Contraceptive Knowledge and Practices among Students in Federal Polytechnic Kaduna, Nigeria: An Exploratory Study

by
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Thesis presented in fulfilment of the requirements for the degree of Master of Arts (Sociology) in the Faculty of Arts and Social Sciences at Stellenbosch University

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December 2014

Declaration

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Abstract

The Population Reference Bureau (PRB) in 2011 reported a low rate of contraceptive use among Nigerian youths at 29%, despite reported high rates of sexual activity and increased awareness of the existence of contraceptive methods. This exposes the youths to the risk of contracting sexually transmitted infections and the effects associated with unwanted pregnancy. From a social constructionist standpoint, I used a mixed method research design to explore contraceptive knowledge and practices among students (18 to 25 years of age) at the Federal Polytechnic Kaduna.

I see students' attitudes towards contraception as being historically and culturally located and dependent on the prevailing cultural arrangement at that period. I thus distance myself from the position of the Health Belief Model (HBM) by recognising that individuals' attitudes towards contraception is not only informed by the perceived benefits of contraceptive use but also by certain external social factors which could serve as barriers to the individual's decision to use contraceptives. I collected data from 187 students out of a sample of 200 who had been systematically selected from the Departments of Mass Communication and Architecture at the polytechnic between August and September 2013. In addition, I conducted fifteen follow-up semi-structured interviews with students and three key informant interviews; two staff at the polytechnic clinic and one private pharmacist close to the polytechnic.

Similar to other Nigerian studies among tertiary students, there is a relatively high level of sexual activity as well as high level awareness of contraceptive methods among students; however, they lack sufficient knowledge of how contraceptives function. Contraceptive use among sexually active students was also low either due to negative attitudes towards contraceptives resulting from inadequate or incomplete contraceptive information from friends or due to lack of easy access to contraceptive methods by students, partners' influence or influences from cultural, including religious, beliefs and practices, thereby making students vulnerable to the risk associated with unprotected sex. There is therefore the need for interventions by relevant stakeholders that will seek to provide adequate information to students and develop in them positive attitudes towards contraceptive use.

Opsomming

In 2011 het Nigerië se Bevolkingsverwysingsburo (PRB) 'n lae gebruikskoers van kontrasepsiemiddels (29%) onder Nigeriese jeugdiges gerapporteer, afgesien van die hoë koers van seksuele aktiwiteit en verhoogde bewustheid oor die bestaan van kontrasepsiemetodes. Dit stel jongmense bloot aan die risiko om seksueel-oordraagbare infeksies op te doen, sowel as aan die negatiewe gevolge wat met ongewensde swangerskap gepaard gaan. Vanuit 'n sosiaal-konstruksionistiese standpunt het ek 'n gemengdemetodenavorsingsontwerp gebruik om kennis oor voorbehoedmiddels en gebruike onder studente (18 tot 25 jaar oud) aan die Federal Polytechnic Kaduna ('n politegniese tersiêre instelling) in noordelike Nigerië te ondersoek.

Ek beskou studente se ingesteldheid jeens kontrasepsie as histories- en kultuurgefundeerd en onderworpe aan die heersende kulturele reëlings van die tydperk. Ek distansieer my dus van die posisie van die gesondheidoortuigingsmodel (HBM) deur erkenning te gee aan die feit dat individue se ingesteldheid jeens kontrasepsie nie net deur die waargenome voordele van kontrasepsiegebruik ingelig word nie, maar ook deur bepaalde eksterne maatskaplike faktore wat struikelblokke kan skep by 'n individu se besluit om kontrasepsiemiddels te gebruik. Tussen Augustus en September 2013 het ek data van 187 studente uit 'n steekproef van 200, wat stelselmatig in die Departement Massakommunikasie en Argitektuur aan die Politegniese skool gedoen is, versamel. Verder het ek vyftien semigestruktureerde opvolgonderhoude met studente gevoer, asook drie sleutelinformantonderhoude, waaronder twee met personeellede by die Politegniese kliniek en een met 'n privaat apteker in die omgewing van die Politegniese skool.

Soortgelyk aan ander Nigeriese studies onder tersiêre studente het ek gevind dat ofskoon daar 'n relatief hoë seksueleaktiwiteitsvlak, asook 'n hoë bewustheidsvlak van kontrasepsiemetodes onder studente bestaan, die meeste studente onvoldoende ingelig was oor hoe kontrasepsiemiddels regtig werk. Daar is ook gevind dat kontrasepsiegebruik onder seksueel-aktiewe studente weens verskeie faktore redelik laag was, ingesluit negatiewe ingesteldhede oor kontrasepsiemetodes as gevolg van onvoldoende of onvolledige kontrasepsie-inligting (wat hoofsaaklik van vriende bekom is); 'n gebrek aan maklike toegang tot kontrasepsiemetodes; beïnvloeding deur seksmaats; asook invloede vanweë kulturele oortuigings en gebruike, met inbegrip van geloof. Die gevolg is dat studente kwesbaar is vir die risiko's wat met onbeskermde seks gepaard gaan. Daar bestaan dus 'n behoefte aan intervensies deur die betrokke belanghebbendes wat studente van voldoende inligting sal voorsien en positiewe ingesteldhede oor die gebruik van kontrasepsiemiddels by studente sal kweek.

Acknowledgement

Firstly, I would like to thank my supervisor Prof Cherryl Walker; she is not just a supervisor to me but also a friend and mentor. I appreciate her for her patience, encouragement and advice throughout the period of my study. She is an amazing person.

I also thank all staff and students of the Department of Sociology and Social Anthropology for the inspiring debates and ideas. Special thanks to Jan Vorster, Prof Rob Pattman, Sean Beckett, the Creative Academic Practitioners (CRAP) reading group and all my classmates.

I thank my family who supported me in various ways throughout my study period. Thank you for your assistance and prayers. You all are priceless.

I thank my friends who were always there to encourage me to move on. I appreciate your inputs, advice and kind words.

Thanks to the management of the Federal Polytechnic Kaduna for granting me permission to conduct my research in the institution. Special thanks to the students of the polytechnic who made my research a success by being welcoming and helpful in providing the information I needed for my study.

Lastly and most importantly, I thank God Almighty, who has made this thesis a reality. Thank you for blessing me beyond measure.

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List of Acronyms

AIDS	Acquired Immuno-Deficiency Syndrome
ASUU	Academic Staff Union of Universities
CIA	Central Intelligence Agency
CLMS	Contraceptive Logistics Management System
FHI	Family Health International
HBM	Health Belief Model
HEC	Higher Education Commission
HIV	Human Immuno-Deficiency Virus
HND	Higher National Diploma
IUD	Intra-Uterine Device
KASU	Kaduna State University
LAM	Lactation Amenorrhoea Method
NDHS	National Demographic and Health Survey
NGOs	Non-Governmental Organisations
NMH	Nigerian Ministry of Health
NPC	National Populations Commission
NPP	National Population Policy
NRHP	National Reproductive Health Policy
NURHI	Nigerian Urban Reproductive Health Initiative
PRB	Population Reference Bureau
SPSS	Statistical Product and Service Solutions
STIs	Sexually Transmitted Infections
TMPs	Traditional Medicine Practitioners
USAID	United States Agency for International Development
WHO	World Health Organisation

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Chapter 1: Introduction

Several studies show that the rate of contraceptive use among Nigerian youths has remained low over time, in spite of reported high rates of sexual activity and increased awareness of contraceptive technologies (Nwokocha, 2007; Akani, Enyindah and Babatunde, 2008; World Health Organisation (WHO), 2011; Lamina, 2013). Students in Nigerian tertiary institutions are considered a particularly high risk group in terms of reproductive health (Abiodun and Balogun, 2009). With these considerations in mind, I have used a mixed-methods research design to explore students' contraceptive knowledge and practices in a tertiary institution in Northern Nigeria (Federal Polytechnic Kaduna) and to see whether certain social characteristics, which emerged from my review of the literature, are significant in informing their understanding and use of contraceptives in heterosexual relationships[1]. These characteristics are gender, religious and traditional beliefs, and sexual behaviour.

The increase in the incidence and prevalence rate of sexually transmitted infections (STIs)[2] and unwanted pregnancies[3] around the world, as well as the adverse consequences these developments have on the world's population, have put the issue of contraception on the global agenda. According to the World Health Organisation (WHO), an estimated 24.4 million women globally resort to abortions annually, with youths accounting for about 50% of abortion related mortality in the African region (WHO, 2004). Unwanted pregnancies have been related to unprotected sexual intercourse as well as to contraceptive failure, also referred to as 'contraceptive accident' (Bankole, Oye-Adeniran, Singh, Adewole, Wulf, Sedgh and Hussain, 2006; Tayo, Akinola, Adewunmi, Osinusi, and Shittu, 2011; Osakinle, Babatunde and Alade, 2013). Unprotected sex and contraceptive accidents have been found to be responsible for an estimated 498 million cases of STIs each year among young couples (WHO, 2011).[4]

Over the years Nigeria has, compared to developed nations, recorded high rates of both sexually transmitted infections (STIs) and maternal deaths resulting from unsafe abortions in response to unwanted pregnancies. Unsafe abortions and the spread of STIs are still considered among the greatest challenges associated with youths' reproductive health in Nigeria (Sedgh, Bankole, Oye-Adeniran, Adewole, Singh, and Hussain, 2006). Nigerian youths (young adults in the age bracket of 18-25 years) also form the majority of people exposed to the risk of unwanted pregnancies and

[1] I have based my study on students in heterosexual relationships because of my concern with students' vulnerability to both unwanted pregnancies and sexually transmitted diseases; it should also be noted that homosexuality is considered an illegal practice in Nigeria and is punishable by law with a jail term of 14 years.

[2] Sexually Transmitted Infections is used in my study to refer to all infections that can be passed from one person to another through sexual activity, including HIV/AIDS

[3] Unwanted pregnancy in my study is referred to not as a disease but as a situation which could lead to unsafe abortions, consequently leading to severe health hazards.

[4] Young couple in my study refers to young people in a sexual relationship either within or outside marriage. As discussed earlier, I look at heterosexual couples only.

contraction of STIs (Orji, Adegbenro, and Olalekan, 2005; Fatusi and Blum, 2008: Osakinle *et al*, 2013). Also, due to the restrictive law against abortion in Nigeria (as discussed in the next chapter), abortions are usually done in clandestine conditions, often resulting in complications that may cause either health hazards to the individual or even death (Abiodun and Balogun, 2009). These health challenges could be significantly reduced, if not entirely avoided, by effective contraception (Omo-Aghoja, Omo-Aghoja, Aghoja, Okonofua, Aghedo, Umueri, Otayohwo, Feyi-Waboso, Onowhakpor and Inikori, 2009).

I conducted my study among students of Federal Polytechnic Kaduna (Kad Poly) in Kaduna, northern Nigeria. The polytechnic is located within Kaduna metropolis, the headquarters of Kaduna State. This location has a history of rapid urbanisation and is inhabited by people from diverse religious and cultural backgrounds from across the country, hence is often referred to by many Nigerians as a "Mini-Nigeria". It serves as a melting pot of all ethnic nationalities in Nigeria.

In this introductory chapter, I first discuss my research problem and rationale as well as present my research questions. Following a brief statement about my research design I outline my conceptual framework, looking in particular at issues related to health-seeking behaviour, gender and sexuality (here drawing on Connell) as well as the significance of culture. (Further discussion of these issues in the Nigerian context is found in the literature review in chapter 2). Thereafter, I describe the outline of my thesis chapters.

1.1 Research problem and rationale

Although globally the level of contraceptive use is considered low compared to contraceptive awareness, certain societies have recorded higher prevalence of contraceptive use than others. The WHO in 2011 reported the general prevalence of contraceptive use to be higher in countries in Latin America, at an estimated 63%, than in countries in Africa at an estimated 20%, with the rate of non-use highest in sub-Saharan African countries. The rate of contraceptive use among the Nigerian population was reported at approximately 12% (Monjok, Smesny, Ekabua, and Essien, 2010).

Nigeria's Population Reference Bureau (PRB) reported in 2011 that only about 29% of Nigerian youth use contraceptives; in spite of reported high rates of sexual activities and increased awareness of contraceptive technologies (Akani, *et al*, 2008; Fatusi and Blum, 2008: Cadmus and Owoaje, 2010: Tayo *et al*, 2011: Osakinle *et al*, 2013; Adeniji, Tijani and Owonikoko, 2013). These studies reveal that youths are generally aware of the existence of contraceptive methods and the benefits accruing from using contraceptives. However, this awareness is not reflected in the actual utilization of these methods, thereby leading to increase in the incidence of STIs and unsafe abortions resulting from unwanted pregnancies.

Similar findings indicating low contraceptive use were found among students in Nigerian tertiary institutions, thus indicating that students are vulnerable to unwanted pregnancies and the contraction of STIs (Orji and Esimai 2005; Nwokocha, 2007; Attahir, Sufiyan, Abdulkadir, and Haruna, 2010; Wusu, 2010; Omoyeni, Akinyemi and Fatusi, 2012). Studies suggest that the high degree of social freedom in tertiary institutions in Nigeria affords students the opportunity to engage in sexual activities; in some cases this could also be triggered by the desire to acquire material gains (Nwokocha 2007; Wusu, 2010). The risk related to the high rates of sexual activity and low contraceptive usage among Nigerian students (especially unwanted pregnancy and STIs) are among the most serious health risks that young people face and can endanger not only their physical health but also their economic, emotional and social well-being (Ebuehi, Ekanem and Ebuehi, 2006).

