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Knowledge, Attitude, and Practices Regarding Contraceptive Use among Female Students in a Private University in South Africa

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Abstract: ***Objective: To assess the knowledge, attitude and practices regarding modern contraception among young university women in South Africa. Study Design: A cross-section survey based study of 112 female undergraduates (ages 18-24) in a multiracial university in South Africa was conducted. Our 44-item survey used a multi-level framework to measure young women's knowledge, attitude, and practices regarding modern contraceptives. Data analysis was focused on descriptive statistics that examined patterns of participants' knowledge and use of modern contraceptives, which provided insight into reproductive health issues of participants. Results: Majority of participants (95.0%) had a good knowledge of at least two types of modern contraceptives, and an equally high number (86.0%) had positive attitude toward contraceptives. A very high percentage (90.4%) of participants who had ever had sexual intimacy (n=73) had used a form of contraceptive, but a low rate (21.9%) of consistent use was recorded. Salient factors associated with low consistent use included weight gain, long term effect on fertility, and encumbrances associated with oral pills. Conclusion: In spite of participants' high levels of knowledge of modern contraception and their positive attitude towards it, young university students are still making restrictive judgement of its use, which may explain in part, the high level of unintended pregnancy among this population cohort. Implications: The findings point to the need for a more nuanced enlightenment campaign and policies on reproductive health that speak to more complex factors that predict contraceptive use among university students in order to reduce unintended pregnancies among this reproductive-aged population.***

Keywords: Abortion, **C**ontraceptive; KAP study, young women, unintended pregnancy, Africa

1. Introduction

Knowledge and use of contraceptivein Europe and North America is consistently high among married and young women, while in Latin America and in Asia, there has been an appreciable increasee of knowledge and use of modern contraceptive from 20% in 1970 to 76% in the 1990s and to 85% in the first decade of the twenty-first century.[1] This positive development,however, has not been the case in Africa,[1,2] with contraceptive use ranging from 7.5% in sub-Saharan Africa to 57.4% in Northern Africa.[3]The World Health Organization has estimated that over 53% of reproductive women in Africa have an unmet need for modern contraceptive compared to 21% and 22% in Asia and Latin America respectively.[1]One important way to curb unintended abortions and high population rates in Africa is by encouraging married and young women to embrace modern methods of contraception. Besides long-acting reversible contraception, other modern contraceptives that are easily accessible and cost-effective include intrauterine devices (IUDs) and implants, which have been demonstrated to be highly effective and can prevent unintended pregnancies.[4,5] Various studies have found that adoption of these contraceptives is still very low among sexually active groups in Africa, especially in sub-Saharan Africa.[6,7,8]

In an extensive survey conducted by Seiber et al,[9] they found that only 14% of married African women used any form of contraceptive. Various reasons have been advanced by scholars in explaining the underlying factors for the poor uptake of modern contraceptive among all categories of women in Africa; some of which include low education attainment among women, and less international investment for family planning on the continent.[8,10,11] Other predictive factors for the poor utilization of modern contraceptive by women include poor knowledge of contraceptive and a misconception of their uses and side effects. Other scholars have also noted that early sexual debut by young women also contributes to non-use of contraceptives. For example, a study by Blum[12] in 2007 indicated that 75% of African youth engage in sexual activity by age 20, while a South African demographic survey in 1998 found that young people start engaging in sexual activities as early as 13 years for boys and 15 years for girls.[13] Sexual activities also increase when young people start their university education because they gain more freedom and get a lot of peer pressure to engage in risky sexual behaviours. Among students in tertiary institutions of learning, increase in risky sexual behaviour is believed to be caused by moving from strict households to a freer and more permissive environment.[14]Such increase in sexual activity by young women prior to marriage has also increased unintended pregnancy and induced abortion.

Unintended pregnancy among young women is increasingin Africa. Surveys conducted in 2008 by The Guttmacher Institute in collaboration with the World Health Organization estimated that 5.6 million abortions are carried out yearly on the continent,[15] with "40% of that number occurring among women between fifteen and twenty-four years under unsafe conditions, which may lead

to loss of fertility and even death".[11] It is estimated that in Nigeria, one in every five pregnancies is unintended,[16] while in Uganda, 297,000 abortions occur each year.[17]The World Health Organization has estimated that about 67,000 maternal deaths occur annually due to unsafe abortions performed by untrained staff.[1] More worrisome is the confirmation by some studies that abortion is competing with contraceptive as a viable alternative control option of fertility.[18,15] What all this points to is the continuous abbreviation of lives as sexually active women continuously make restrictive use of modern contraceptives.

