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Examining First-year Student Experiences: What Informs their Contraceptive Choices? A Case Study of the Durban University of Technology

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ABSTRACT South Africa's record of poor contraceptive use among university students' results in high levels of unplanned pregnancy, early child-rearing responsibilities, and HIV and other sexually transmitted infections, all of which have a detrimental effect on their education. Nationally, numerous studies have investigated students' contraceptive use but few have explored the knowledge and experiences of contraception among students straight out of school who are entering university for the first time. This study examined first-year female students' understanding and practice of contraception in the setting of the Durban University of Technology (Midlands Centre), Pietermaritzburg, South Africa. The objective was to gain understanding of first-year female students' knowledge about and use of contraception at the start of their tertiary education. Data was collected through two focus groups from a purposive convenient sample of 33 female students, and then thematically analyzed. The findings revealed that although these students knew about contraceptive methods, they had limited knowledge on how these work. They preferred using hormonal methods to barrier methods. Schools were the main source of information and nurses were seen as the main barriers to contraceptive use, although partners and parents were also a significant influence. These results form a useful starting point for designing relevant support programs to assist first-year female students in taking informed decisions about contraception during their university career.

INTRODUCTION

Enhancing the quality of the student learning experience has become a priority in most South African higher education institutions (Awang et al. 2014; van Zyl 2014). The focus of attention has been primarily on first-year students, relating not only to scholarly matters but also to their health and wellbeing, and to their vulnerability to high-risk behaviors as they transit from high school to university (Gama 2008; Nibabe et al. 2014). Therefore, the use of contraception is an important feature (Gama 2008; Nibabe et al. 2014).

Awang et al. (2014: 263) view transition as "the period between separation from a known community of culture where norms, values and behavior are familiar and transition to a new culture where norms, behavior and values are unknown." Students experience specific types of difficulties as they begin their tertiary education. There have been many studies on female undergraduate student populations, but few have focused on first-year students as a subpopulation, and few have been conducted at the very start of university life. It is believed, however, that the earliest period of university experience is important as the time when students develop culture, identity, role and status, routines, and relationships that will determine how well they will cope subsequently with their studies and expectations (Awang et al. 2014).

In their South African study of first-year students' transition from high school to university, Awang et al. (2014) make several points that emphasize student needs and vulnerabilities during this period. They point out that what happens at this time of dealing with sudden and unlimited independence and exploration can affect subsequent student graduation levels, and they stress the importance of assisting students during the first few months of university life, with guided social support that can include inter-personal and inter-group interactions. They add that for this support to be effective, higher educational institutions need to understand their students and the knowledge they bring with

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them. Then the support can be tailored in a way that best promotes the students' wellbeing, adjustment and smooth transition, assisted by the university, lecturers, friends and peers.

Statement of the Research Problem

Despite high availability and accessibility of contraceptives in South Africa, young women still experience unplanned pregnancy, early child-rearing, and HIV and AIDS (Russo et al. 2013; Teal et al. 2013; Nibabe et al. 2014), and university life seems "to offer many opportunities for HIV/STI, risk-taking and contraction with students engaging in sexual risks including non-condom use" (Protogerou et al. 2014: 215). Pregnancy, HIV and AIDS, and STIs are highest among females aged 18-24 years (DOH 2012), as this group includes the university-going population, and the consequences of high-risk behavior contribute to high first-year attrition rates. Psychosocial factors such as risk-taking behaviors affect academic progress and there is pressure on universities to address these issues. The trend in research studies is to treat university students as a homogeneous population. However, the high school and university contexts vary so greatly that the initial transition stage implies potential differences between students in their first year and those in subsequent years of study. In high school, students are less independent and more prone to comply with their parents' and teachers' rules and restrictions. By contrast, universities offer almost unlimited independence, and students rely on themselves for decision-making. The researchers therefore regarded it as useful to investigate contraceptive issues specifically among first-year women students who come to university straight from high school, and to focus on their knowledge and use of contraceptives as well as factors influencing such use. The present study was conducted in the first three months after first entry to university.