Although there are studies on contraception among students in Nigeria, the issue of contraceptive practices among students of tertiary institutions in northern Nigeria have received little or no attention over time; as shown by my literature review which did not reveal any published work on contraceptive practices among students in this region of Nigeria. Against this background, I recognised the need to explore contraceptive knowledge and practices among tertiary-level students in northern Nigeria, in order to contribute to a greater understanding of the extent of their vulnerability to unprotected sex and its attendant problems. Based on my preliminary literature review, I was also interested in exploring the influences of social characteristics such as gender, religion, cultural backgrounds as well as students' sexual behaviour on contraceptive use. Given the limitations of an MA research project, I designed my study to probe these possible influences without going deeply into how they work; this I recommend should be taken up in further studies.

This study was conducted among students of Federal Polytechnic Kaduna, located within Kaduna metropolis in northern Nigeria. It is hoped that the findings from this study will be useful for informing policy and practice in the polytechnic and, by extension, other institutions of higher learning in Nigeria.

1.2 Research questions

My study is concerned with understanding students' knowledge and practices of contraception. Within this context and drawing from the existing literature, my research is organised around the following questions:

- What is the level of awareness and knowledge among students in Federal Polytechnic Kaduna about different methods of contraception (both modern and traditional) and what is their primary source of contraceptive information?
- What is the extent of sexual activity among students in the Polytechnic?
- What is the extent and nature of contraceptive use among sexually active students?

- How accessible are contraceptives for sexually active students, here considering in particular availability, cost and the attitudes of Polytechnic health workers and other relevant staff towards students seeking access to contraception.
- Do social characteristics such as age, gender and cultural beliefs and practices (which were identified as important in the general literature) influence students' understanding of and attitudes towards contraceptive use in Federal Polytechnic Kaduna?

1.3 Research design and conceptual framework

As already noted, I conducted the study using a mixed methods research design. This involves "a procedure for collecting, analysing, and mixing both quantitative and qualitative data at some stage of the research process within a single study to understand a research problem completely" (Ivankova, Creswell and Plano 2007:261). The advantage of a mixed-methods approach is that at its best it is able to offset the limitations of both quantitative and qualitative methods of research, therefore, providing a better understanding of the research problem (Fouche and Vos, 2011). In agreement with Fouche and Vos, I found that a mixed methods approach allowed me simultaneously to confirm and explore my research question (what is the level and extent of students' knowledge and contraceptive practices?). In my third chapter, I present a more detailed discussion of the methodology I used for the study. Here I outline my approach to analysing the gap between knowledge and behaviour, in this case in relation to contraception, as well as the concepts of sexuality, gender and culture which have informed my research design.

Conceptualising the gap between knowledge and behaviour

The focus of my study is how students in Kaduna Polytechnic in heterosexual relationships relate to the issue of contraception and what social factors shape their attitudes and practices. I am motivated by studies which have revealed a gap between contraceptive awareness and contraceptive use and the negative social and health consequences of unprotected sex among young Nigerian students, including the spread of STIs and the risk associated with unsafe abortions resulting from unwanted pregnancies.

As already noted, growing concerns generated by the increasing reproductive health problems experienced by young people in developing countries of Africa, have resulted in various studies aimed at understanding why people may not use available health services despite their awareness of its existences and usefulness.

I work within a social constructivist framework, starting from the premise that knowledge and reality are created interactively and embedded in specific social contexts, thereby making an individual's action a product of interchanges with their environment (White, Bondurant and Travis 2000). Thus, I recognise that students in the polytechnic will have varying attitudes towards contraception given that they come from different backgrounds with different orientations. The social constructionist approach

further suggests the examination of social processes involved in generating constructs such as the self, gender and sexuality. I thus attempt to find out if social factors, which emerged from my literature review, influences students' contraceptive practices and how the individual in sexual relationship creates personal meanings in relation to external social realities which in turn informs his or her behaviour, in this case, in relation to the use or non-use of contraceptives. I further recognise students' attitude towards contraceptive use as being historically and culturally located. Not only are individual attitudes specific to particular periods in history and cultures, it is also considered a product of and dependent on the prevailing arrangements in that culture at that historical period (Burr, 1995).

In my study, I thus distance myself from the position of scholars such as Rosenstock, Strecher and Becker (1988) and, more recently, Glanz, Rimer and Lewis (2002) who have attempted to explain individuals' attitudes towards health-related issues by means of the Health Belief Model (HBM). This posits that health behaviour is informed by the perceived benefits of the particular behaviour by the individual. They assume that an individual's behaviour on health related issues is rational; as such the individual will use contraception if he/she is convinced about its benefits. This approach fails to consider how other social factors could serve as barriers to individual's decision to adapt certain beneficial health behaviours. Such processes could include existing patterns of gender relationships (in which one party may be coerced into sexual activity) as well as other factors such as time, cost, inconvenience, embarrassment or loss of pleasure, religion and cultural norms (Dejoy, 1996). This implies that although students are aware of the benefits accruing from the practice of contraception and may want to use it, there are other social barriers that serve to deter them which the HBM does not explain sufficiently.

Reyna and Farley (2006) reported that although adults often believe that young people view themselves as invulnerable and are therefore incapable of rationally weighing risk and benefits, this is not true, as young people do weigh risk and benefits rationally. However, they also found that even when the benefit is perceived to be greater than the risk, they sometimes go ahead to take the risk. In line with this, Thamlikitkul (2006), in his article on 'Bridging the gap between knowledge and action for health', is of the opinion that knowledge about health issues in itself is not enough to improve peoples' choices towards health practices. Rather for this to be achieved, knowledge must suit the existing diverse social and political context. According to Thamlikitkul, for the 'know-do' gap to be bridged, institutions responsible for reproductive health in developing countries need to "invest more resources in promoting professional communicators or intermediaries to narrow the gap as well as develop a culture where decisions taken by policy-makers, health professionals and the public are based on evidence" (2006:605).

While these studies take different approaches to explaining decision-making and choice of options regarding health-related issues among young people, at the centre of them all is the common recognition of social factors impacting on the individual and influencing his/her choice of action

regardless of the rational calculation of risk and benefits. Research in Nigeria has revealed that key issues such as gender relations, cultural beliefs and practices[5], as well as contraceptive accessibility all play significant roles in influencing students' decision or choice of action with regards to the use and non-use of contraceptives (Orji and Onwudiegwu, 2002; Izugbara and Modo, 2007; Olaleye *et al*, 2007; Sudhinaraset, 2008). These features, function to shape and inform students' attitudes to reproductive health issues at tertiary institutions and even at later stages in life (Izugbara and Modo, 2007; Amos, 2007; Sudhinaraset, 2008; Omo-Aghoja *et al*, 2009; and Avong, 2012). I have thus factored them into my research design. Below I discuss briefly how I understand them in my study.

Sexuality

Studies on sexuality suggest that sexual relationships are shaped by the social meanings we attach to them. For Connell (1987:111), "sexuality is socially constructed. Its bodily dimension does not exist before, or outside the social practices in which relationships between people are formed and carried on". Literature is replete with findings on sexual behaviours of young people around the world. "Secondary sexual growth, changes in hormonal secretion, emotional, cognitive and psychological development occur around puberty, resulting in sexual curiosity and experimentation, these biological and psychological changes result in the awareness of sexuality in male and female adolescents" (Okpani and Okpani 2000:41). Research on sexuality and how it is understood and constructed in various societies should be able to assist in the development of effective and efficient sexual and reproductive health care services for youths in such societies (Izugbara and Modo, 2007). Sexuality can also only be fully understood when seen as constructed from childhood, along with gender identities (Pattman, 2005).

Gender relations in heterosexual relationships

Here I find Connells's concept of 'cathexis' (desire) and the role it plays in gender relations pertinent. Cathexis refers to the construction of emotionally charged social relationships with other people in the real world. In patterns of desire within socially hegemonic gender relations, Cathexis sees male and female partners in heterosexual relationships as not just different but unequal. I thus situated my study around heterosexual relationships among students which may be ambivalent.[6]

The nature of interaction and communication among partners in relationships through the expressions of gender identities and roles has been found to influence decision making regarding reproductive health issues (Iwuagwu *et al*, 2000; Adaramaja, Adenubi and Nnbueze, 2010; Gibbs, 2012). In a patrilineal society such as Nigeria, there is reportedly a pronounced domination of men in terms of decision making in intimate relationships both within and outside marriage. This male dominance in

[5] I use cultural belief here as a general belief system of a people including both religious and other traditional forms of belief.

[6] both affectionate and hostile relationships

decision making also extends to issues around contraception, where according to Duze and Mohammed (2006), a man often feels it is his responsibility to decide whether or not his female partner uses contraceptives. This perception is widely shared among people of different ethnic groups, making it a prevailing gender norm that males are superior partners, while females are subservient partners who are expected to concede to the views and decisions of the male in sexual relationships (Adamu, 2008).

Gender inequality in relationships as this, has informed agitations by civil organisations towards the establishment of more tolerant structures in the society that will rather ensure equality in all aspects between males and females. This has led to the fight for the emancipation of women in terms of rights of control over their own bodies as regard issues of reproductive health (Smith, 2000).

Cultural beliefs and practices

Cultural beliefs and practices (including religion) are been passed on to young people and continue to shape their perceptions and attitudes towards issues around them (Manjok *et al*, 2010). In their study, Monjok *et al* argued that the interplay of culturally held values and norms continue to influence the prevalence of contraceptive use among young people. Beliefs that have been identified include: that women must bear children to please their husbands, that only promiscuous women use contraceptives, that modern contraception is a means to control the African population thereby reducing its capacity to resist external domination, and that all sexual acts must be open to the possibility of procreation (Duze and Mohammed, 2006; Avong, 2012). These beliefs and practices vary from one society to the other.

Studies of cultural change in Nigeria indicate a transition from ‘traditional’ to ‘modern’ (western) values among Nigerian students, thereby, exposing them to challenges in defining their rights and responsibilities in terms of gender expectations and sexuality (Oloruntoba-Oju, 2007; Amoran *et al*, 2005). While some students tend to follow this trend of cultural transition, others remain cut up within the traditional cultural and religious values which govern their lives. However, these students interact with one another on a daily basis and through the process of interaction they influence one another by creating conflicting ideas around health issues, including contraception and this interaction is also part of the context influencing decision-making around contraceptive use among Nigerian students (Oloruntoba-Oju, 2007; Abah, 2009; Lawal, 2010).

1.4 Chapter outline

The study is organised into five chapters, including this introductory chapter. The next chapter focuses on my literature review. This review helped me develop my conceptual framework for the study as well as give an indication of the gaps the research needs to fill. Chapter three discusses the methodology and the rationale for adopting each method used in the study. It includes: the scope of

study, the study population, sampling methods and sample size as well as data collection procedures and the methods used to analyse the data collected. It also presents the ethical considerations for the research as well as reflections from my research process. Chapter four carries the presentation of findings, interpretation and discussions as to how my results were reached. The final chapter discusses these findings within a broadly social constructionist paradigm and compares it with previous works in the same aspect. As the last chapter, it also presents my conclusion as well as recommendations for future research.

Chapter 2: Literature review

The aim of this chapter is to contribute to a better understanding of the research problem, by reviewing the available literature on youth and contraception internationally and within the Nigerian context.

2.1 An overview of contraception

Arguably, the practice of contraception is as old as human existence. Contraception refers to the deliberate prevention of pregnancy using any of several methods; contraceptives such as condoms also function to protect its users from contracting sexually transmitted infections (STIs) (Olugbenga-Bello, Abodunrin, and Adeomi, 2011; Obinna, 2011). Contraceptives that are reliable and safe (irrespective of whether they are reversible or not or designed for males or females) thus offer sexually active people the chance to lead a healthy sex life (Ogunbanjo and Bogaert 2004). The ideal contraceptive according to Guillebaud (2004) should be 100% effective, safe, convenient; it should be reversible, cheap, easily accessible, and acceptable to all religions and cultures.

However, no form of contraceptive method, other than abstinence, has been proven to provide 100% protection in terms of pregnancy prevention or protection from STIs. Extensive research and clinical trials have led to improvement in existing methods of contraception and the development of new, more effective and acceptable methods with fewer side effects (Monjok *et al*, 2010).

However, the level of effectiveness offered by contraceptives varies (Trussell and Raymond, 2012). According to Family Health International (FHI), cited in Steiner, Trussell, Mehta, Condon, Subramaniam and Bourne (2006), the failure rate of contraceptive methods can vary from as high as 30 pregnancies per 100 women in a year to as low as one or even fewer. Studies have shown that human factors also influence the efficacy of contraception ranging from the knowledge of the individual about the proper use of contraceptive methods to the capacity of the individual to adhere to instructions of use (Benagiano, Bastianelli and Farris, 2006; Trussell and Raymond, 2012). As such, people using contraceptive methods need to understand the risks and benefits of available contraceptive methods to be able to make an informed choice (Steiner *et al*, 2006)

Contraception methods can be broadly divided into the traditional and the modern methods (Abiodun and Balogun, 2009). According to Nigeria's National Demographic Health Survey (NDHS) 2008, modern contraceptive methods include female sterilisation, male sterilisation, the pill, intra-uterine device (IUD), injectables, implants, male condom, female condom, diaphragm, foam/jelly, lactation amenorrhoea method (LAM), and emergency contraceptives. Methods such as rhythm (periodic abstinence) and withdrawal are grouped as traditional methods, along with herbal and other interventions described further below.

