception, which was higher than reported in other studies conducted in Limpopo province, South Africa and Ethiopia.[6,18] About 29.3% of participants spoke to their parents (mostly mothers) about contraception, and this is higher than the researchers were expecting because it is not common for parents to talk to their children about contraception due to religious beliefs and cultural views. Other sources of information about contraception employed by adolescents are books/magazines, friends/colleagues, hospitals, family planning clinics, community pharmacies and sensitisation workshops conducted to educate the students about prevention of STIs.

A significant finding of this study is the high level of general contraceptive awareness, while nearly half of the participants (47.9%) agreed that contraception can prevent unwanted pregnancies, but the usage of contraception remains low because only 1.6% of the participants reported using contraception. Interestingly, the Coimbatore study also noted a significant "Knowledge, Attitude and Practice (KAP)", observing that despite the availability of contraceptives, there is often poor acceptance due to ignorance or fear of complications.[4] In the Gambia, the low use of contraception is usually driven by religious beliefs, as the majority of the country practices Islam, with few inhabitants being Christians. Further, there is a social stigma attached to single people seeking contraception which prevents them from seeking contraceptive services. Hence, there should be mass sensitisations regarding contraceptives, and youth-friendly contraceptive facilities should be provided.

Nevertheless, 79.8% knew where to obtain contraception services, and 90.5% were unsure of the difficulty involved in getting the contraception, likely because they had never attempted to access these services due to social barriers and stigma towards using contraceptives. Moreover, 59.3% of the participants agreed that our culture and religion have a negative influence on the use of contraception. The findings of the Coimbatore study also indicated that husband's opposition (28.4%) and fertility related reasons (45.1%) had a negative impact on contraception usage.[4] The difference in the factors responsible for the negative perception of contraceptive use in this study and Coimatore study[4] could be due to the different age groups studied.

Furthermore, 65.1% of the participants agreed that it is extremely important for high school students to have some knowledge of contraception, but 64.5% were "strongly against" high school girls practicing it. This reflects a deep-seated perception that contraception is primarily intended for married couples, a view held by 43.7% of the participants. In addition, the passive fear of stigma and discrimination among Gambian girls prevents them from approaching health professionals or other stakeholders even when they deem such discussions "normal".

Limitations

The primary limitations encountered were the socio-cultural taboos surrounding sexual and contraception discussions, which resulted in non-response on sensitive questions regarding sexual behaviours and intimacy. This highlights the difficulty of conducting reproductive health research in conservative environments where sexual activity among young people, especially among unmarried people, is not openly discussed. Moreover, the data is subjected to social desirability bias because participants may have under-reported their sexual behaviours or contraceptive behaviours to align with prevailing cultural norms and religious expectations. Additionally, the fear of being judged or stigmatised is likely to influence the responses received, potentially resulting in underestimation of the actual need for reproductive health services in the population.

This study was conducted among senior secondary school students in the urban context, which may limit the generalisability of the findings to rural populations or out of school adolescents who may experience different levels of health access and socioeconomic barriers. By focusing exclusively on girls, the study does not capture the knowledge, attitudes, and practices of adolescent boys.

Conclusion

This study demonstrates that senior secondary school girls in Banjul have a significant level of contraceptive awareness, but the uptake and utilization of contraception was very low. However, a gap remains in their understanding of reproductive health, particularly regarding the fertile period of the menstrual cycle and the role of contraception in preventing unintended pregnancies. Most participants reported that they had never used any contraceptive method. Negative attitudes towards contraceptive use among school-going girls were influenced by socio-cultural norms and religious beliefs.

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These findings highlight the need for comprehensive, age-appropriate sexual and reproductive health education within schools, alongside interventions that promote accurate knowledge of contraception and reproductive physiology. Strengthening adolescent-friendly health services, encouraging open communication between parents and adolescents, and engaging community and religious stakeholders may help address misconceptions and reduce barriers to accessing contraceptive information and services. Further research, including qualitative studies, is recommended to explore the underlying socio-cultural factors influencing contraceptive attitudes and practices among adolescents in The Gambia.

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Conflicts of interest

The authors declare no potential conflicts of interest.

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