Literature Review

Teenage years are marked by increased risk-taking behaviors, which can result in HIV and AIDS and other sexually transmitted infections (STIs), early pregnancy, and university dropout (Gama 2008; Nibabe et al. 2014). Female students who unexpectedly fall pregnant lose an entire academic year, and in South Africa, such pregnancies contribute to the country's overall first-year university dropout rate, which in 2013 was as high as fifty-five percent (Council on Higher Education [CHE] 2013). At the Durban University of Technology (DUT), the 2013 first-year student dropout rate was nineteen percent, but had risen alarmingly in 2014 to thirty percent (DUT's Management Information Department 2015).

Contraception is a key focus for the World Health Organization (WHO 2011) because of the potential contribution it makes to the reduction of HIV transmission, which still remains a global problem. Studies indicate that a large number of pregnancies in South Africa are unplanned (Thobejane 2015) and as much as thirty-five percent of women experience pregnancy before the age of 20 years. Sexually transmitted infections are also high when HIV is diagnosed (Protogerou et al. 2014).

According to World Contraceptive Use (2011) statistics, the method of contraception most used in South Africa is the injectable one, followed by the pill and male condoms. The high use of injectable contraception, according to Burgard (2004), is because of its introduction to black women during the apartheid era. Sterilization, inter-uterine devices (IUDs), and vaginal barrier methods are the ones least used (World Contraceptive Use 2011). At the DUT's Midlands Centre in 2014, among female students using contraceptives, 31.5 percent used the pill, 21.1 percent used the emergency contraceptive pill, and 47.4 percent used the injectable method (Midlands Centre Student Health Statistics).

There are many barriers to the use of contraceptives by first-year undergraduate women. The literature indicates that lack of knowledge about contraceptives is a leading one. Students are often provided with little and vague information (Protogerou et al. 2014). Protogerou et al. (2014), for example, reported that condom use was believed to be transient and not related to disease prevention. Furthermore, the survey conducted in 2012 by the Department of Health of South Africa found that the level of education plays an important role in the effective use of contraceptives, which suggests that younger students could be at greater risk than older ones. Another barrier for South African students is that they often fail to use contraceptives or to comply with the relevant instructions because of gender dynamics, perceived indications of

intimacy associated with long-term relationship, and social stigma associated with females proposing condom use (Protogerou et al. 2014). In rural areas, gender dynamics are more extreme than in cities, as men are regarded as having more power than women (Wood et al. 2006). Such inequalities make it difficult for women to ask their partners to use condoms (Protogerou et al. 2014).

In addition, healthcare service providers can also create barriers to contraceptive use. Young women are often feel unwelcome and ill-treated at clinics when they go there for contraceptives (DOH 2012; Wood et al. 2006). Also, stigmatizing sex for reasons of age puts them off using of contraceptives when they are told by nurses that they are too young to be sexually active (Wood et al. 2006). Studies indicate, however, that as women become more educated and their socioeconomic status rises, their use of contraceptives tends to rise as well (DOH 2012).

METHODOLOGY

The present study adopted a qualitative approach because of its emphasis on human experiences, subjectivity and specificity in context (Babbie et al. 2005). Qualitative research allows for the exploration and understanding of social norms such as gender roles, region, norms, ethnicity, and socioeconomic status and the roles that are not always clear in research (Babbie et al. 2005). This approach enabled the researchers to access specific details of individual students' experiences related to their knowledge and use of contraceptives. An explorative method was used. One question was posed to define the enquiry and further questions and answers developed out of the student discussions (Durrheim et al. 2008). Two separate focus group discussions were conducted.