Contraceptives have been defined as ways of preventing pregnancies by interfering with the ovulation process as well as fertilisation.[19] It gives sexually active women an option to avoid unwanted pregnancies. While enlightenment campaign has the underlying assumption that increase in contraceptive knowledge will increase contraceptive use, surveys do not seem to fully support this assumption. In Southern Africa for example, it has been estimated that more than 300,000 university students have unplanned pregnancies annually.[20]

Consequences of unplanned pregnancies among students may include stigmatisation, drop outs, high stress levels, fear, shame and anger. It is not only a problem to individuals but also has socio-economic effects on the society. University students as part of society's young adults' population are at a greater risk of contracting sexually transmitted diseases, Human Immunodeficiency Virus (HIV) infection and falling pregnant unintentionally because of their high levels of sexual experimentation.[21]Unwanted pregnancies among young women often come with great costs to both the individual and the government especially when they have to abort the foetus. Unplanned pregnancies among university female students are a concern because it may compromise their academic advancement, limit their social development, and disempower them.

In spite of the availability of contraceptives to all women in South Africa, the persistent high rates of unintended pregnancies especially among young women however, indicate that there is restrictive use of contraceptives among this population group. The South African Department of Health has noted that poor knowledge about contraception is associated with some form of insecurity and misunderstanding[22] resulting in about 90,000 induced abortion in South Africa.[23] The amount of information that university students have with regards to contraception is still not well known and therefore needs to be identified and their practices regarding contraception explained. The overall aim of this study was therefore to find out whether young women in South Africa have adequate knowledge of modern contraceptives, what their attitudes towards contraception are, and the pattern of their contraceptive use.

2. Methods

A cross sectional exploratory and descriptive approach was adopted to assess the knowledge, attitude and practice of female undergraduate students in a private university in South Africa regarding modern contraception. The population included female students of different racial and socio-economic backgrounds. A non-probability volunteer sample was used for the selection of participants for the study. The use of volunteer sampling enabled the researchers to get reliable and accurate information since respondents volunteered to take part in the study. Before conducting the study ethics clearance was obtained for the study from the university's ethics committee board.

Recruitment of respondents for the study was initiated by adverts, placed around the campus, inviting interested female students to volunteer as participants in the research. Students who wished to participate had to obtain a copy of the survey instrument at a section of the library as advertised. They were required to complete the questionnaire at any place of their choice and were instructed to drop the completed questionnaire in the Sociology assignment box in the campus. Pascoe[24] has noted that findings derived from this type of sampling method may not be very reliable because most volunteers are motivated by the possibility of gaining something in return and sometimes end up providing information they think is the desired response from the researchers. In order to minimise this problem, the researchers did not provide any incentive to the volunteers who participated in the research nor was there any form of physical interaction between the researchers and respondents during the process of collecting the data. It was therefore out of respondents' will to volunteer and provide the information required. Also to improve anonymity, volunteers' names were not requested for nor were participants seen by the researchers to provide room to ask for any form of favour in return for filling out the questionnaire. Criteria for inclusion included female students who were between the ages of 18 and 24 at the time of study and who were enrolled as full time students in the university.

3. Data Collection and Analysis

Self-administered questionnaire was the primary instrument for data collection over a period of three months (May-July 2015). The structured questionnaire, which comprised forty-four open and close-ended questions categorized under six sections, was standardized after a pilot study was conducted. The first section included questions on demographic data of respondents, and the second section comprised 7 items on contraceptive knowledge. The third section consisted of 12 items on participants' attitude towards contraceptives, and a fourth section consisted of 8 questions on contraceptive use, while the last 2 sections contained open ended questions that bordered on reasons for the use or non-use of contraceptives by participants. After collection, data was cleaned, coded and entered into the Statistical Package for the Social Science (SPSS) version 22. In all, 112 questionnaires were eligible for analysis. Analysis was focused on generating frequencies and cross tabulation to identify patterns, for the purpose of summarizing the data and providing insight to participants' reproductive health issues.

4. Results

Sample characteristics

The demographic characteristics of the sample (n=112, study population=1,829) are presented in Table 1. The mean age of respondents was 20.1 years, with the majority of participants (32.0%) being in the Foundation programme. The majority were South Africans (56.2%), Christians (88.3%), Black (83.0%), and were single (71.4%). Most of the respondents (46.4%) lived independently.

