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AWARENESS AND UTILIZATION OF CONTRACEPTIVES AMONG FEMALE STUDENTS IN ELDORET NATIONAL POLYTECHNIC IN UASIN GISHU COUNTY, KENYA, A CROSS SECTIONAL STUDY

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ABSTRACT

Background: **Good knowledge of contraceptives is a key component for contraceptive utilization by young women. There have been increased incidences of unwanted pregnancies and induced abortions in tertiary institutions. This study sought to assess the knowledge and pattern of utilization of contraceptives among female students in Eldoret National Polytechnic, Kenya (ENP).**

Objective: **One of the specific objectives of the study was to assess Contraceptive literacy among female students of ENP in Kenya.**

Methods: **The study design was a cross-sectional one in form of self-administered closed ended and open-ended questionnaires. Study population was only female students of ENP, aged between 18 and 35 years. Stratified random sampling was applied to the selected sample of 360 from the study population of 5879.**

Results: **Majority of the respondents affirmed the knowledge on contraceptive method for pills (88.0%) injections (83.4%) male condoms (82.2%), and e-pills (88.0 %) while affirming the use of alternate methods such as withdrawal (62.3%) and abstinence (77.3%). Regarding the sources of the family (FP) services, most respondents scored highly on the sources of the contraceptives with injectables, male condoms, E-pill and oral contraceptive pills at 82.8%, 80.7%, 80.4% and 73.6% respectively.**

Conclusion: **Most participants reported good knowledge and source for short term family planning (FP) methods while long term reversible contraceptive methods are least understood. Majority of students get contraceptive information from social media and peers.**

***Recommendation*: This study recommended robust reproductive health education in tertiary institutions to ensure correct and timely dissemination of information on sexuality and contraceptives use.**

INTRODUCTION

Family planning FP has been defined by the World Health Organization (WHO) as a voluntary and informed decision by an individual or couple on the number of children to have and when to have them (1). Among the targets (3.7) in goal 3 of the United Nations sustainable development goals (SDGs) is to assure universal access to sexual and reproductive health (RH) services, including contraception, information and education, and the integration of RH into national strategies and programs (2).

Modern contraceptives have been recognized as an effective tool for fertility reduction and are being widely promoted to slow rapid population growth, particularly in developing countries (3). Despite these established benefits of family planning, the use of modern contraceptives is low especially in sub-Saharan Africa countries, worldwide, among the 1.9 billion women of reproductive age group (15–49 years) in 2019, 1.1 billion have a need for family planning; of these, 842 million are using contraceptive methods, and 270 million have an unmet need for contraception (4).

In eastern Africa, the abortion rate increased by 20% while the share of unintended pregnancies ending in abortion rose from 24% to 35%. In 2015–2019, there were a total of 20,900,000 pregnancies annually. Of these, 9,890,000 pregnancies were unintended and 3,500,000 ended in abortion (5).

Past research studies on young women, although primarily small-scale surveys, have shown that just over two in three young women are aware of modern contraceptives. More than half of them have the good knowledge (6) and while knowledge of contraception, awareness and benefits however may not necessarily translate into commensurate utilization among young women since other factors like availability, accessibility and preference also influence usage (7). This paper examines contraceptive awareness by female students in ENP since knowledge plays vital role in choosing which method of contraceptive to use.

METHODS

Study Design: This study conducted on 15th to 17th May 2019 using self-administered questionnaires on female students. Information on knowledge of contraception was assessed by asking respondents whether or not they had heard of 10 modern methods; female sterilization, male sterilization, the oral pill, IUDs, injectables, implants, male condoms, female condoms, LAM, and emergency contraception.

Study Population: The study population consisted of female students pursuing certificate, diploma and higher diploma courses. Most of these students were aged 18-25 years. At time of the study, it had a population of 5879 female students and comprises students in their first, second and third year of their studies. Emphasis was placed on women because they bear the risk of exposure to pregnancy and most methods of contraception are designed for them.

Study Site: This study was carried out at ENP in Eldoret Town of Uasin Gishu County in former Rift Valley province in Kenya. It is a tertiary institution offering vocational and technical courses at certificate, diploma and

higher diploma levels. During the time of the study, ENP had a female population of 5879 distributed across all years of study most of whom were aged 18-25 years.