Context normally refers to the distinctiveness of a research setting. When applied to qualitative research it denotes uniqueness of information that can differ from other contexts (Babbie et al. 2005). This study focused on exploring the knowledge and use of contraceptives, and factors influencing contraceptive use, amongst a group of first-year female students at the DUT's Midlands Centre in Pietermaritzburg, KwaZulu-Natal, which is an urban area. The Midlands Centre comprises the Riverside Campus in Scottsville and the Indumiso Campus in Imbali. Students from DUT are generally from the lower living standards measure (LSM) (DUT Strategic Plan 2015-2019), which indicates that they are mainly from disadvantaged backgrounds. According to the literature, this suggests low contraceptive use, low information dissemination and low access to resources (Maharaj et al. 2007; Bramwell 1994). Furthermore, the DUT is situated in KwaZulu-Natal, the province with the highest prevalence rates for HIV and AIDS in South Africa. Prevalence is highest for the age group 18-24 years, and females within this age group are the most affected (DOH 2012). The university has a primary health clinic situated on each of the two campuses, staffed by professional nurses with dispensing licenses who are registered with the South African Nursing Council. As part of the care they offer, these clinics provide family planning services to approximately 4,500 registered students.

Research population is defined as a group of persons with common characteristics that interest the researcher (Durrheim 2008) and that meet the criteria set for the particular study. In this project, the target population consisted of first-year female students in their first three months of study at DUT. Exclusion criteria with regard to age and first-time entry into university were applied. Only first-year students over the age of 18 years who were entering university directly from school for the first time were included. The DUT caters not just for disadvantaged students but also for those from poorer and less sophisticated rural areas, who are more vulnerable because they come from more traditional, often patriarchal backgrounds. Thus the sample included students with all these features and experiences.

A purposive and convenience sample was used to recruit participants. Purposive sampling is a non-probability sampling method that allows for the research to select participants based on study objectives (Durrheim 2008), whereas a convenience sampling method allows for the use of participants who are readily available and meet the research requirements (Durrheim 2008). Advertisements were placed around the two campuses and in female residences. Students registered their names with the researchers and were requested at this point to bring in friends who were interested in being part of the study. Issues of availability in terms of time for the focus groups were also negotiated at this time. A suit-

able schedule and venue for the focus groups was confirmed.

In ensuring that the research problem was going to be answered by research questions, researchers consulted relevant literature and experts in the field.

Prior to the start of each focus group discussion, participant information sheets were distributed. Data was collected by the researchers through two separate focus group discussions, scheduled on different days, with a different group of students in each. Open-ended questions were used. Each discussion lasted for an hour. The focus groups were conducted in isiZulu because all the participants were isiZulu first-language speakers. The scope of inquiry covered the following questions:

- What are contraceptives and what different kinds of contraceptives do you know about?
- When and how did you get to know about contraceptives?
- What kinds of contraceptives are preferred by students and why?
- Identify some problems with getting contraceptives at home and on campus.

Further questions grew out of the discussions and the researcher also paraphrased and asked related probing questions to develop the discussions as far as possible. The questions were standard for both focus groups.

The discussions were recorded, transcribed, and translated from isiZulu to English. Back translation was used to ensure that the meaning was retained (Kelly 2008). Thematic content analysis was used to analyze the data in a process based on systematic consideration of repeated themes, words and phrases (Creswell 1998). The researchers first searched and reviewed themes. The data was then organized into formats that could be used for analysis. Finally, the data was defined and interpreted. The central themes emerged as:

1. Factors influencing contraceptive use
2. Attitudes, beliefs and misconceptions
3. Preferred methods
4. Barriers to contraceptive use

Ethical clearance was obtained from the DUT Institutional Research Ethics Committee (Reference Number: REC 70/15). Permission to conduct the study at the Midlands Centre was obtained from the university's Director of Research and Postgraduate Studies. Permission to put up posters for recruitment purposes was obtained through the Student Services and Development Centre. Participant information sheets were given to students explaining what the study entailed, the nature of voluntary participation, use of data for publication and conference purposes, access to results, storage of data and use of pseudonyms. Written informed consent from each student was obtained for participation in the study and for audio recording of data. A separate confidentiality pledge stating that whatever would be discussed in the focus group would remain confidential was also signed by each participant.

RESULTS

Demographic Data

As many as three quarters of participants who took part in this study were from rural areas. Of the 33 students who took part in the study, most reported that they were using or had used contraceptives. They indicated that they were mainly using injectable contraceptives and implants. Only one said that she already had a child. Very few (3) indicated that they had never been sexually active.