2.2 Contraception in Nigeria

In pre-colonial Nigerian communities, procreation was generally regarded as the primary function of marriage. Children were seen as assets, as the number of children born in a family would determine the work force of the family as well as its status within the community. Families with higher numbers of children were given greater respect as they were believed to be contributing more to the workforce and wellbeing of the community (Obinna, 2011). Despite this desire for more children in families, there was a general knowledge about reproductive health issues concerning the health of the woman and the baby, hence the need to control pregnancy for adequate child spacing (Bablola, 2009).

Traditional methods of birth control used local resources to ensure the reduction of reproductive health problems among its people. A major form of contraception in pre-colonial Nigerian societies was abstinence from sex during breastfeeding. Traditional beads were also worn by women as waist bands or as armlets. These items were usually soaked in recipes available as concoctions or decoctions, and thereafter, believed to possess certain spiritual powers to protect women from getting pregnant during sex. Rings and padlocks were also used as clamps on the woman's vagina to ensure that she abstained from sex within a given period. These were being provided and administered by Traditional Medicine Practitioners (TMPs), who were mostly women (Nwachukwu and Obasi, 2008; Bablola, 2009; Obinna, 2011; Olugbenga-Bello *et al*, 2011; Adesina, 2013).

Herbal contraceptives also form an important aspect of traditional contraceptives in Nigeria. Bablola defines herbal contraceptives as "those plants used for birth control or in the prevention of pregnancy and for premature expulsion of the foetus from the womb" (2009:142). These plants possess sterilizing properties which act to inhibit implantation by causing disturbance in the oestrogen-progesterone balance in females. They also function by affecting the viability and count of sperm cells in males (Ciganda and Laborde cited in Bablola 2009). Herbs used may include the leaf, stem, bark, root, seed or fruits of specific plants which are collected and prepared by knowledgeable TMPs (Sofowora, 2006).

Although, the efficacy of these methods is often only explicated by the TMPs and their clients, it is however important to emphasize the relevance of traditional contraceptive methods to these clients. Admittedly, most users of traditional contraceptives in Nigeria may lack access to modern contraceptives; they however, believe that traditional contraceptive methods are products of their fore-father's wisdom, which recognises their socio-cultural and religious values and has little or no side effects when compared to modern contraceptives (Adesina, 2013). These traditional methods are still being used in contemporary Nigerian societies as reported by Bablola (2009) and Olugbenga-Bello *et al* (2011).

Prior to 1988, most attempts to address family planning issues in Nigeria were carried out or led by international organisations (Smith, 2003). It was in 1988 that the Nigerian government showed its first

significant concern with problems associated with reproductive health, which saw to the establishment of the National Policy on Population (NPP) in the Nigerian Ministry of Health (NMH). This policy discussed the need to improve the quality of reproductive health among its citizens to boost economic growth. An evaluation of this policy's objectives after 22 years of implementation, by Adekunle and Otolorin, reveals a rather insignificant improvement in the quality of reproductive health. Poor quality and limited availability of health services, as well as low rates of contraceptive use (estimated at about 11%), still lingers on in Nigeria (Adekunle and Otolorin, 2000). As my study shows, this is a problem for students at Kaduna Polytechnic.

The NPP failed to achieve its objectives largely due to:

> Cultural, religious and financial factors in play; however, a positive demographic change was noticed statistically after the policy was implemented. Achievement of policy goals was limited… due to a cultural aversion to family planning in Northern Nigeria, among other factors. The success of the policy was greatest in Southern Nigeria where social advancement also played an integral role (Adegbola, 2008:52).

A further limitation was that this policy was more focused on married couples than on unmarried youths.

The Nigerian government in 2001 adopted a replica of the 1988 policy, this time called the National Population Policy (NPP) and National Reproductive Health Policy (NRHP). Designed to ensure quality reproductive and sexual health for all Nigerians, the policy aimed at addressing issues of low level of awareness and use of contraceptive services so that all Nigerians (male and female, young and old) would have the opportunity to obtain and use contraceptives of their choice, at the right place, at all times and at the cheapest possible cost (Ogundipe, 2011).

In the same year (2001), The Bill and Melinda Gates foundation provided funds for the 'Get it together' project initiated by the Nigerian Urban Reproductive Health Initiative (NURHI). 'Get it together' was a media campaign that used both electronic and print media to increase awareness and utilization of contraceptive methods (NUHRI, 2012). Although it is difficult to access recent evidence-based appraisals of contraceptive mass media initiatives in Nigeria online, assessments of media campaigns on reproductive health in Nigeria have proven such initiatives to be effective in increasing awareness on STIs as well as encouraging the practice of safe sex (Keating, Meekers and Adewuyi, 2006).

In 2003, the Nigeria government, in collaboration with the United States Agency for International Development (USAID), initiated the Contraceptive Logistics Management System (CLMS) with the primary objective of forecasting and procuring contraceptives; clearing, storing and managing inventories; transportation and distribution of contraceptives; monitoring and supervision; improving

logistics management; and cost recovery (Kolapo, Bunde, Ronnow and Igharo, 2007). A 2011 evaluation by USAID indicated that despite the acceptance of these initiatives by Nigerians, and the high levels of training conducted for personnel responsible for contraceptives at medical facilities across the country, the initiative recorded little success. This they attributed to poor supervision and the reluctance of trained personnel to adhere strictly to the CLMS guidelines, also, lack of support from policy makers in Nigeria in terms of funding which led to an uneven distribution of ordered contraceptives across states in Nigeria.

Subsequently, the National Population Policy (NPP) of 2004 presented a multi-sectional strategy for problems affecting the Nigerian population, including issues of reproductive health. This policy has specific objectives, among which is to improve the reproductive health of all Nigerians at every stage of the life cycle as well as to accelerate the response to HIV/AIDS epidemics and other related issues, by increasing the prevalence rate of modern contraceptives by at least two percentage points per year, and the reduction of HIV/AIDS prevalence (3.6%)[7] in adults by 25% every five years (NPC, 2004).

In 2012, as reported by Oshodi (2012), the Nigerian Government stated its commitment to tripling the current funding for contraceptives in the country. This led to the approval of a 'task sharing' policy that will now allow community health workers to provide injectable contraceptives, which previously was only administered by doctors, nurses and midwives, to women in their neighbourhood. This practice had prevented some women in rural areas from having access to injectable contraceptives (Oshodi, 2012).

Despite efforts made by government and NGOs to improve contraceptive use among Nigerians, numerous studies have consistently revealed low contraceptive usage among Nigerians, especially among the youth (Duze and Mohammed, 2006; Ebuehi *et al*, 2006; Wusu, 2010; Cadmus and Owoaje, 2010; Ijadunola, Abiona, Ijadunola, Afolabi, Esimai, and OlaOlorun, 2010; Tayo *et al*, 2011; Adebayo, 2013). It is therefore pertinent to explore the levels of sexual activity among students so as to have a better understanding of the nature of contraceptive use.

2.3 Patterns of Sexual relationships

The degree of social freedom enjoyed by students at tertiary institutions in Nigeria has been seen to provide a favourable environment for the initiation and sustenance of sexual relationships (Egbochukwu and Akerele, 2007; Adinma and Okeke, cited in Cadmus and Owoaje, 2010). For many students, life in the tertiary institution often provides for more independence and freedom of association and decision making than when with their parents. Students who may still reside with their

[7] The HIV/AIDS prevalence rate of 3.6% among Nigerian adults of age 15-49 years was estimated by the Central Intelligence Agency (CIA) based on the 2009 estimate. This was derived by dividing the estimated number of adults living with HIV/AIDs at the end of the calendar year by the total population of adults in the same year. This estimate is said to be accurate as at February 21st 2013.

families may also experience less restriction as they often spend most of their time in the polytechnic environment (Okonkwo, Fatusi and Ilika, 2005; Olley, 2008).

Life in Nigerian tertiary institutions is typified with social events of different kinds and forms - 'department week', 'faculty week', 'tribal association week', or 'social association week', as well as celebrations, dinners and hostel parties, among others. This encourages widespread social mixing amongst students. These events often extend through the night and can lead to the development of sexual relationships among students (Ejembi and Otu, 2004). Studies in the mid-2000s by Ebuehi *et al*, as well as Oye-Adeniran, Adewole, Odeyemi, Ekanem and Umoh suggest high levels of risky behaviour within heterosexual relationships among students in the western region of Nigeria, such as unprotected casual sex, gender-based violence, transactional sex and engagement with multiple partners (Oye-Adeniran *et al*, 2005; Ebuehi *et al*, 2006).

According to Alemu, Damen, Baley, and Davey (2007:345), "Sexual commencement at an early age with limited insight as to the consequences and the low rate of consistent condom use are among factors putting youths at risk of unwanted pregnancy and HIV/AIDS". In their study among students of tertiary institutions in western and eastern Nigeria, Orji *et al*, (2005); Salako, Iyaniwura, Jeminusi, and Sofowora (2006); Izugbara and Modo (2007) reported a decrease in contraceptive use among respondents as age at sexual debut decreases. The lack of contraceptive knowledge, the need for experimentation and pressure from more matured partners featured as reasons for the non-use of contraceptives among respondents who experienced their sexual debut at younger ages.

A 2009 Nigerian study by Abdulraheem and Fawole reported the non-use of contraceptives to be influenced by having multiple sexual relationships. In their study 74.6% of their respondents were sexually active, two thirds of them having had multiple sexual relationships at the same time; however, only 38.1% of those in multiple sexual relationships reported using contraceptives regularly. This study found that students preferred to practice the withdrawal method rather than use condoms, which they associated with a lack of trust in one's partner (Marston and King, 2006). A similar study conducted by Sunmola (2005) among undergraduate students in a university in Nigeria revealed that 52.0% of female and 66.0% of male respondents were in multiple sexual relationships. However, in this study, 40% of male respondents indicated frequently having unplanned and unprotected sex compared to 25% for female respondents. These trends of having multiple sexual partners increases the risk of unwanted pregnancy and contraction of STIs, including HIV, as about 58% of the respondents indicated the non-use of contraceptive during unplanned sexual intercourse. Despite the awareness of the risk involved in having multiple partners, students perceive this practice as a way of gaining social respect for themselves by boosting their acceptance and ranking among their peers (Izugbara and Modo, 2007).

Students of Nigerian tertiary institutions have also been found to engage in transactional sexual relationships[8]. An article by Wusu vividly supports this assertion by stating that:

> Undergraduates sexual partners are sometimes highly placed in the society, at least of higher status than them [selves] or rich enough to offer them what they don't have, this category of individuals include lecturers who offer grades for sex (quid pro quo), young persons and others who have money and others who have money and other materials that are attractive to their prey (2010:2).

In his study he found this as a common practice among both male and female students of Lagos State University, although these students perceive and interpret this behaviour in different ways. While male student partners would perceive this act as largely geared towards material gain, female partners are likely to perceive it as a display of love and commitment to their partners (Wusu, 2010).

Bianchi, Lancianese and Hunter (2006) argue that it is often difficult for economically inferior partners to have influence in relationships when they are been given gifts of money and other material things by their highly placed partners, therefore making the phenomenon of sex for gifts a way of life in societies where uncertainties and high levels of inequality are pervasive. In a 2007 Nigerian study, Nwokocha reveals that due to economic hardship and the need for survival, students whose parents do not have sufficient means to provide for their needs are more likely to engage in poverty driven risky sexual behaviour.

In this case, poor young students are not likely to insist on the use of contraception in sexual relationships if their "rich" partners prefer unprotected sex, because of what they stand to get afterwards. Thus sexual relationships involving economic transactions are often associated with unsafe sex, as well as increased risk of unwanted pregnancy and contraction of STIs (Madise, Zulu and Ciera, 2007; Nwokocha, 2007; Wusu, 2010). There have been reports of studies indicating a positive relationship between transactional sex and the vulnerability to risk of pregnancy and STIs (as stated in literatures cited above), but a 2007 study conducted by Moore, Biddlecom, and Zulu, in selected countries of sub-Saharan Africa, Nigeria inclusive, reported a rather negative association between transactional sex and risk of pregnancy. The foregoing therefore suggests a rather vague relationship between the variables. Hence further research is needed to grasp a proper understanding of the association between transactional sex and vulnerability to pregnancy and STIs in Nigeria.

For reproductive health programs to be successful, it is pertinent to understand and attend to young people's needs as they become sexually active. This could be achieved by identifying some of the

[8] This means the exchange of sex for material things. Transactional sex differs from prostitution in that; it covers a broader set of obligations that does not actually involve a predetermined price. However, it has a definite motivation to benefit materially from sexual exchange.

factors that influence youths to adopt these patterns of sexual activity, thereby exposing themselves to risk of unwanted pregnancies and STIs.

A Nigerian 2006 study by Abu and Akerele on parental influences on adolescent sexual behaviour suggests variables such as family history, type of parental care, and education as key determinants of the adolescent's sexual behaviour. They opined that children who receive adequate attention from their parents often feel emotionally connected in a way and are less likely to be exposed to sexual activities at an early age, hence a reduction in the risk of unwanted pregnancy and STI infections. However, children who are exposed to models of risky sexual behaviour from their parents (for instance, parents involved in early child birth, or having permissive attitudes to pre-marital sex) are likely to engage in early and risky sexual activities.