Kenya is a country located in East Africa bordering Ethiopia to the north, South Sudan to the North West, Uganda to the west, Tanzania to south west, Somalia to the east and Indian Ocean to south east. According 2019 population census, Kenya's population is estimated at 47.6 million people within an area of 580,376 square kilometres.

Eligibility Criteria: Female students enrolled in the Eldoret National Polytechnic and in good mental state

Sampling method: Stratified random sampling was used to pick participants where the population was divided into subgroups based on the year of study namely year 1, year 2 and year 3. Systematic sampling was then used to select a sample from each of the above years of study. The sapling frame used is shown in table 1 below:

Table 1

Study Sample frame

Year of Study	**Gender**	**N**	**Sample Size**
First	Female	2,218	136
Second	Female	2164	132
Third	Female	1497	92
Total		5879	360

Data collection: Data collection was done between 15th and 17th May 2019. This was done using a pretested self-administered questionnaire which was developed by the researcher with assistance of supervisors. The questionnaire was in English since it is the medium of learning in Kenyan tertiary institutions. The questionnaire was used to seek information on the socio-demographic characteristics of the respondents, contraceptive utilization, their knowledge of contraceptive methods and sociodemographic factors affecting contraceptive utilization. Response rate was 90.6% (326 of 360).

Data Analysis: Data was done using SPSS version 20 for windows for statistical analysis. The results were then presented in descriptive statistics using frequency tables, bar charts, graphs and percentages as shown in the result section.

Ethical Considerations: Research proposal was presented to University of Kabianga Institutional Ethical Review Committee (IERC) for approval before commencement of the research and approval obtained as number IERC AN 0010 in April 2019. All study participants signed an informed consent before participating in this study. Permission to conduct the study was sought and obtained on March 15, 2019 from Eldoret National Polytechnic authorities. Privacy and confidentiality was strictly maintained. Anonymity was kept as individual identities were hidden. Names of participants were not used on data collection tool or any other place. Data was kept in locked cabinets and keys kept only by principal investigator.

RESULTS

Demographic characteristics of the Participants

Table 2

Demographic characteristics of study participants

Variables	Category	Frequency	Percent (%)
Age of the respondent	18 – 20 years	37	11.3
	21 – 23 years	219	67.2
	24 – 26 years	61	18.7
	>27 years	9	2.8
	Total	326	100.0
Marital status	Married	35	10.7
	Single	280	85.9
	Cohabiting	11	3.4
	Total	326	100.0
Number of children	None	276	84.7
	One	40	12.3
	Two	10	3.0
	Total	326	100.0
Religious Affiliation	Catholic	103	31.6
	Protestant	218	66.9
	Muslim	5	1.5
	Total	326	100.0
Year of study	First	129	39.6
	Second	117	35.9
	Third	80	24.5
	Total	326	100.0

The distribution in table 2 highlights the socio-demographics of the study respondents. A total of 326 respondents consented and enrolled into the study, and majority of them (67.2%) were aged between 20-22 years, 18.7 per cent were aged between 24 and 26 years, while 2.8 %(9) were above 25 years. Regarding marital status, majority of the respondents (85.6%) were single while the rest (14.1%) were either married or cohabiting. Concerning, religious affiliation, majority of respondents (66.9%) were Protestants while others were Catholics (31.6%) and Muslims (1.5%). From the distribution, 84.7 % of respondents had no children while 13.3% had at least one child.