Knowledge and Its Sources

The students in the sample indicated that they knew what contraceptives are and what they are used for. They were able to name the different methods they had seen or used and the methods they had heard about from different sources. Their descriptions of contraceptives included general understanding that contraceptives prevent STIs, including HIV and AIDS. The following comment from one of the participants was echoed by others:

"Contraceptives are things that help you, that prevent you from getting pregnant… Some do prevent you from like getting a disease, a virus, but yes mostly are to prevent youth or even older people from getting pregnant" (Participant 1, aged 19).

A typical confirmatory statement came from another participant:

"Contraceptives are the methods to prevent pregnancy, STIs and HIV and AIDS" (Participant 2, aged 18).

The participants were able to differentiate the various available methods of contraception. One said:

"There is contraceptive pills, implant, female condoms, condoms, loop, rhythm, withdrawal" (Participant 3, aged 20).

However, they had limited knowledge about how contraception works and did not always name certain contraceptives correctly. For example, one student repeatedly and incorrectly used the name of a certain antibiotic when referring to a type of contraceptive pill. She said:

"Yes, but most of them [students] prefer fragyls because it destroys the sperm right away. If you did life science at school you will know" (Participant 15, aged 19).

Knowledge was based largely on life sciences and life orientation classes in high schools, as shown by constant reference to information provided there. For example, one participant explained:

"If you did life science you'd know that the first sperms are the ones that are strong and dangerous" (Participant 3, aged 20).

When students were asked about their sources of contraceptive information, they reported that there were different ones including schools, health campaigns and friends. Schools were the most commonly cited, with students frequently using phrases such as, "in primary", "Grade 8", "high school", and "in Grade 7". Only a few students gave nurses and campaigns as sources of contraceptive information. Some also reported that they had first heard about contraceptives from their friends, and there was just one mention of a parent being a source of such information. This is what participants had to say about campaigns and nurses:

"There was like nurses. Nurses used to come to school and talk about it."

"There were campaigns from love life people telling us that we need to protect ourselves" (Participant 5, aged 19).

Factors Influencing Contraceptive Use

Parents

Parents were viewed as inadequate sources of contraceptive information. Some students reported that their parents could advise other young women on contraceptives but never their own children because of a fear that such discussions would seem as if they were encouraging their children to start engaging in sexual activities. As one participant said:

"If parents talk about contraceptives it is like they are telling their children to go out and have sex" (Participant 12, aged 19).

Participants whose mothers were nurses indicated that they had never received any advice regarding contraceptive use at home. One said:

"My friend's mom is a nurse; she advises other people but for her child, no" (Participant, aged 19).

Another said:

"My mom is a nurse, she has never discussed contraceptives with me" (Participant 17, aged 18).

Students also reported that their parents were in denial of the fact that their children were growing up:

"Parents are very closed minded. Parents are…they don't want to believe. Parents are in denial" (Participant 20, aged 19).

Another said, *"They don't want to accept that we are growing up."*

Partners

Partners had an influence on contraceptive use. Students reported that their sexual partners disliked using contraceptives and as a result the female students tended to hide them. Students reported that it was difficult to raise the issue of condoms in their relationships. They also said that their partners wanted to have a hold over them by making them pregnant. Almost all of them indicated that they did not want their partners to know that they were using contraceptives. One said:

"My friend told me that her boyfriend doesn't like using a condom (laughs), because his penis is big and it tights him" (Participant 7, aged 19).

Another explained that students did not want their boyfriends to know they were using contraceptives, which affected their choice of contraceptive methods:

"Students use injections and implant because they don't want their boyfriends to know that they are protected" (Participant 3, aged 20).

Attitudes, Beliefs and Misconceptions

Many factors reported by students, such as weight gain, weight loss, hair loss and skin conditions, influenced contraceptive use. They re-

ported that with most hormonal contraceptives they experienced different kinds of body changes. One student explained:

"Some gain weight, some their body become less tight, some lose weight" (Participant 10, aged 19).

Other participants gave further explanations:

"Yoh, skin conditions are very bad, yoh. My cousin used to be big but after using contraceptives, yoh, she started losing weight, I wish you could see her. She is skinny" (Participant 11, aged 19).