Studies have also proved that peer pressure, often exerted through social interactions, plays an important role in determining whether or not the individual engages in sexual relationships and whether or not he/she uses contraceptives in sexual relationships (Okonta, 2007; Omo-Aghoja *et al*, 2009; Monjok *et al*, 2010). Research in Nigeria have revealed that students mostly gain their information on reproductive health from their peers with whom they associate on a daily basis, and this information provided by peers is often either incomplete or inaccurate thereby subjecting such youths to risky sexual practices (Amos, 2007; Sugh, 2011).

A study conducted by Okonkwo *et al*, in eastern Nigeria published in 2005, reveals that more than half of the female undergraduates in the study had experienced some pressure from their peers to engage in premarital sex. This indicates the unsupportive nature of the social environment in Nigerian higher institutions of learning towards abstinence, as Okonkwo *et al* will put it "…abstinence is not a popular practice among Nigerian undergraduates" (2005:111). Another Nigerian research project conducted among undergraduates identified the need of students to step up to their peers' status as one of the reasons students engage in risky sexual practices. In cases such as this, students will take risks to achieve material wealth just to be like or not intimidated by their peers (Nwokocha, 2007).

2.4 Awareness and knowledge of contraceptive methods among youths

Studies have been conducted around the globe to evaluate the knowledge young people have about contraceptives. Generally, these studies reveal higher knowledge of contraceptive methods among young people in Europe compared to developing countries in Asia and Africa. This marked difference has over the years caused serious concerns which have led to the implementation of health programs to increase contraceptive knowledge and practice in developing countries, with different levels of success (Ijeoma, 2006; Duze and Mohammed, 2006; Sedgh *et al*, 2006; Ryan, Franzetta and Manlove, 2007; Hindin and Fatusi, 2009; and Wu 2010; Olisemeka and Salim, 2011).

Duze and Mohammed (2006) argued that developing countries in Asia became relatively more aware of contraceptive methods than those in sub-Saharan Africa, largely because Asia has experienced significant socio-economic change earlier as well as because campaigns in the region involved local community leaders and other influential people. A 2009 study by Williamson, Buston and Sweeting shows that young women in developing countries have inadequate information about contraceptives and are not correctly informed about pregnancy risks; some thought they could not get pregnant at first sexual intercourse or when having sex in a standing position. Related studies have shown the level of awareness and knowledge of contraceptive methods to be closely associated with the individual's level of education, status and place of residence. This suggests that people with higher levels of education, or who are married or living in urban areas are more likely to have better knowledge of contraception than single, less educated people living in rural areas (Myer, Mlobeli, Cooper, Smith and Morroni, 2007 and Omo-Aghoja *et al*, 2009; Esiet, Esiet, Philliber and Philliber, 2009).

Studies in sub-Saharan Africa have revealed an increasing awareness of contraceptive methods among young people; although this awareness may not involve detailed understanding about the way contraceptives function. A 2006 study conducted by Oyedeji and Cassimjee among young students in a South African province showed that only 45% of males and 30% of females were aware of at least one contraceptive method available to men. However, they argued that students are ready to be responsible for contraceptive use if given sufficient and correct information about its existence and the way it functions. This finding was replicated in a study conducted among university students in Ghana, which revealed the male and female condoms as the only contraceptives known by 88.9% of the respondents, while 11.1% were aware of other modern methods such as the IUD, pills, Spermicides etc. (Appiah-Agyekum and Kayi 2013).

Similarly, several studies among Nigerian students revealed high levels of awareness of contraceptive methods regardless of the extent of their actual engagement in sexual activities. However, most of the students lacked detailed knowledge of the methods (Abiodun and Balogun, 2009; Omo-Aghoja *et al*, 2009; Adeyinka, Oladimeji, Adeyinka, Adekanbi, Folope, and Aimakhu, 2009; Adeokun, Ricketts, Ajuwon and Ladipo, 2009; Tayo, *et al*, 2011). An earlier study conducted by Akani *et al*, (2008) indicated a relatively high level of contraceptive awareness at 50.7% among young Nigerian students; of these students, however, 57.6% did not have detailed knowledge on how contraceptives function.

Studies in the western region of Nigeria reveal the condom as the most widely known contraceptive among both male and female students, followed by the oral pill, with very few reporting knowledge of other forms of modern contraceptives. The awareness of other forms of modern contraceptives was reported to be higher among female students. Students of both sexes had a relatively low level of awareness of emergency contraceptives among (Salako *et al*, 2006; Olaleye, Anoemuah, Ladipo,

Delano and Idowu, 2007; Akani *et al*,, 2008; Omo-Aghoja *et al*, 2009; Adeyinka *et al*, 2009; Tayo *et al*, 2011).

A study by Okunlola, Morhason-Bello, Owonikoko and Adekunle in 2006 indicates that most students (39.9%) acquired their contraceptive knowledge through media activities, either in electronic forms (radio or television) or print media (newspapers, magazines, posters, pamphlets). This finding is supported by other studies conducted by Adeokun *et al*, (2009) and Tayo *et al*, (2011), which reports the media (50% and 45% respectively) as the major source of knowledge for students in Tertiary institutions of Nigeria. However, other studies by Oladokun, Morhason-Bello, Enakpene, Owonikoko, Akinyemi and Obisesan, (2007) as well as Akani *et al*, (2008) have shown that students mostly learn about contraceptives from their peers/friends (40.4% and 33.6% respectively)

These studies also reveal that few students reported acquiring their knowledge from family members, partners or school teachers. Sugh (2011) reveals that most parents find it difficult to acknowledge that adolescents are sexually active beings believe that information about sexual behaviours should not be freely divulged to adolescents. Due to this poor relationship existing and inadequate information between parents and their children, most adolescents are often not aware of the consequences of their sexual behaviour until they become pregnant or infected with STIs (Sugh, 2011). Amoran, Onadeko, and Adeniyi (2005), indicate that a significant number of adolescent students (43.2%) in their study reported a rather poor relationship existing between them and their parents as regards issues of reproductive health, with only 25.2% reporting having a cordial relationship and good communication with their parents in this regard.

Of interest is that relatively few students acquired their knowledge from health care providers (Okunlola *et al*, 2006; Oladokun *et al*, 2007; Akani *et al*, 2008; Adeokun *et al*, 2009; Tayo *et al*, 2011). This suggests that these students could lack detailed knowledge about contraceptive methods, which may result in improper or non-use and possibly the formulation of negative attitudes towards contraceptives. Duze and Muhammad (2006) are of the opinion that the extent to which contraceptive awareness affects the actual use may largely be determined by individual attitude towards the different methods available for them, which is the next issue I discuss.

2.5 Attitudes towards contraception use

Studies have shown that the attitude youths have about contraceptives is an important determinant of the use and non-use of contraceptives. Positive attitudes are associated with greater use of contraceptive while negative attitudes are associated with lesser contraceptive use (Salako *et al*, 2006; Duze and Mohammed, 2006; Ryan *et al*, 2007; Ugoji, 2008; Wu, 2010; Mnyanda, 2013). Furthermore, the attitudes youths have towards contraception are shaped differently among males and females. Ryan *et al*, (2007) suggest that an increase in contraceptive knowledge among boys helps them form positive attitudes towards contraceptives. Girls, on the other hand, form positive attitudes

towards contraceptives by acquiring more knowledge on actual reproductive health and the ways in which their bodies function.

In contrast, a 2010 study by Wu among teenagers in China suggests that an increase in contraceptive and reproductive health knowledge does not necessarily translate into positive attitudes, as increase in knowledge could also lead to the formation of negative attitudes due to the awareness of contraceptive side effects. A similar study conducted by Mnyanda in 2013 among youths in a South African province also reflects Wu's finding. In Mnyanda's study, youths who are knowledgeable about contraception consider it as bad because of their awareness of contraceptive side effects and their perception of the condom as reducing sexual pleasure. As such, they would rather go for an abortion which they feel is a better method of preventing the effects of unwanted pregnancy (Mnyanda, 2013).

Studies among students in tertiary institutions in south-western Nigeria have revealed that students develop negative attitudes towards contraceptives for several reasons. These include insufficient information, fear of side effects, experience of contraceptive failure, the perceived tedious routine involved with methods such as the oral pill and societal disapproval of contraception among young and unmarried youths (Salako *et al*, 2006 and Ugoji, 2008). Related studies in this region by Omo-Aghoja *et al*, (2009) and Abiodun and Balogun, (2009) reveal that the majority of their respondents (53.1% and 77.5% respectively) would not use contraceptives because of its perceived side effects, including health risks, on the individual.

These studies also reveal that students generally hold more positive attitudes towards condoms, reporting it as the most favourable method of contraception. This could be due to its dual function in terms of pregnancy prevention and protection form STIs, as well as its being less intrusive on the reproductive system of the individual compared to other modern contraceptive methods (Olley, 2008; Abiodun and Balogun, 2009; Monjok *et al*, 2010). However, some students reported having negative attitude towards condoms, stating that condoms often fail by either breaking or slipping out as well as reducing sexual pleasure during sex; as such, they would prefer other methods such as injectables and implants because of their perceived long lasting effects and efficiency (Amos, 2007; Akani *et al*, 2008; Cadmus and Owoaje, 2010). The attitudes of students towards contraceptives influences the individual's behaviour as to whether or not he/she uses contraceptives (Duze and Muhammad, 2006; Abdulraheem and Fawole, 2009).

2.6 Contraceptive use among youths

Studies evaluating prevalence of contraceptive use among varying populations in different societies have led to similar findings. These studies reveal that while there are people who do not use contraceptives due to lack of knowledge, there are others who are aware of their existence and importance but will rather not use them, Reasons for this include fear of side effects, the fact that it contradicts religious or social norms as well as unavailability and partner disapproval (Ndifon, Ogaji

and Etuk, 2006; Alemu *et al*, 2007; Amos, 2007; Wu, 2010; Butawa, Tukur, Idris, Adiri and Tailor, 2010; Cleland, Ndugwa, and Zulu, 2011; Curtis, Evens and Sambisa, 2011; Avong 2012 Osakinle *et al*, 2013).

Studies conducted among Nigerian students in tertiary institutions have also shown a low rate of contraceptive use compared to high level of awareness. A 2005 study by Orji and Esimai involving 300 Nigerian students found that at the time of the study, 50% of the respondents were sexually active, but of these sexually active respondents only 13.3% reported having used a form of contraceptive during their last act of intercourse. However, another 2005 study among Nigerian students conducted by Orji *et al*, revealed a relatively high rate (75% current users) of contraceptive use among a study sample of 283 students. Although these studies were both conducted in the south-western part of Nigeria in the same year, there were differences in their findings as regard the prevalence rate of contraceptive use among students. This difference could be as a result of age and gender variations in the respondents used for each study. In the first study, by Orji and Esimai, 66.7% of the respondents were females while only 33.3% were males and all respondents were within the age bracket of 13-19 years. In the second study, by Orji *et al*, there were more male respondents and a higher age bracket of 18-49 years. This could suggest that contraceptive use is positively affected by an increase in age of respondents, and that gender is an important variable. Interestingly, both studies reveal that the most commonly known contraceptive among both study samples was the male condom at 80% and 83% respectively. Therefore, this could possibly justify why contraceptive prevalence rate was higher among the male dominated study sample.

Other Nigerian studies confirm the low prevalence of contraceptive use among both male and female students, Adeyinka *et al*, (2009); Aziken *et al*, (2009) conducted a similar study among female Nigerian students and found that 77.6% of female respondents were sexually active, but only 25.4% had ever used any form of contraception.

2.7 Reasons for non-use of contraceptives

Concerns about the gap between awareness of contraceptives and use among young people have led to research on the reasons for their non-use of contraceptives. The common issues in these studies include gender relations in sexual relationships, traditional and religious beliefs and practices as well as contraceptive accessibility. These were reported to influence young people's attitudes to reproductive health issues even at later stages in life (Izugbara and Modo, 2007; Sudhinaraset, 2008; Abdulraheem and Fawole, 2009; Omo-Aghoja *et al*, 2009; Avong, 2012). The literature on these issues is briefly reviewed below.

Gender relations in sexual relationships

The 2005 study by Orji and Esimai found that most female students (86.7%) would not use any form of contraception during sex, either because they were involved in relationships with male partners who did not want them to use them, or they were engaged in sexual relationships with multiple partners, which exposed them to unplanned and sometimes coerced sex thereby limiting their negotiating power on the use of condoms. In another study among Nigerian students Smith (2000) found that male students hold negative attitudes towards girls that initiate or negotiate the use of condoms during sex. They associate this with promiscuity and refer to such girls as professionals.[9] However, contrary to this assumption of male students, studies have established that girls with fewer sexual partners are more likely to initiate condom use during sex than girls with more sexual partners (Iwuagwu, Ajuwon and Olaseha, 2000; Okunlola *et al*, 2006). In their study Iwuagwu *et al*, showed that 73% of female respondents reported negotiating condom use with male partners during sex. Their findings also established a positive relationship between the number of sexual partners and a girl's ability to negotiate condom use.