Socio-demographic factors and its effects on utilization of contraceptives

Table 3

Socio-demographic characteristics and utilization of contraceptives

Variable	Category	Yes	No	Total	χ^2	df	Sig.
Age (Years)	18 – 20	17 (8.6)	20 (15.6)	37 (11.3)	21.833	3	0.001*
	21 – 23	136 (68.7)	83 (64.8)	219 (67.2)			
	24 – 26	45 (22.7)	16 (12.5)	61 (18.7)			
	> 27	0 (0.0)	9 (7.0)	9 (2.8)			
	Total	198 (60.7)	128 (39.3)	326 (100.0)			
Marital status	Married	16 (8.1)	19 (14.8)	35 (10.7)	10.436	2	0.005*
	Single	171 (86.4)	109 (85.2)	280 (85.9)			

	Cohabiting	11 (8.5)	0 (0.0)	11 (3.4)			
	Total	198 (60.7)	128 (39.3)	326 (100.0)			
Number of children	None	172 (86.9)	104 (81.3)	276 (84.7)	7.258	2	0.027*
	One	24 (12.1)	16 (12.5)	40 (12.3)			
	Two	2 (1.0)	8 (6.2)	10 (3.0)			
	Total	198(60.7)	128 (39.3)	326 (100.0)			
Religious affiliation	Catholic	60 (30.3)	43 (33.6)	103 (31.6)	3.506	2	0.173
	Protestant	133 (67.2)	85 (66.4)	218 (66.9)			
	Muslim	5 (2.5)	0 (0.0)	5 (1.5)			
	Total	198(60.7)	128 (39.3)	326 (100.0)			
Year of study	First	55 (27.8)	74 (57.8)	129 (39.6)	38.29	2	0.001*
	Second	95 (48.0)	22 (17.2)	117 (35.9)			
	Third	48 (24.2)	32 (25.0)	80 (24.5)			
	Total	198 (60.7)	128 (39.3)	326 (100.0)			

The distribution in Table 3 illustrates the relationship between the socio-demographic characteristics and the utilization of contraceptives. The distribution shows that majority of respondents who use contraceptives (68.7%) lay at 20-22 years age bracket while 22.7% were at 23–25-year age bracket. A tiny minority (7.0%) was above 25 years old. Respondents who were single reported using more contraceptives (86.4%) than those married or cohabiting at 8.1% and 8.5% respectively. A majority of Protestant respondents (67.2%) reported using contraceptives as opposed to Catholic and Muslim respondents at 30.3% and 2.5% respectively. Second year respondents reported using contraceptives more (48.0%) than first year and third year respondents at 27.8% and 24.2% respectably. Respondents who do not have any children are using more contraceptives (86.9%) than those who have at least one child at 13.1%.

The Chi – square distribution indicates that the utilization of the contraceptives is significantly associated with the following socio-demographic characteristics; age, marital status, number of children and year of study at 0.05 significant levels. In particular, χ^2 (3) = 21.833, ($p< 0.05$) indicates that age (Years) significantly relates to the utilization of modern contraceptives. The student who is aged between 21- and 26-years group are more likely to utilize contraceptives than a student who is younger than 20 years or older than 27 years.

The statistic, χ^2 (2) = 10.436, ($p< 0.05$) indicates that marital status significantly relates to the utilization of modern contraceptives. Thus, a student who is single or cohabiting is more likely to utilize contraceptives than a student who is married. The statistic, χ^2 (2) = 7.258, ($p< 0.05$) indicates that number of children significantly relates to the utilization of modern contraceptives. Thus, a student who has no children is more likely to utilize contraceptives than a student who has children.

The statistic, χ^2 (2) = 38.29, ($p< 0.05$) indicates that year of study significantly relates to the utilization of modern contraceptives. Thus, a student who is in second year of study is more likely to utilize contraceptives than a student who is in the first year of the study. However, religious affiliation is not significantly related to utilization of contraceptives among the students, χ^2 (2) = 3.506, ($p> 0.05$). Thus, there is no significant difference in the utilization of

the contraceptives among students of different religions.

Level of awareness of contraceptive among respondents

Table 4

Awareness of Contraceptive among respondents

Awareness on;	**Yes (%)**	**No (%)**	**Total (%)**
Emergency pills	296 (90.8)	30(9.2)	326 (100.0)
Female sterilization	80 (24.5)	246 (75.5)	326 (100.0)
Male sterilization	78 (23.9)	248 (76.1)	326 (100.0)
Oral contraceptives	230 (70.6)	96 (29.4)	326 (100.0)
IUDs	196 (60.1)	130 (39.9)	326 (100.0)
Injectables	230 (70.6)	96 (29.4)	326 (100.0)
Implants	234 (71.8)	92 (28.2)	326 (100.0)
Male condom	250 (76.7)	76 (23.3)	326 (100.0)
Female condom	195 (59.8)	131 (40.2)	326 (100.0)

The distribution in Table 4 above shows the distribution relating to the awareness to modern contraceptives. As indicated majority of respondents (90.8%) have heard of emergency pills and most respondents had a good knowledge of male condom, implants, oral contraceptives, and injectables at 76.7%, 71.8%, 70.6% and also 70.6% respectively. The least known contraceptives were male sterilization at 23.9% and female sterilization at 24.5%.