Table1: Demographic characteristics of respondents

Variable	Frequency	Percentage
Age:		
18	19	17
19	25	22.3
20	21	18.7
21	17	15.1
22	13	11.6
23	7	6.3
24	10	9
Year of study:		
Foundation	36	32.0
1st year	32	28.6
2nd year	21	18.9
3rd year	23	20.5
Religion:		
Christianity	99	88.3
Islam	4	3.6
Hindu	3	2.7
Traditional	5	4.5
Relationship status:		
Single	80	71.4
In casual relationship	12	10.7
In a stable relationship	20	17.9
Race:		
Asian	3	2.7
Black	93	83.0
Coloured	10	8.9
White	6	5.4
Nationality:		
South Africa	63	56.2
Zimbabwe	23	20.5
Botswana	3	2.7
Zambia	9	8.0
Nigeria	4	3.6
Others	10	9

5. Sexual Behaviour and Contraceptive Knowledge

Results of respondents' reproductive characteristics, sexual behaviour and knowledge of contraceptives are summarized in Table 2. Level of sexual activities of respondents indicated that 65.2% (n=73) of the sample had ever engaged in sexual relation while 34.8% (n=39) of respondents had never engaged in sexual activity. Knowledge of contraception among respondents indicated that 95% knew about one or two contraception methods at the time of the study with the commonest knowledge associated with contraceptive oral pills (85.0%) and male condoms (81.6%), while the least familiar contraceptive methods were intra uterine devices (20%) and withdrawal method (9.2%). Of the 65.2% that were sexually active (n=73), a high number of respondents (67.1%) had used at least one form of contraceptive. The overwhelming majority of respondents (95%) associated contraceptives with the prevention of pregnancy, while 82.5% were familiar with a source where at least one type of contraceptive can be obtained. Participants generally did not consider access to contraceptive as a major problem. The most common sources of obtaining information about contraceptives were the media (62%) and from health professionals (58%). Though relatively low, it is important to note that 20.8% of respondents also relied on their parents in obtaining contraceptive knowledge. Ninety-four percent of respondents knew that the male and female condoms can prevent both STIs and pregnancies. However, 2% also believed that intra uterine devices (IUDs) can prevent both pregnancy and STIs, while 2.5% believed that oral pills can prevent STIs, and another 2.5% were of the opinion that the withdrawal method can prevent both STIs and pregnancy. In all, 71% of participants believed that contraceptives are safe, while 23.8% did not believe in the safety of contraceptives citing mainly weight gain, and infertility.

6. Attitude towards Contraceptives

The majority of respondents (82.1%) were convinced that the advantages of using contraceptives outweigh the disadvantages, and 85.7% believed that contraceptives should always be used in sexual encounters. An overwhelming majority (96.0%) believed that contraceptive matters should be the joint responsibility of both partners and not only the prerogative of the male partner. Although participants had positive attitude toward contraceptive use, 32.5% were uncertain if the use of contraceptive would improve their relationship with their spouse, while 34.2% agreed that it would, and 10% did not agree that it would improve their relationship. On the other hand, 78.6% of participants believed that the use of contraceptives would enhance their chances of achieving their goals in life.

Table 2: Distribution of respondents' reproductive practices

Variable	Frequency	Percentage
Knowledge of contraception (n=112):		
Yes	106	95.0
No	6	5.0
Sources of contraceptive* knowledge (n=106):		
Media	66	62.0
Health professionals	61	58.0
Friends	28	26.6
Parents	22	20.8
Attitude toward contraceptive* (n=112):		
Advantages outweigh disadvantages	92	82.1
Contraceptive use is important	108	96.0
Joint responsibility of partners	108	96.0
Contraceptive use would reduce chances of unplanned pregnancy	108	96.0
Reproductive characteristics and contraceptive use:		

Sexual intercourse with male partner ever (n=112)	73	65.2
Sex with contraception ever (n=73)	66	90.4
Consistent use of contraception for every sexual encounter (n=73)	16	21.9
Contraceptive type ever used (n=73)		
Male condom	52	71.2
Injectable	9	12.3
Implants	4	5.4
Oral pills	2	2.7
Others	6	8.2
Contraceptive type known* (n=106)		
Oral pills	90	85
Male condom	86	81.6
Female condom	44	41.6
Injectable	31	30.0
IUDs	21	20
Withdrawal	9	9.2

***- multiple entries by respondents.**

7. Contraceptive Use

Given the relative high levels of knowledge of, and positive attitude towards contraceptives among participants, its use was relatively low with only 35% having used any form of contraceptives four weeks prior to the study. Of the total number of respondents who had never used any form of contraceptive (n=46), 87.7% (n=39) had never had any sexual encounter, indicating that 9.5% who had ever had a sexual encounter had never used any form of contraceptive, while less than a quarter of respondents (21.9%) consistently use contraceptive in all sexual encounters. Among the major reasons for the non-use of contraceptive were: access to contraceptives, specifically oral pills (46%), cost (31%), and a lack of knowledge at the time of sexual encounter (22%). Furthermore, among contraceptive users, although participants had wide knowledge of contraceptive types, they were mostly limited to the use of four types: male condoms (71.2%), and injectables (12.3%) and the lowest contraceptive preferences being implants (5.4%) and oral pills (2.7%).