Women suffer the most consequence of unprotected sex in terms of the contraction of STIs and the risk of unsafe abortion resulting from unwanted pregnancy, therefore the need to protect themselves (Orji and Esimai, 2005). As such prevailing gender norms have raised concerns among feminist scholars and other human rights activists on the need to consider the rights of women in issues of reproductive health. As noted by Iwuagwu *et al* "while intervention that addresses the reproductive health needs of all young Nigerians is justified, females deserve a high priority because they are disproportionately affected by reproductive morbidity associated with unprotected sex" (2000:508). This is also influenced by increase in educational attainment of men who now believe in the rights of women, also increasing the awareness of women as regards their rights towards contraception and issues of reproductive health (Ogunjuyigbe and Adeyemi, 2005; Olisemeka and Salim, 2011).

Traditional beliefs and practices

Most ethnic groups in Nigeria loathe barrenness which is expressed by the honour given to women with many children. Children, especially in rural communities, are regarded as the pride of womanhood, as well as economically beneficial for the family and community at large. People in such communities usually accord higher levels of respect for women having a large number of children while women who have no children are sometimes treated with disdain and given the status of an 'incomplete woman'[10] (Duze and Mohammed 2006). Among the Igbos in eastern Nigeria, as reported by Duze and Mohammed, women with 10 or more children are celebrated during a ceremony called the "Ewu-Ukwu", which gives them a position of distinction and high esteem accompanied with

[9] The term 'professional' refers to a promiscuous person.

[10] This concept is formed from the belief that every woman must bear children for her husband to proof her being a woman.

special privileges. A 2009 study by Abiodun and Balogun found that due to the special recognition given to mothers and the stigma attached to women without children, young female students may sometimes not use certain contraceptives because of the fear of infertility resulting from continuous contraceptive use.

The low prevalence of contraceptive use among Nigerian students is also informed by the negative cultural attitudes parents and guardians hold towards the use of contraceptive by youths which are commonly associated with promiscuity (Arowojolu, Ilesanmi, Roberts, and Okunola, 2002). Thus the process of socialization of youths in these societies often involves labelling issues about reproductive health as 'dirty', which should not be discussed openly. Since youths are sexually active beings, this makes then more vulnerable to the risk of unprotected sex (Friedman cited in Sugh, 2011)

Religious beliefs

Religious beliefs and practices have also been found to be important in shaping the attitudes of Nigerian students towards contraception as students are often under an obligation to act in accordance with the belief systems of the religion they are affiliated to. A 2005 study by Odimegwu among 1,870 Nigerian university students revealed a strong influence of religion on students' attitudes towards reproductive health issues. Students who were committed to their religion tended to have more negative attitudes towards issues of reproductive health such as contraception than those who were only affiliated to the faith (Odimegwu, 2005).

Reports indicate a lower usage of contraception among Muslims compared to Christians, because of the practice of early marriage and the belief that it is beyond the capacity of humans to decide on the number of children one should have (Duze and Mohammed, 2006). A Muslim cleric, Ustaz Abdulwaheed Olowo, stated in an interview with *Vanguard* (a Nigerian newspaper) in July 2012 that religiously, the practice of contraception among both married and unmarried couples is at variance with God's injunction which teaches that all sexual relations should be open to procreation and there should be no limit to or restrictions on child bearing (Vanguard, 2012).

While the Christian religion shares a similar view that children are gifts from God, it is less opposed to the use of contraception by married couples. However, Christian denominations hold different ideas on how this should be done (Avong, 2012). The Roman Catholic Church has explicitly stated its disapproval of modern contraceptive methods. The Catholic Church also believes that all sexual activities should be open to procreation and will rather preach abstinence for the unmarried and the use of natural contraception methods (usually the temperature reading) for married couples (Odimegwu, 2005). In an interview with *Vanguard* Rev, Fr. Mike Iroh stated that the Catholic Church stands for moral laws and the propagation of moral values and dignity in the society, therefore it preaches restraint rather than contraception especially among the unmarried (Vanguard, 2012). Other Christian denominations also believe in procreation as being the major reason for sex and preach

responsible parenthood as well as the need for contraception in marriage (Johnson 1993 cited in Avong, 2012).

Contraceptive accessibility

The fourth issue that studies have shown to be important is that of contraceptive accessibility.

Accessibility is partly contextualised in terms of the proximity and convenience of contraceptive services to students, cost, and methods available to students but also in terms of the attitudes of health care providers towards students seeking for contraceptives. No single contraceptive method has been found to satisfy all needs as each method has its shortcomings, for instance that it is irreversible, has unpleasant side-effects, is expensive, or it conflicts with religious doctrines or social norms. However, each method is likely to work for certain groups of people; therefore providing variety of methods to a given population is likely to benefit more people (Ross and Hardee, 2012).

Societal development is often accompanied by technological advancements and the need to improve the lives of people. Ross and Hardee in a study published in 2012 suggest that most developed societies achieved development with a reduction in fertility and growing interventions on issues of reproductive health especially among the younger generations. Therefore, indicating the need for an improvement in preventive health services especially through the provision of contraceptives. While methods of contraceptives spread throughout the world, many developing countries especially in sub-Saharan Africa have continue to make available for its citizens only limited contraceptive methods (Ross and Hardee, 2012). They argued that a country like Nigeria only make condoms available to over half of its population. Generally, many Nigerians may lack complete access to contraceptive methods; this is a consequence of limited availability, poor quality or high cost of procuring available contraceptives as well as poorly trained health providers with limited equipment (Monjok *et al*, 2010).

Nigerian tertiary institutions are reportedly graced with little or no monitoring programmes that seek to ensure that students acquire contraceptives at the right time, right place and the least possible cost or encourage students to seek for advice from health workers on issues of contraception and reproductive health (Arowojolu *et al*, 2002; Salako *et al*, 2006). These reports corroborate a 2002 study conducted among Nigerian students by Orji and Onwudiegwu which found non-use of contraceptives was attributed to lack of easy access in terms of convenience, cost and proximity to service centres.

Although, accurate figures are not readily available, studies point to an increase in the spread of STIs and incidence of unsafe abortions resulting from unwanted pregnancies among Nigerian students. Despite this, the authorities concerned have made relatively little or no effort to provide cheap and accessible contraceptive methods to students. Okpani and Okpani (2000) relate this to concerns relating to promiscuity and the spread of STIs. In contrast, Osakinle *et al*, (2013), suggested providing

sufficient contraceptives for the youth would reduce abortion and morbidity rates rather than promote promiscuity.

The public health sector is usually charged with the responsibility of providing contraceptives for the population; however, a 2008 report by the NDHS shows that the majority (57.7%) of youths acquire their contraceptives from private hospitals or clinics, pharmacy shops or from private doctors, nurses or midwives. Of interest is the fact that only 22.8% acquire their contraceptives from public hospitals, health centres or family planning clinics.

The above NDHS report confirms an earlier study by Arowojolu *et al*, (2002) which found that majority of students (58.0%) acquired their contraceptives from pharmacy stores, which are often far from campus or expensive may not dispense accurate information to students. This limits students' options around contraception (Abiodun and Balogun, 2009).

A factor in the social restrictions students face in accessing and using contraceptives is the negative attitudes of many health care providers in terms of poor treatment, or refusal to supply contraceptives to young unmarried students (Levy, Curtis, Zimmer and Speizer, 2013). Some providers have limited knowledge of contraceptive methods (Herbert, Schwandt, Boulay and Skinner, 2013) and/or believe that contraceptive services are meant for older, married people and not for young and unmarried students (Abiodun and Balogun, 2009). Thus youths seeking contraceptive services are exposed to experiences of hostility, stigmatisation or denial (Arowojolu *et al*, 2002). This correlates with the findings of Lamina (2013) that since health care services are not youth-friendly, young people may not seek out contraceptives, because they have been made to believe that such services are not meant for them. Seeking contraception will expose them to the hostile and judgemental attitude of providers, resulting in embarrassment as well as fears around the lack of privacy which could lead to their parents being made aware of their visit; Trying to avoid shame can also play a part in cases of sexual abuse such as rape. Lamina suggests an intensive orientation programme for health providers on issues of reproductive health especially as it affects the youth. Health services should identify the needs of the youth regarding contraception and use it to develop youth-friendly policies.

2.8 Consequences of non-use of contraception

The major risks associated with the non-use of contraception among Nigerian youths in tertiary institutions are the contraction of STIs and unsafe abortions resulting from unwanted pregnancy (Osakinle *et al*, 2013).

Sexually transmitted infection

Despite high and increasing awareness among young students on reproductive health, studies still suggest a relatively high incidence of STIs among students resulting from improper or non-use of contraceptives (Aomreore and Alikor, 2008; Omoyeni *et al*, 2012). A 2002 study by Nworah,

Obiechina, Diwe and Ikpeze found high levels of awareness among young Nigerian students regarding STIs (93.6% of respondents). In a related study among Nigerian university students Ejembi and Otu (2004) found that 23.3% of their respondents had contracted a STI at some point within the six months preceding their study, as a result of the inconsistent use of condoms.

Students often get infected as a result of unprotected sex which is either caused by coerced sex, peer/partner influence or students' perception that STIs are inevitable and can easily be treated (except for HIV/AIDS). On this basis, students who believe their partners to be HIV free are likely not to bother about using condoms (Tenim, Okonofua, Omorodion, Renne, Coplan, Heggenhougen and Kaufman, 1999; Marston and King, 2006). WHO, in a 2004 report on adolescent health, reported that the practice of older and experienced men having sexual intercourse with young female students without using any form of contraceptive, made the students susceptible to contracting STIs (Tayo *et al*, 2011).

Unsafe abortion resulting from unwanted pregnancy

Campaigns for the emancipation of Nigerian women have led to an increase in participation of women in formal organisations. This trend is seeing young girls delaying marriage while having sexual relationships, which increases the chances of unwanted pregnancies out of wedlock and the risk of unsafe abortions (Bankole *et al*, 2006; Sedgh *et al*, 2006). The majority of women students who regard their pregnancy as unwanted do so for reasons that include conflict with their partners and/or families, financial constraints, dropping out of school, and the stigma associated with pregnancy outside wedlock (Otoide, Oransaye and Okonofua, 2001; Bankole *et al*, 2006; Abiodun and Balogun, 2009; Tayo *et al*, 2011).

A 2009 study among 600 female undergraduates in western Nigeria by Abiodun and Balogun revealed an increase in cases of unwanted pregnancies and induced abortion. In their study 67.8% of the respondents reported having had an unwanted pregnancy, with 63.5% of them having gone through an induced abortion. While abortions are often reported as resulting from unwanted pregnancies due to contraceptive failure, a study by Otoide *et al*, in 2001 showed that some girls were concerned about the adverse effect of modern contraceptives on their future fertility and would thus prefer to take the risk of an abortion if they got pregnant. These girls perceived abortion as an immediate solution to unwanted pregnancy with few negative consequences on future fertility when compared with modern contraceptives.

However, abortion is illegal in Nigeria, unless the pregnancy is certified by two physicians as posing a serious threat to the life of the pregnant woman. The Criminal Code Act states that:

> Any person who, with intent to procure miscarriage of a woman whether she is or is not with child, unlawfully administers to her or causes her to take any poison or other noxious thing, or uses any kind, or uses any other means whatever, is guilty of a felony, and is

> liable to imprisonment for fourteen years. However, where a woman herself causes or attempts to cause her own miscarriage, whether she is pregnant or not by any administration of poison, force or means, she will be guilty of felony punishable by seven years imprisonment (quoted in Izunwa and Ifemeje, 2011:121)

Because of this, abortions are clandestine and often carried out in unsafe conditions. It is also difficult to find accurate statistics. One study suggests that one in ten Nigerian women of child-bearing age have had an abortion, resulting in about 760,000 abortions each year (Bankole *et al*, 2006).[11] Students who resort to illegal abortions are often exposed to 'quack' doctors and midwives, using crude methods, unsterilized equipment and/or uncertified drugs. There is this a high risk of complications, emotional stress (sometimes leading to depression and poor academic performance), infection, damage to reproductive organs, and, at the most extreme, death (WHO, 2004; Sedgh *et al*, 2006; Monjok *et al*, 2010). Promoting reproductive health and safe sexual practices through the effective use of contraceptives is thus an issue of major concern.

[11] This figure is not substantiated due to the undisclosed cases of abortion

Chapter 3: Research design

This chapter presents an overview of my research design. I discuss the research methodology, to include, population of the study, sample design, methods of data collection as well as methods used in analysing my data. I also discuss ethical issues in my research and the limitations of my study. I conclude with reflections on my research process.

3.1 Research methodology

In conducting my study, I have adopted an exploratory research design. Exploratory studies, according to Fouche and Vos, (2011) are usually conducted to gain more knowledge of a situation or phenomenon within a given population. This form of study is usually employed when there is a lack of information on a particular issue among a given population. Babbie and Mouton (2012) have extended this by arguing that exploratory studies can be employed not only when a researcher is working on a new area of interest but also when the subject of the study is relatively new. As already noted, I was unable to locate any study of contraceptive practices among students at tertiary institutions in northern Nigeria, hence my selection of an exploratory research design for my study.

As already noted, I adopted a mixed methods approach to address my research questions. This involves the combination of both quantitative and qualitative methods to come up with a broader picture of the research problem (Delport and Fouche, 2011). A quantitative method in the form of a survey questionnaire enabled me to have a wider scope of responses for possible generalisations of findings within my study population, while qualitative interviews complemented the survey by enabling me to get more insight into students' views on issues of contraception. This also enabled me to explore further on emerging issues in the research process. I used survey questionnaires to find out the levels of contraceptive awareness and knowledge among students in the Polytechnic, their primary sources of contraceptive information, the extent of sexual activity among students, the extent of contraceptive use among sexually active students, as well as issues of contraceptive access and the nature of contraceptive services for students. I also used questionnaires as a medium to seek a pool of interested respondents who will be willing to make themselves available to participate in the interviews.