Awareness of Contraceptive methods and their source

Table 5

Awareness of FP methods and their source

Variable	**Response**	**Method**	**Source**
Oral Pill	Yes	204 (62.6)	240 (73.6)
	No	122 (37.4)	86 (26.4)
	Total	326 (100.0)	326 (100.0)
Injection	Yes	272 (83.4)	270 (82.8)
	No	54 (16.6)	56 (17.2)
	Total	326 (100.0)	326 (100.0)
Male condom	Yes	268 (82.2)	263 (80.7)
	No	58 (17.8)	63 (19.3)
	Total	326 (100.0)	326 (100.0)
E.pills	Yes	287 (88.0)	262 (80.4)
	No	39 (12.0)	64 (19.6)
	Total	326 (100.0)	326 (100.0)
Withdrawal	Yes	203 (62.3)	
	No	123 (37.7)	
	Total	326 (100.0)	
Abstinence	Yes	252 (77.3)	
	No	74 (22.7)	
	Total	326 (100.0)	

The distribution in Table 5 above relates to the respondents' awareness of the contraceptive methods and where to obtain them. As per the distribution, majority of the respondents affirmed the knowledge on contraceptive method for pills (88.0%) injections (83.4%) male condoms (82.2%), and e-pills (88.0 %) while affirming the use of alternate methods such as withdrawal (62.3%) and abstinence (77.3%). Regarding the sources of the family FP services, most respondents scored highly on the sources of the contraceptives with injectables, male condoms, E-pill and oral contraceptive pills at 82.8%, 80.7%, 80.4% and 73.6% respectively.