Preferred Methods

Hormonal methods of contraception, such as injectable contraceptive, implant and the pill, were mostly used. The reason given was that the students did not want their partners to know that they were protected from pregnancy. Students also indicated other reasons for their high preference for hormonal contraceptives, including the fact that they did not want their parents to find out that they were sexually active. One student said:

"And yes sometimes it is better to use implants and injection, you know why… because you don't want your parents to know that you are sexually active. Yoh, with condoms they will know" (Participant 26, aged 19).

Students reported that hormonal contraceptives are preferable because of their long span in the body. One participant noted:

"Some follow implants because it lasts longer because it lasts for three years" (Participant 30, aged 18).

Barriers to Contraceptive Use

On and Off Campus

Barriers to accessing contraceptives on and off campus were reported to include nurses, embarrassment related to others knowing, and significant others being judgmental. One participant said, *"Well, it's been about this thing of being scared of taking contraceptives, like, what are people are gonna say. Yes what they gonna say"* (Participant 14, aged 19).

Most students reported nurses as generally being a major barrier to contraceptive use and reported that they were not welcoming to students or any young woman who comes to a clinic for contraception. Students based their reports on their own experiences with nurses. They also reported that nurses ask students if they are sexually active even when they come for help with unrelated conditions such as flu or headaches. The students seemed not to understand whether the questions asked were for the purpose of ruling out a particular possible diagnosis or whether such statements were meant to make them feel unwelcome. Nurses also sometimes knew the families of the students asking for contraceptives, and this also created a challenge. Students further reported that nurses look intimidating because they are old and the same age as their mothers. One of the participants referred to a nurse as, *"Yo, that mama at the clinic"* (Participant 19, aged 20).

"I went there to this sister here, because I had flu. First she was a bit rude but as it went on she became better. But I wouldn't dare go there for contraceptives" (Participant 28, aged 19).

Neighbors were also viewed as barriers because, when they saw the students in clinics, they reported the fact to their parents. Furthermore, there were financial barriers to accessing contraceptives, even though they are available free of charge, money would be needed to pay for transport.

DISCUSSION

University dropout remains an important problem in South Africa. The dropout level, which currently is fifty-five percent, remains a concern (Awang et al. 2014) with teenage pregnancy contributing to the problem. The present study focused mainly on first-year female students in their first three months of university, right at the start of their assimilation into the world of tertiary education. Most of the participants indicated that they were using contraception, but not barrier methods, and overall, the findings showed high levels of risk engagement amongst these new university female students. Both focus groups gave similar responses, which corresponded with the other. This was a good indication that the study had tapped the common experiences of this particular sub-population of students.

Wood et al. (2006) argue that the contraceptive knowledge that young women have is normally vague and incorrect. This study support-

ed this argument in that the researchers found some knowledge of contraceptive methods, which came largely from schools where students first heard about contraceptives, but limited knowledge about how the methods work or what might be the side effects. Most of the students came from lower LSM, and the findings accord with the literature, which states that knowledge of contraception tends to be poor among young people from disadvantaged backgrounds. According to earlier studies (Wood et al. 2006), such limited knowledge is a result of poor or nonexistent counseling from nurses. A number of misconceptions about contraceptives that the student sample presented could have been addressed by proper counseling and education from healthcare providers.

Schools seemed to be the first source of contraceptive information for most participants. According to the research, however, schools often provided information that was insufficient and vague. Only one parent was mentioned as a source of contraceptive information and even that came about only after the daughter had had her first child.

Existing research indicates that the most used method of contraception in South Africa is injectable, followed by the pill and male condoms (World Contraceptive Use 2011). The study indicated, however, that at the transition stage from school to university, the student sample preferred using the injectable method and the implant, which is at variance with the world's ranking of contraceptive use. Condoms provided a secondary option if the injectable or implant methods failed or were not in place. Negotiating for condom use was often a challenge for the students, but the study found that some students, even from the onset of a relationship, did not use condoms, and as a result, this form of contraception never became part of their relationships. Of all the available methods, most female students in the study preferred hormonal methods to barrier methods. They also preferred implants because they last longer and can be disguised from partners, peers, neighbors and parents. The over-preference for hormonal contraceptives suggests that the students were not aware of risky behaviors associated with using hormonal methods or ignored them. These risky behaviors make them more likely to contract HIV and AIDS and other STIs. Their preferences were, in fact, based mainly on problems associated with their partners and parents, as the young girls in the sample often had difficulty complying with guidelines for use or applying contraceptive methods properly and consistently, because of gender dynamics, perceived intimacy and social stigma, and this finding supports the argument presented by Protogerou et al. (2014).