The questionnaire is often regarded as being superficial in its coverage of complex social issues since not all information can be reduced to numerical forms (Babbie and Mouton, 2012). As such, a questionnaire on its own could not provide a deeper understanding of students' vulnerability to unprotected sex. This informed my decision to also conduct qualitative interviews (with a smaller group of students from the initial survey group) to gain a broader understanding of issues around contraceptive practices among the students of Federal Polytechnic Kaduna. Using qualitative interviews, I explored more deeply the meanings respondents attach to their responses in surveys in

relation to their beliefs and perceptions (acquired through social interaction) of sexual and contraceptive health issues. Interviews were semi-structured thereby ensuring flexibility and making it possible for me to probe the responses of individuals while being consistent in the nature of questions being asked. Survey and interviews were conducted in English, which is the official language used in the polytechnic and a common language that both the researcher and the respondents understand.

The study site

My study site is located within Kaduna metropolis, the capital of Kaduna State in the north-west region of Nigeria. Kaduna state has a land mass of 46,053 sq km, with an estimated population of 6.1 million people (NPC 2006), emerging as the third most populous state in Nigeria. The state houses numerous institutions of higher learning in the country and has adopted "Centre of Learning" as its current slogan.

Initially, my study site was to be Kaduna State University (KASU), in Kaduna. I obtained institutional consent for my research from the institution. However, upon my arrival in Nigeria in August 2013, I found that the Academic Staff Union of Universities (ASUU) was on an indefinite strike which had led to the complete shutdown of all Nigerian universities including KASU, my proposed study site.

Due to the limited time available for me to conduct my study I thus had to seek an alternative study site very quickly. After consultations with my supervisor, I chose Federal Polytechnic Kaduna, otherwise known as Kaduna Polytechnic or Kad Poly, as the new site for my study. The choice of Kaduna Polytechnic was informed by its relative homogeneity in certain characteristics with my prior study site (KASU) in terms of social interaction and the various forms of social activities that exist within the institutions. Both institutions are located at a walking distance of less than one kilometre from each other. I also obtained institutional consent from the polytechnic before commencing my study.

The polytechnic was established in 1956 as the Kaduna Technical Institute, by the then British Government following the recommendation of the Higher Education Commission (HEC). It was re-designated to become Kaduna Polytechnic in 1968 and became a Federal Polytechnic in 1991 when its governance was taken over by the Federal Government of Nigeria under decree no. 40 of the same year (1991). The institution was established with the objective of providing diverse instruction, training and research in technology, the sciences, commerce, the humanities and programmes of in-service instruction for members of the public in Nigeria.

The Polytechnic as a tertiary institution in Nigeria has been considered as an agent of change and national development as indicated by the Ashby commission report in 1960.[12] This report saddled

[12] Set up by the British colonial government to map out the educational road map of Nigeria. Its report led to the establishment of some of the first generational tertiary institutions in Nigeria.

Nigerian Tertiary Institutions (the Polytechnic inclusive) with the responsibility (among others) of providing for the academic, social, physical and psychological needs of students and the society at large (Ajayi and Adeniji, 2009). Every year, a large number of students get admitted into the polytechnic, these students come from different backgrounds in different societies. While some are well prepared for life in the new environment; others are ill prepared for it thereby making it difficult for them to adjust to the life changing experiences their new environment confronts them with.

My initial study design was constructed around two student groups at the University, namely students in the Department of Medicine and students from the Political Science Department. The choice of these student groups was informed by the assumption that they would have had different levels of exposure to issues around contraception owing to the mode of training in their different fields. From these clusters, I decided to use first and third year students for the study. This was to enable me to make inferences on findings in terms of time and level of study at the University. Third year students, due to their relative seniority in the university are likely to be more sexually experienced than younger students. First year students on the other hand, are likely to have had less exposure to issues around contraception as well as being less sexually experienced.

Upon changing to my new study site; Kaduna Polytechnic, I adapted this design into the polytechnic context while making certain adjustments to suit existing conditions at the polytechnic. Thus I decided to use fourth-year students in place of third-year students. The decision was informed by the fact that the polytechnic in Nigeria admits students from other polytechnics to study for their third and fourth year Higher National Diploma (HND). I was concerned that new third-year students might not have had enough experience of the social life in their new environment to be able to comment on it in depth.

3.2 The survey

Population and sample design

In selecting my sample, I encountered certain difficulties. First was the challenge of defining my study population. According to the students' records which I obtained from the institution's 'Statistics Office', the polytechnic had a total student population of 15,240 in 2013, of whom 8,354 were males and 6,886 were females. However, these figures differ from the figure of 12,174 for the total student population, based on enrolment figures for each of the faculties in the institution, which was provided by the same office. This discrepancy made it impossible to compile an exhaustive list of all students in the polytechnic, given that student records were incomplete and there was no data base that I could access to provide this information.

A further problem in selecting my sample was that students do not have access to email via the polytechnic. This meant that I could not rely on this for my survey. In order to address this problem,

and drawing on my prior knowledge of the population, I decided to use purposive non-probability sampling and worked with selected departments to construct my study sample; namely, the Department of Architecture and Department of Mass Communication. Babbie and Mouton (2012), state that purposive sampling enables one to select samples on the basis of prior knowledge of the population, its elements, and the purpose of the study. Furthermore, purposive sampling is appropriate where most members of a group can be easily identified but it is nearly impossible to enumerate all of them (Babbie and Mouton, 2012). The choice of these two departments was informed by the need to adapt my initial research design for the university, and because I thought that students in these departments would have comparable experiences and exposure to issues of reproductive health as those in the departments I had initially selected for the university.

From these Departments, I selected my respondents from first year (National Diploma 1) and fourth year (Higher National Diploma 2) students. This was to enable me to make inferences (where appropriate) on findings in terms of age, and length of time at the polytechnic. Fourth year students, who I thought were likely to be older than first year students and relatively senior in the polytechnic, were also likely to be more sexually experienced than younger students who were also new to the polytechnic.

From the list of students in these departments which I obtained from the departmental secretaries, I drew a total of 200 respondents using systematic probability sampling. I achieved this by randomly selecting every sixth name in the list of students. This method of sample selection as emphasised by Babbie and Mouton (2012) often gives a relatively unbiased sample. To achieve this advantage, I carefully considered the list of students to ensure that elements were not arranged in a particular order that might produce a selection of elements with common characteristics. My final sample comprised 50 respondents from each of the four selected classes, making up a total of 200. However, I was able to retrieve 187 questionnaires which I used for my study.

Data collection

I collected data for this study through the use of a structured survey questionnaire (see appendix A) specifically designed for the study. The questionnaire contains three sections covering a total of 52 questions. My choice of items to include in the questionnaire was informed by my problem statement. I also drew on a survey that was similar in some ways to my study, which was conducted by Kitshoff in 2010 among students of Stellenbosch University. The first section of the questionnaire sought to elicit socio-demographic information from respondents. The second section covered students' knowledge about contraceptives and the sources through which they had acquired this knowledge, while the third section addressed students' sexual behaviours and contraceptive use.

I used multiple indicators to obtain comprehensive information on complex categories such as students' knowledge about contraceptives, as well as patterns of sexual behaviour and contraceptive

use. For instance, in the case of contraceptive knowledge, if respondents were only asked if they knew about various contraceptives, the information would be incomplete as it would only reflect students' general level of awareness of the existence of contraceptive methods but not indicate if they knew know how these contraceptive methods actually function. It is generally expected that a combination of indicators will give a better reflection of the issue than a single indicator would.

I conducted a pilot study with 20 students (10 males and 10 females) over a period of two days (21st – 22nd August, 2013). Pilot studies, according to Strydom (2011), help a researcher test the feasibility of the study as well as test the research instrument(s) to improve the success and effectiveness of the investigation. The pilot study enabled me to improve on the content and organisation of my research instruments. This I achieved by identifying ambiguous questions from respondents' responses and also by observing questions that respondents appeared to avoid answering. I recruited respondents for the pilot study through the voluntary participation of students from the Departments of Computer Engineering and Food Technology who were not part of my final sample. It took respondents an average of 20 minutes to complete the questionnaire.

Major observations were that my informed consent form was unduly lengthy, so respondents were reluctant to read it. Also from the questionnaires filled during the pilot study, I observed that students were reluctant to answer questions about their engagement with multiple sexual partners at a time. One female student confided in me that she would not respond to that question because, given the small number of respondents for the pilot study, she assumed that her response could be traced back to her. However this was not the case in the actual study which was much bigger. Nevertheless, I noted comments from volunteers and made the necessary corrections before the actual study commenced.

The distribution of questionnaires was preceded by the distribution and completion of informed consent forms (see appendix D) on the part of the selected respondents. Questionnaires were self-administered and delivered by hand to the respondents to complete in their own time. I obtained permission from the respective Head of Departments and subject teachers which enabled me to approach students at the commencement or end of a class. I distributed questionnaires to students selected at random from the list of students gotten in each class. Agreeing to their request, I allowed respondents to complete questionnaires outside the class and to return them to me during their next class the following day. By distributing questionnaires in this way much time is generally saved and response rate increases, because on the one hand there is personal contact between the researcher and the respondent and on the other, respondents are not pressurized into completing questionnaires at a potentially inconvenient time (Delport and Roestenburg, 2011).

However, this process also has its disadvantages, including increased financial cost, given that I had to keep returning to the study site until I had collected all or most of the questionnaires distributed for

the study. It also increases the risk that, some respondents might not return their questionnaires (Delport and Roestenburg, 2011). Challenges as these were part of my study, as some respondents misplaced their questionnaires. The questionnaires were distributed and retrieved within a period of 13 working days (26th of August - 11th September, 2013).

Figure 1 below indicates the rate of responses in terms of questionnaires returned each day. This has been referred to by Babbie and Mouton as the "return rate graph" (2012:260). This is a valuable activity as it enables one to know how the data collection is proceeding as well as giving a picture of how successful the process of data collection is (Babbie and Mouton, 2012). As indicated in the return rate graph above, after the 13th day a total of 187 completed questionnaires were collected from the respondents, constituting 93.5% of the 200 questionnaires administered. I consider that the 187 retrieved questionnaires would be able to provide me with enough information needed for my study. The graph also illustrates the importance of following up on questionnaires distributed everyday as each day I visited the study site I retrieved completed questionnaire(s) till the 13th day

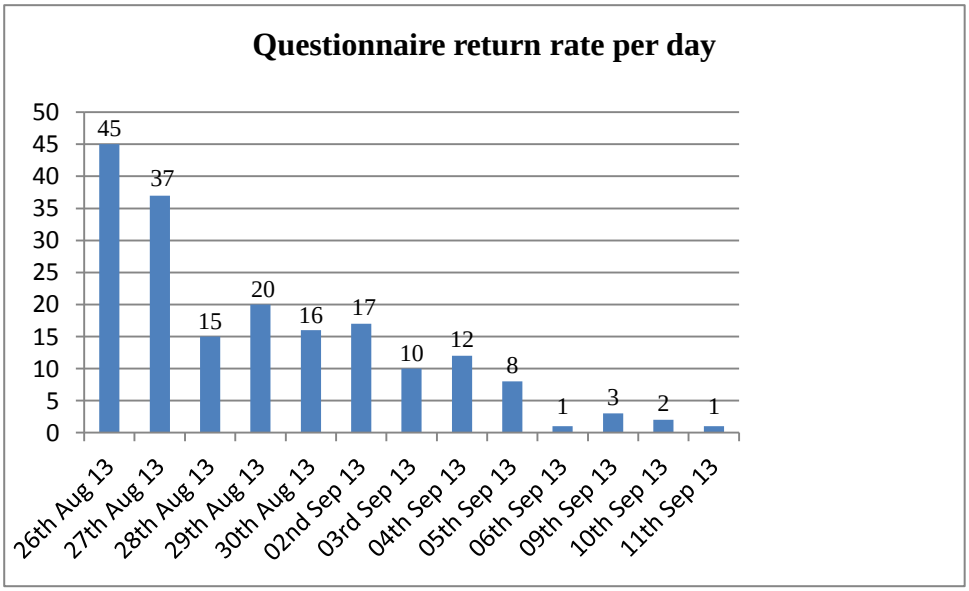

Figure 1: Questionnaire return rate per day

Sample verification

Sample verification was used in my study to compare available socio-demographic information of respondents with those of the entire student population and determine the degree of sample deviation from the total student population.[13] The respondents' data in the survey were compared to available data on the total student population at Federal Polytechnic Kaduna in terms of gender and religious affiliation. Other socio-demographic variables such as age, place of permanent residence as well as

[13] Student population here implies all students registered in the polytechnic during the 2013 academic year

place of residence at the polytechnic could not be verified because the data I obtained from the polytechnic did not contain this information.

This comparison shows that my study sample does not differ significantly from the larger student population in terms of gender and religion. This implies a fair representation of the entire student population in terms of sex and religion within the study sample. I therefore decided that it was not necessary to weight my data.