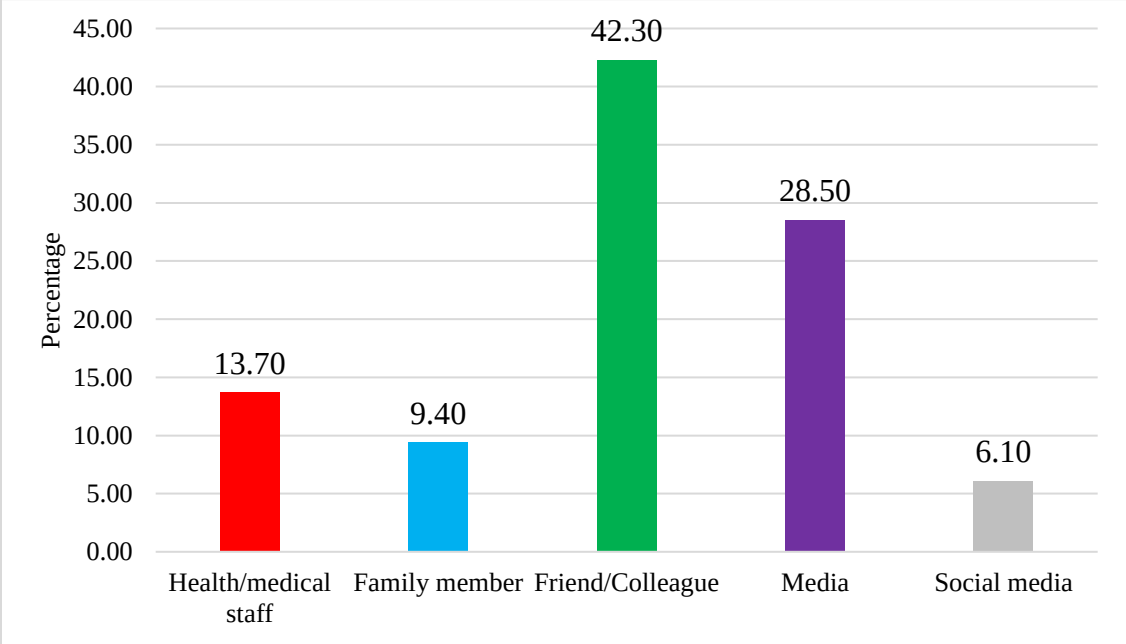

Figure 1: Respondents' source of information on contraceptives

The distribution in Figure 1 above shows the source of information on contraceptives. It shows that the respondents derive the information on contraceptives from varied sources that include; friend/colleague (42.30%), media (28.50%), medical staff (13.70%), family members (9.40%) and social media (6.1%). This indicates that students largely depend on their friends, peers and colleagues as their main sources.

DISCUSSION

Knowledge of contraceptive methods was one of the key objectives of the study. This is because knowledge of methods is a prerequisite for making a decision to initiate utilization. This study found that majority of respondents (90.8%) have heard of emergency pills. Most respondents had a good knowledge of male condom, implants, oral contraceptives, and injectables at 76.7%, 71.8%, 70.6% and also 70.6% respectively. The least known contraceptives were male sterilization at 23.9% and female sterilization at 24.5%. This agrees with a similar study on Kenyan tertiary institutions which found that the most commonly known and used methods were condoms and pills and that the fear of side effects (55.6%) and lack of information about contraceptives (18.5%) have been reported as

factors influencing the non-use of contraceptives (8).

A similar study in Ethiopian Tvet institutions found that of the total participants, 91.2% of them had heard of at least one method of contraception and among these, 72.5% of them were aware of injectables while 57.8% of the participants had discussed at least one method of contraceptive previously (9).

Another similar study found most respondents replied that they have heard about contraceptives, mostly condoms and pills. Recent studies found that level of awareness and use of modern contraceptives in SSA amongst women of reproductive age (15–49 years) was highest amongst the 20–24 years age group compared to the adolescents (15–19 years) and over 24 years group (10).

This study found that majority of those who got contraceptive information from friends (45.5%) used contraceptives than those who got information from health worker, media and family at 25.8%, 18.7% and 4.5% respectively. On the contrary, a study in Ghana found that respondents' awareness and use of contraceptives varied with about 65% reported to have ever heard of a contraceptive method and 21% ever used a modern contraceptive predominantly an emergency contraceptive pill (48%) while television (TV) was the main reported source of information on contraceptives (33%), and respondents' parents, relatives, and guardians were the main sources of contraceptives used at 72% (11).

A study of contraceptive knowledge and practices of female students in Uganda found that awareness of contraceptive methods did not translate into practice. Only about half of the students using contraceptives, mostly oral contraceptives (21.4%) and the male condom (26.4%). A third (30.2%) knew about long-term reversible contraception methods (LARCs) but only 13.4% used them (12).

A similar study in Ghana however found that ninety-five percent of the respondents exhibited some knowledge about contraceptives, but this high knowledge did not translate into its use as the prevalence rate was as low as 18% (13).

The strengths of this study lie in the fact that we captured a wide range of information from respondents: demographics, contraceptive use, contraceptive awareness, source of family planning, source of contraceptive information and measures of association between different variables among participants. This allowed for a wide variety of individual experiences and/or perspectives that contributed to offer a nuanced understanding of the topic under study. However, this study had one main limitation; the sensitivity of issues surrounding contraceptive utilization and sexuality may be one factor that limited responses during data collection. Another likely limitation is that the study has not considered current non-users' perception about the benefits of contraception. To mitigate this, the researchers assured all participants of the utmost confidentiality of subject data. Furthermore, we used study codes on data documents like completed questionnaire instead of recording identifying information and kept a separate document that linked the study codes to participants' identifying information. Face sheets containing identifiers from research instruments containing data were removed after receiving from study participants.

CONCLUSION

Contraceptive literacy was above average with oral contraceptives, injectables, male condoms and implants being the most understood.

There was little knowledge on long term reversible methods such as IUDs and also poor understanding of real side effects of modern contraceptives. Furthermore, friends and social media were main source of contraceptive information.

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