8. Discussion

Among this sampled population of university students, knowledge of contraceptives was very high, with participants being able to identify at least three types of contraceptive. On average, participants were able to identify and describe at least two types of contraceptives with the commonest types being male condoms, oral pills, and injectables. These findings are consistent with studies conducted in other parts of Africa[25-27] and support the assumption that the higher women's educational attainment the more knowledgeable they become regarding matters associated with reproductive health.[28-30] Unexpectedly, oral pills were not among the favoured form of contraceptive as was identified by studies conducted in other parts of the continent. Other scholars have also noted that the pills are not very popular among young women in contemporary times because of their cumbersomeness and the cost involved in maintaining a steady supply. Others have also identified weight gain being associated with the pills. Though relatively small in terms of percentage, it is worrisome that some participants erroneously believed that only oral pills can prevent pregnancy, while some were convinced that the withdrawal method can prevent both pregnancy and sexually transmitted diseases. The implication of such misconception is that some young women may be limited in their contraceptive choice while some may unwittingly become vulnerable to sexually transmitted infections by engaging in withdrawal method as a safe method in the prevention of sexually transmitted diseases.

Knowledge and attitude alone did not seem to translate to the consistent use of contraception among participants. While studies have reported similar findings it is worrisome that similar practice is being reported among respondents in a private university who are mostly from sophisticated backgrounds and have easy access to male condoms as this is freely provided to students in the campus. Contrary to the common notion that knowledge and positive attitude will predict use, this study points to the fact that there are other intervening variables, which may explain why students in higher institutions of learning may be making restrictive judgment regarding contraceptive use. Eisenberg, et. al[32] have noted that cost may be an important inhibitive factor for non-use, while the accessibility factor has also been implicated for the low use of contraceptive among young adults. While these are contributory factors they are not sufficient in explaining the low usage among the respondents as they have free access to at least one form of contraceptive (the male condom) on campus. A study conducted by Izale et al[33] in the Democratic Republic of Congo found that women were not making use of contraceptives because of their male partners' uncooperative attitude, but this was not the case in this study because participants affirmed that both partners should take responsibility of contraceptive matters. While this is their opinion, in practice it seems their male partners still influence respondents' choice to use or not to use contraceptives.

This study further point to the fact that while this may be true, unmet needs alone may not explain why contraceptive use is low in Africa. Other intervening variables that may predict contraceptive non-use could be the lack of discipline among young women who may be aware of the consequences of unprotected sex, have access to at least one form of modern contraceptive, yet do not utilize them. One such contraceptive is the pills, which exerts pressure on the woman to religiously take the pill every day. Such demands on students may be overwhelming considering their academic activities and the frailty of the human mind for the capacity for long term retention. A salient finding of this study is not so much the non-use or low use of contraceptives by female undergraduate students but the inconsistent use of them. Consistency, defined as the use of contraceptive for every sexual encounter, is crucial to young adults' reproductive health as coital frequency increases the chances of contracting sexually transmitted diseases, or unintended pregnancy, or both.

One important variable that seems to resonate with most studies conducted in Africa, including our own study, is infertility that is associated with modern contraceptive, which has a strong cultural connotation in relation to the desire for the African woman to have children. In enlightening women about contraception therefore it is expedient that adequate information is provided. It is only by designing campaigns that are sensitive to cultural expectations that more women in Africa will respond positively to the use of contraceptives and to take full responsibility of their reproductive health. As optimistically noted by Hall,[34] with further research and analysis policy makers and non-governmental organizations interested in preventing unintended pregnancy can come up with more sophisticated model in explaining contraceptive behaviours that will guide campaigns in the promotion of positive family outcomes.

9. Conclusion

This study has provided some information on young women's knowledge, attitude, and practices regarding modern contraceptive use in a private university context in South Africa. The study recorded a high level of modern contraceptive knowledge, as well as a positive attitude towards modern contraception by participants but recorded a very low consistency level of contraceptive use among young women in the university. Non-use and inconsistent use of modern contraceptive by participants were salient issues identified and they represented the most disturbing outcomes of this study. Young women in the study area were not consistent in their use of modern contraceptives in spite of their adequate knowledge of, and positive attitude towards contraception. The findings therefore cast a shadow on the assumption that high level of, and positive attitude towards modern contraception will necessarily increase contraceptive use. Furthermore, these findings may circumscribe the anticipation that unintended pregnancies will progressively decrease in Africa as female education increases across the continent. Although this assumption is sound and logical in theory it does not seem to translate to actual behaviour and practice. Deriving from this study, it is recommended that to mitigate unintended pregnancies among young women, enlightenment campaigns need to be intensified. In addition, reproductive health policies regarding modern contraceptive uptake also need to recognize and consider incorporating other factors that will persuade young women, especially those in institutions of higher learning, to consistently use modern contraceptives.

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