Table 1: Comparison between sample and total student population in terms of gender and religion

Variable	Categories	Survey respondents		Student population	
		Number	Percentage	Number	Percentage
Gender	Male	98	52.4	8,354	54.8
	Female	89	47.6	6,886	45.2
	Total	**187**	**100**	**15,240**	**100**
Religion	Christianity	121	64.7	9,537	62.5
	Islam	65	34.8	5,713	37.5
	Other	1	0.5	0.0	0.0
	Total	**187**	**100**	**15,240**	**100**

Data analysis

The data from my survey was processed and analysed using the SPSS software, version 21. To facilitate analysis, I first cleaned the data collected from the field and then assigned codes to the cleaned data. Schurink, Fouche and Vos (2011) stated that coding helps the researcher generate categories from information collected, thereby, reducing mechanical data into simpler forms for easy analysis. I imported raw data manually from coded questionnaires; I analysed data using descriptive statistics such as frequencies and cross tabulations. I also used chi-square, Levenes test of variance, t-test and ANOVA for statistical test. Results were presented in tables or charts (bar charts, pie charts and histograms).

3.3 Interviews

As earlier stated, I was aware from the start that my survey questionnaires would not give me a broader understanding into students' knowledge and practice of contraception, therefore, I decided to conduct follow-up face to face interviews with a smaller group of respondents, selected from the sample population (see appendix B for interview guide). I also conducted key informant interviews with three people in a position to dispense or withhold reproductive health services within and around the polytechnic; these interviews were with a pharmacist and a nurse with the family planning unit of the polytechnic clinic and also with a private pharmacist located close to the polytechnic (see appendix C for key informant interview guide).

Follow-up interviews: participant selection

I used the survey questionnaire to identify respondents who were willing to participate in follow-up interviews. I asked interested respondents to write down their phone numbers on the space provided at the end of the questionnaire. A total of 77 respondents (just about 40% of the survey population) indicated interest in the follow up interviews but only 61 of them provided their phone numbers for further contact. Of these, I selected 37 students on the basis of information in their survey responses concerning sexual activity, gender, religion, as well as department and level of study. I then scheduled interview dates at times and venues convenient for the respondents. I successfully conducted a total of fifteen interviews with sexually active respondents, eight females and seven males. Ten of the participants were Christians while five were Muslims. Eight were from the Department of Mass Communication and seven from the Department of Architecture, while seven were in their first year and eight were in their fourth year of study.

Data collection

I conducted the follow-up interviews with the aid of a semi-structured interview guide, which assisted me in exploring themes around students' contraceptive practices and further probing responses for a more broad understanding. Interview guides covered the following issues;

- Sexual relationships among students of Kaduna Polytechnic
- Students' awareness of the existence of contraceptive methods
- Availability of contraceptives within and around the Polytechnic
- Gender as a factor in decision taking in terms of contraception in heterosexual relationships
- Cultural practices and beliefs influencing students' contraceptive use
- The attitude of health care providers towards students who seek for contraceptives
- Other reasons why sexually active students will not use contraceptives
- Policies implemented to encourage contraceptive use among students.

I first piloted my interview guides on the 28th of August, 2013 with two students (1 male and 1 female) to test the validity of the interview guide. Thereafter, I proceeded to conduct the actual interviews with selected respondents. Before the commencement of each interview, I gave informed consent forms to the students (see appendix D) to review and complete. Interviews lasted between 40 and 65 minutes. I recorded them with a digital audio recorder and later transcribed them for analysis. I also took notes during interviews. What impressed me about these interviews was that participants were eager to talk about issues regarding their sexual life, which they felt had been ignored by researchers. This positive response could have been as a result of students' curiosity about

contraceptives and their determination to improve their reproductive health as well as their identifying with me as a fellow student. Interestingly, I found that gender differences between myself as the researcher and female participants did not affect the nature and content of my interviews negatively.

Data analysis

I reviewed and analysed my transcripts thematically, paying attention to responses which complemented the information I got from my surveys as well as other major themes which were not predetermined but emerged as important to my study. I achieved this through a critical evaluation of responses and notes taken during the interview sessions. I then discussed themes in relation to my findings from the quantitative surveys.

3.4 Ethical considerations

In reflecting on my research project, I classified it as medium risk. Given that its focus is on sexual and contraceptive practices among students, I recognised that sensitive issues could arise, particularly in the semi-structured interviews, which could make respondents experience discomfort, embarrassment or emotional stress. I therefore made arrangements to refer such participants to the Polytechnic's counselling unit/or health clinic should the need arise. However, none of these possibilities occurred.

I conducted my study in accordance with standard ethical principles and guided by the policy requirement of Stellenbosch University. The study was approved by the Human Research (Humanities) Ethics Committee of Stellenbosch University, with the condition that certain requirements be met (see appendix F for stipulations). Institutional permission was given by the polytechnic in the form of an official letter (see appendix E).

Before the commencement of each session, I gave each participant a copy of the informed consent form to review and complete. This helped ensure that students become aware of their rights and responsibilities as research participants before participation. Participation in the research was voluntary. Since authorisation for the research was given by the Polytechnic's administration, I recognised that students might feel a level of compulsion to participate. To avoid this, I emphasized that participation was voluntary and participants could freely withdraw at any point of the research. I ensured confidentiality of responses and anonymity of respondents through the use of identifying numbers or pseudonyms rather than actual names or ranks (where applicable). Participants were also informed that volunteering to participate in interviews would mean that their anonymity would not be maintained with me as researcher, but the contact information they gave me would be treated with strict confidentiality and their identity would not be revealed in my thesis. I stored survey and interview forms in a locked storage safe, while digital information was stored on my personal

computer and restricted from unauthorized access by the use of a password, which is known only to me (the researcher).

3.5 Limitations of the study

In this section I discuss the methodological limitations of my research and their implications.

An inherent feature of any social research project is dynamism in the implementation of the planned methodology once in the field. Because social researchers often work with people in societies which are dynamic, there are likely to be changes in any well-planned methodology for any research depending on the conditions the researcher is faced with in the field.

The biggest challenge I faced in the field was changing my research site from Kaduna State University to the Federal Polytechnic Kaduna due to the strike action that led to the closure of all Nigerian Universities. This was a major setback considering the initial arrangements I had made at my supposed study site (KASU). It also meant I had to seek institutional permission from the new study site, which cut into my research time. Owing to the assistance rendered me by the personal assistant to the registrar of the polytechnic, I was fortunate in being able to obtain institutional permission within two weeks. However, it took almost a month for me to be able to access student data. This was so because the Polytechnic does not have a data base on which all information about its students could be easily accessed. Eventually, when the information was provided, it was found to be incomplete and inconsistent, which impacted on my sampling. This made it impossible for me to verify my study samples against the entire student population at the polytechnic in terms of important social characteristics such as age, place of residence in the polytechnic and place of permanent residence.

Furthermore, during the course of my field work, the Polytechnic (my new study site) also embarked on an indefinite strike action. Despite this I was able to complete my interviews as students were still in campus residences for a couple of days after the strike started. The lingering strike action by academic institutions in Nigeria not only delayed my field work but made it impossible for me to conduct the focus group discussions I had originally planned. It also cost me more time and financial resources than I had initially budgeted for. However, after transcriptions, I consider responses from respondents both in surveys and interviews to contain substantial information that could be used for the study.

Respondents' reluctance to return completed questionnaires immediately after it was administered also prolonged the exercise and proved stressful, being that I had to visit the institution every day for 13 days trying to retrieve the questionnaires.

In my survey, I recognise that measuring complex issues around sexual behaviour is difficult and my instruments can only provide me with approximations of what the terms used mean to respondents, However, guided by the argument of Babbie and Mouton (2012) I tried to overcome this by using

multiple rather than single indicators to measure such concepts. As stated in section 1.2, in this study I could also not consider all social characteristics of respondents in relation to their vulnerability to unprotected sex. I thus considered only those characteristics which emerged in my review of the literature as being significant in influencing sexual behaviours and contraceptive use among students in other parts of Nigeria. Given that I selected participants for interviews on the basis of their willingness to participate, as well as the nature of their responses to questions asked in the survey, I recognise that this process could have affected the nature of the responses, since not all who volunteered were selected for the interviews.

3.6 Reflections on the research process

Here I speak about how my research evolved as I believe by highlighting my experience it can, in the process, also offer some methodological insights for other researchers. As was expected, I had to come up with a complete research design that would guide my fieldwork. Using a mixed method research design and working within a social constructionist perspective, I focused on investigating students' knowledge and practice of contraception by using survey questionnaires and follow-up interviews. Interestingly, a good number of participants showed interest in participating in the follow-up interviews. Participants irrespective of their gender freely expressed their views and experiences during interviews and were open in their responses even on issues around sexual behaviours which may be considered sensitive.

Despite the level of openness I found on the part of participants during my interviews, responses could have been influenced by existing cultural and religious norms in the study location, which discourages young and unmarried youths from openly talking about sex. Responses especially on more personal issues as sexual behaviours could have been influenced by these norms. Participants could also have responded to certain questions by saying what they think ought to be and not really what they know is. This could happen because they wouldn't want to give an impression that they are uninformed or are ignorant about such issues. Also such responses could be because participants are trying to cover up for a neglected responsibility. For instance, student respondents reported the non-availability of contraceptive methods at the polytechnic clinic and suggested that they pay for such service (which is included in their medical fees), whereas, staff at the polytechnic clinic reported that contraceptive services are freely available for students at the clinic.

Contradiction in responses between the two groups could be due to two reasons; On the one hand, it could be a result of students' perception that since existing cultural norms in the society discourages contraception among young unmarried students, the clinic will not provide such services for them and not necessarily that they have been to the clinic before and failed to access contraceptives. On the other hand, contraceptives may not be available at the clinic for students and being that the clinic is lacking in its responsibility to provide such services for students; clinic staff may be trying to cover up

in their responses to portray a rather efficient role. To get around this problem, I reminded participants of their rights which include confidentiality of responses, I also stressed on the need for them to express their own perceptions about contraceptive issues rather than what the society says about such issues.

Although I took precautions during interviews to ensure I collect quality data, I recognise that there could be some bias in this process. During interviews, I encouraged open discussions on issues of students' contraceptive practices, but being a semi-structured interview, I had an interview guide to direct the flow of the discussion towards themes that I had already decided were important for the study, based on my literature review. As argued by Laxton (2004) interviews can be biased by leading respondents to considering responses best-suited to meeting the interviewer's interest rather than their own. I did this to ensure that major themes for the study were covered while still exploring other surrounding issues as regards students' contraceptive practices.

I had considered that my research topic was a sensitive topic and that certain risk could be involved (see 3.4) However, this was not the case. None of the participant showed discomfort during interviews. Issues around sexuality, religion and attitudes where approached and discussed with ease. All participants in interviews were delighted to be part of the research process, and indicated that it is an important area of their lives which has received little or no attention over the years. They also indicated interest in having feedback on the findings of the study, which I promised to provide a copy of the completed thesis to polytechnic library.

CHAPTER 4: Research findings on respondents demographic characteristics, sexual activity and contraceptive knowledge

In this chapter, I present the results of my study.[14] Respondents' demographic characteristics are presented in section one. Section two discusses sexual activities among students, while the third section discusses respondents' contraceptive awareness and knowledge.

4.1 Demographic characteristics of respondents

The age range of the 187 respondents in the survey was 18-25 years, with a mean age of 21.5 years for male respondents and 21.2 years for female respondents. There was no marked difference between the average age for first year (21.1 years) and fourth year (21.6 years) respondents. This is because the age of respondents was not evenly distributed with regards to their year of study. A majority of respondents (52%) were males while 48% were females; this percentage difference in gender is similar to that of the entire student population in the polytechnic as previously shown in Table 1 above. Nearly two thirds of respondents (65%) were Christians; with one exception, the remainder were Muslims. A small majority of students reported being in established sexual relationships, either married or in steady romantic relationships, while 48% of respondents were not in any steady romantic relationship (Table 2).

[14] Table percentages are rounded up to one decimal place, while percentages presented in discussions were rounded up to the nearest whole number for ease of reading except in cases where the difference is significant.

Table 2: Distribution of respondents according to age, gender, religion, permanent residence and relationship status (N=187)

Social Characteristics of respondents	Category	Frequency	Percentage
Age	18 years	20	10.7
	19 years	25	13.4
	20 years	24	12.8
	21 years	27	14.4
	22 years	30	16
	23 years	26	13.9
	24 years	18	9.6
	25 years	17	9.1
	Total	**187**	**100**
Gender	Male	98	52.4
	Female	89	47.6
	Total	**187**	**100**
Religion	Christianity	121	64.7
	Islam	65	34.8
	Others	1	0.5
	Total	**187**	**100**
Place of permanent residence	Urban	163	87.2
	Rural	22	11.8
	Missing cases	2	1.1
	Total	**187**	**100**
Current relationship status	Single, no romantic relationship	89	47.6
	Single in a steady romantic relationship	76	40.6
	Married	18	9.6
	Others	3	1.6
	Missing case	1	0.5
	Total	**187**	**100**

Although equal numbers of questionnaires were distributed to each department, and level of study, the return rate as shown in Table 3 below, was slightly higher among respondents from the department of Mass Communication (52%) than respondents from the Department of Architecture (48%), as well as among fourth year respondents (52%) compared to their first year counterparts (48%). Also a majority of respondents (56%) reported residing in polytechnic residences while the other 44% reside in private residences off campus.