The students in the study appear not to have felt sufficiently empowered to overcome issues of gender dynamics in their relationships. According to the literature, girls often feel overpowered by their partners in relationships, but the study also found that students know the risks of unprotected sex but do not address them because they fear they might lose their partners if they insist on protection. Parents also play a role in problems associated with poor contraceptive use. Research indicates that parents are not good sources of contraceptive information (Wood at al. 2006). The students indicated that they used hormonal methods mainly because they did not want their parents to find out. They also engaged in unprotected sex rather than using dual methods of contraception because they felt they had to hide their use of contraceptives.

There is high availability and accessibility of contraceptives in South Africa (Wood et al. 2006; Teal et al. 2013; Russo et al. 2013; Nibabe at al. 2014), but there are also many barriers to actual contraceptive use. Earlier research indicates that young women are often ill-treated and judged at clinics when they go for contraceptives and that they also receive poor contraceptive counseling (Wood et al. 2006; DOH 2012). The study confirms these findings for most of the early-first-year participants, as they perceived campus nurses as barriers to contraceptive use, judgmental, unfriendly and unwelcoming.

There seemed among the participants to be an exaggerated concern with what other people think of them, which is key to their particular high-risk behavior. This raises so many questions. Could this be connected with how things were so recently at school, when they were required to please teachers and parents? Could it be that they are not yet mature or independent-minded enough to be able to stand up more strongly for what they want (for example, protection against STIs and pregnancy) rather than to please others first? This exaggerated concern with what others think of them affects even the issues relating to their boyfriends, where they

engage in high risk behaviors just to please them. This also results from the young women's patriarchal backgrounds in which a man has to be respected no matter what. This set of findings indicates that, as soon as students enter university, the first point of direction should be towards empowering them enough to protect themselves from disease.

CONCLUSION

The purpose of this paper was to report on the knowledge, use and factors influencing the use of contraceptive methods among a group of first-year students, and it covered in particular young women from poor backgrounds who had just emerged out of high school into a new and very different educational environment. The study showed that they had inadequate knowledge of contraception, which made these students particularly vulnerable to dangers of high-risk behavior. The themes that emerged are the ones that seemed most to influence whether or not such students use contraceptives, and use them wisely, based on informed decisions. The study further and crucially suggests that campaigns and contraception education should focus more than they currently do on critical elements of risk-taking that lead to infection, and on empowering young girls, straight from a more sheltered school environment, who enter university for the first time.

RECOMMENDATIONS

Recommendations emerging from the findings are that such campaigns and contraception education could benefit from emphasizing the following features, especially when they are combined with first-year-student induction programs:

- First-year female students should be educated holistically and empowered about contraceptive knowledge and use, as well as issues of patriarchy as relevant, in order to protect themselves from contracting diseases and unwanted pregnancies.
- Students should be encouraged to use dual-methods of protection.
- Information around contraception during health campaigns should be escalated for first-year students, right from the beginning of the academic year.
- Schools and universities should be more strategic in information dissemination and the training of staff around contraception, as they need to provide students effectively with clear and accurate factual information.
- Accessibility and availability of contraceptives should be increased for first-year female students through distribution in their residences, cafeterias, and other places that they frequent regularly.

LIMITATIONS OF THE STUDY

The study had a number of limitations. First, the sample size was small. Second, most female students who participated in the study were from rural areas of KwaZulu-Natal, which limited the information about other student groups from urban and peri-urban areas. Furthermore, all were isiZulu-speaking, so the findings cannot be generalized to other settings. Third, the study was exploring sensitive issues, which could have inhibited students from offering answers that were fully open, especially in a focus group discussion context.

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