Table 3: Distribution of respondents according to department, level of study and place of residence in the polytechnic (N=187)

Social Characteristics of respondents	Category	Frequency	Percentage
Department	Mass Communication	97	51.9
	Architecture	90	48.1
	Total	**187**	**100**
Level of study	First year (ND1)	89	47.6
	Fourth year (HND2)	97	51.9
	Missing case	1	0.5
	Total	**187**	**100**
Place of residence in polytechnic	In polytechnic hostel	105	56.1
	Off campus	82	43.9
	Total	**187**	**100**

Table 4 below shows the distribution of respondents' in terms of gender across other social characteristics. Although there were slight differences in percentages according to gender, these differences were not statistically significant.

Table 4: Distribution of respondents' social characteristics by to gender (Chi square, N=187)

Other characteristics	Category	Gender		Sig.(p)
		Male (%)	Female (%)	
Age	18-21 years	48.0	55.1	0.205
	22-25 years	52.0	44.9	
	Total	100 (98)	100 (89)	
Department	Mass Communication	48.0	56.2	0.164
	Architecture	52.0	43.8	
	Total	100 (98)	100 (89)	
Year of study	First year	47.4	48.3	0.510
	Fourth year	52.6	51.7	
	Total	100 (97)	100 (89)	
Religion	Christianity	63.3	66.3	0.598
	Islam	35.7	33.7	
	Other	1.0	0	
	Total	100 (98)	100 (89)	
Relationship status	Single, in no intimate relationship	48.0	47.7	0.334
	Single, in an intimate relationship	43.9	37.5	
	Married	6.1	13.6	
	Others	2.0	1.1	
	Total	100 (98)	100 (88)	

4.2 Sexual activity among students

Students' sexual activities were explored through both the survey and the follow-up interviews. The survey asked questions to determine if respondents have ever had sex, the age at which they had their first sexual experience, and if they have been sexually active within the past six months prior to the period of data collection. What emerged is that students of the polytechnic engage in different forms of sexual activity, including involvement with multiple partners as well as transactional sex.

Respondents' engagement in sex

Table 5 shows that a high majority of respondents (88.2%) reported having had sexual intercourse at some point in their life. This is somewhat higher than the study conducted among students of a tertiary institution in western Nigeria by Abiodun and Balogun (2009), which reported that 77.6 % of their respondents had had sex before.

Table 5: Respondents' engagement in sex (N=187)

Have you ever had sex	Frequency	Percentage
Yes	165	88.2
No	22	11.8
Total	**187**	**100**

As stated by some participants in my in-depth interviews, the polytechnic environment provides high levels of social interaction and social freedom among students which is seen to encourage the establishment of sexual relationships among students;

> *Based on my experience as someone who stays in the hostel (Polytechnic residence), sexual relationship is really very high and this is as a result of the freedom of interaction we enjoy in the Polytechnic. I can say when we were in our Diploma; it was very common in our class and in the campus as well. For instance, if I can recall, there (was) a friend of mine that came, he went to the toilet and someone from the other toilet threw a condom which was filled with sperm (used condom). So we think that definitely something happened there. It occurs in the school environment where you see people in corners kissing and hugging all the time. (Interview 4 with a fourth year male student of Mass Communication)*

> *Social gatherings like parties often encourage sexual relationships in the Poly (Polytechnic). Definitely, because like it is for instance," you can't enter the room without getting through the door". So everything would start from somewhere. Most especially in the school parties or in the class, one thing always lead to another and they flow… It has once happened to me, I attended a gathering in the school, I met a girl and slept (had sex) with her in one dark corner, apart from that I have testimonies from my friends and others. (Interview 7 with a fourth year male student of Mass Communication)*

> *Most students go into relationships freely because they are not with their parents, because they are staying on their own they are free to attend parties even clubs at night and it expose(s) them to begin to have sex. But if they go back home during holidays they will never go out of the house so that their parents will think they are good and well behaved, meanwhile in school it is a different case. (Interview 14 with a first year male student of Architecture)*

The relationship between respondent's engagement in sex and their socio-demographic characteristics was tested for statistical significance by means of a chi-square value (See Table 6). As could be expected, respondents' relationship status was found to be associated with sexual practice among students of Kaduna Polytechnic (p=0.045, df=3, UC=0.045). Also associated with the practice of sex was the level of study (p=0.03, df=1); however, these associations were weak at UC=0.045 and UC=0.009 respectively. This implies that relationship status and level of study accounted for only 4.5% and 0.9% variation in respondents engagement in sex. Therefore, respondents in their fourth

year and those in relationships are more likely to engage in sex than those in their first year and those who are not in a relationship. With regard to other characteristics, slight differences were observed, but these differences were found to be insignificant.

Table 6: Cross-tabulation of respondents' engagement in sex by other social characteristics (chi square)

Social Characteristics	Category	Ever had sex		Total % (N)	p value
		Yes %	No %		
Age	18-21 years	86.5	13.5	100.0 (96)	0.163
	22-25 years	90.1	9.9	100.0 (91)	
	Total	88.2	11.8	100.0 (187)	
Gender	Male	87.8	12.2	100.0 (98)	0.322
	Female	88.8	11.2	100.0 (89)	
	Total	88.2	11.8	100.0 (187)	
Level of study	First year	85.4	14.6	100.0 (89)	0.03*
	Fourth year	90.7	9.3	100.0 (97)	
	Total	88.2	11.8	100.0 (186)	
Department	Mass Communication	91.8	8.2	100.0 (97)	0.157
	Architecture	84.4	15.6	100.0 (90)	
	Total	88.2	11.8	100.0 (187)	
Place of permanent residence	Urban	86.5	13.0	100.0 (163)	0.204
	Rural	100.0	0.0	100.0 (22)	
	Total	88.2	11.8	100.0 (185)	
Residence in polytechnic	In hostel	87.6	12.4	100.0 (105)	0.493
	Off campus	89.0	11.0	100.0 (82)	
	Total	88.2	11.8	100.0 (187)	
Religion	Christianity	90.9	9.1	100.0 (121)	0.547
	Islam	83.1	16.9	100.0 (65)	
	Others	100.0	0.0	100.0 (1)	
	Total	88.2	11.8	100.0 (187)	
Relationship status	In no relationship	82.0	18.0	100.0 (89)	0.045**
	In a relationship	92.1	7.9	100.0 (76)	
	Married	100.0	0.0	100.0 (18)	
	Others	100.0	0.0	100.0 (3)	
	Total	88.2	11.8	100.0 (186)	

*Uncertainty coefficient (UC): * =0.045, **=0.009*

Respondents' age at first sex

Although a higher proportion of respondents reported having their first sex at 20 years of age, the mean age of sexual debut was 18.0 years. This is consistent with a 2004 study by Ejembi and Otu among University students in the North-Western region of Nigeria which found the mean age at sexual debut for students in the institution as 18.0 years. Gender made no significant difference in terms of age at sexual debut, with the reported age for male respondents being 18.1 years and for female respondents 18.4 years. This does differ from the findings of Ejembi and Otu which found that the average age at which young women had their first sexual experience was younger at 17.8 years than that for young men at 19.2 years.

Table 7: Respondents' age at first sex by their gender (Levenes test of variance, N=165)

Age at first sex	Gender		Total
	Male	Female	
<15 years	10	5	15
15 years	13	10	23
16 years	7	14	21
17 years	8	7	15
18 years	7	7	14
19 years	8	5	13
20 years	17	14	31
21 years	11	10	21
22 years	2	2	4
23 years	0	1	1
24 years	1	1	2
25 years	2	3	5
Total	**100 (86)**	**100 (79)**	**100.0 (165)**

Mean = 5.1 Std dv. = 2.8 p = 0.639

Respondents' current sexual status

At the time of this study, 60% of the respondents (112) reported having been sexually active within the past six months;[15] of these, slightly above 12% reported having sex more than once in a week, while 34% reported having sex several times in a month. Slightly above 13% of respondents reported having sex at least once in every month. Slight gender differences were also observed with regards to being sexually active. About 70% of female respondents were sexually active, exceeding the 51% of male respondents who were sexually active (Table 8). However, this difference was found to be statistically insignificant at 0.08.

Table 8: Respondents' sexual activeness with regards to gender (Chi square, N=187)

Frequently of sexual intercourse in the past six months.	Gender		Total %
	Male %	Female %	
Every or most days	2.0	1.1	1.6
More than once a week	6.1	15.7	10.7
Approximately once a week	11.2	16.9	13.9
Several times a month	20.4	20.2	20.3
Approximately once a month	11.2	15.7	13.4
A few times	7.1	9.0	8.0
Once	10.2	5.6	8.0
Not sexually active in past 6 months	19.4	4.5	12.3
Never had sex	12.2	11.2	11.8
Total % (n)	**100.0 (98)**	**100.0 (89)**	**100.0 (187)**

$x^2 = 12.37$, $p = 0.08$

Also, as shown in Table 9 below, there was a weak association between relationships status and being sexually active (p=0.02 and UC sig. = 0.07). Therefore, relationship status accounted for only 7% difference in sexual activity among respondents with regards to their relationship status. Of the

[15] I consider respondents who had sex at least once a month in the preceding six months to the time of the research to be sexually active.

respondents who reported being in a romantic relationship 66% were sexually active. This was higher than those who were single and in no romantic relationship at 54%.

Table 9: Respondents' sexual activeness with regards to relationship status (Chi square, N=186)

Frequency of sexual intercourse in the past six months	Current Relationship Status %				Total %
	no relationship	in a steady relationship	Married	others	
Every or most days	0.0	2.6	5.6	0.0	1.6
More than once a week	12.4	10.5	5.6	0.0	10.8
Approximately once a week	9.0	13.2	38.9	33.3	14.0
Several times a month	20.2	21.1	22.2	0.0	20.4
Approximately once a month	12.4	13.2	16.7	0.0	12.9
A few times	7.9	7.9	0.0	66.7	8.1
Once	9.0	9.2	0.0	0.0	8.1
Not sexually active	29.2	22.4	11.1	0.0	24.2
Total % (n)	**100.0 (89)**	**100.0 (76)**	**100.0 (18)**	**100.0 (3)**	**100.0 (186)**

$x^2 = 35.56$, $p = 0.04$, Uncertainty Coefficient (UC) = 0.07

Respondents' engagement in multiple sexual relationships

Somewhat over a quarter of sexually active respondents (28%) reported engaging in multiple sexual relationships at the same time (Figure 2). The majority two - thirds (67%) were male respondents while 33% were female (Figure 3).

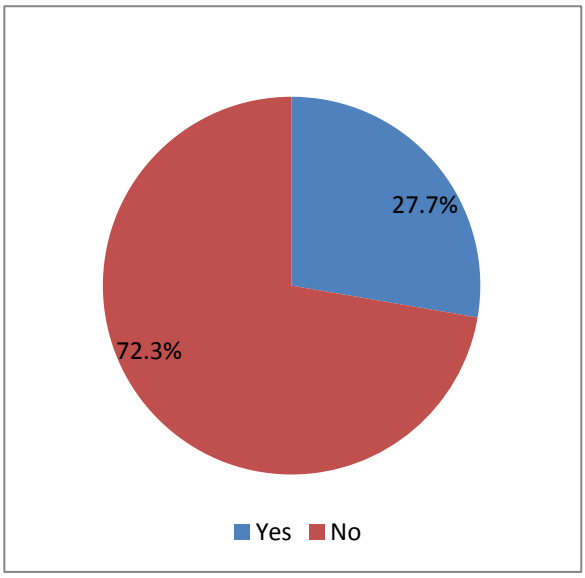

Figure 2: Having multiple sexual relationships among sexually active respondents (n=112)

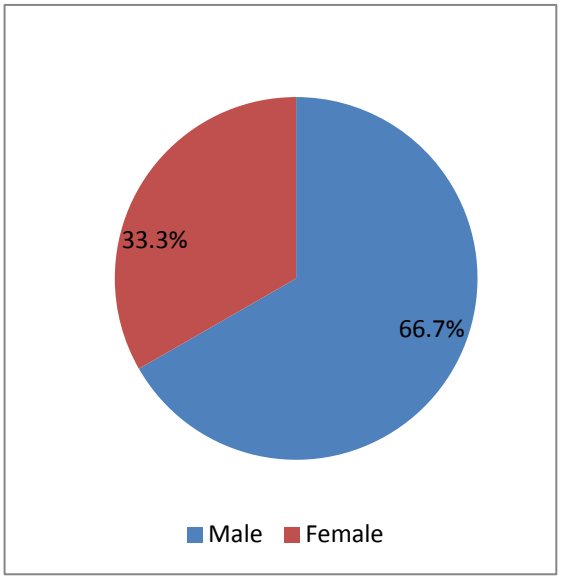

Figure 3: Having multiple sexual relationships by gender (n=39)[16]

Participants in follow-up interviews acknowledged the existence of this practice among students based on their personal experiences and/or observations. They also reported that students who engage

[16] 39 is the number of sexually active respondents who reported engaging in multiple sexual relationships constituting the 28% in Figure 7

in this practice are accorded more respect among their peers as they perceive this practice as a demonstration of an individual's intelligence and elegance; a way of being smart. It also has its problems which include increased vulnerability to the contraction of STIs, as well as destroying existing relationships when caught among others.

> *Of course it exists, even me I was having two girlfriends who I usually have sex with. It is a good experience but if you are caught then you suffer it. (Interview 7 with a fourth year male student of Mass Communication)*

> *Definitely, from my knowledge of some students and my judgement, some usually have more than one sexual partner. It is not a very common practice because people are mostly aware of the dangers it has, for instance, it may cause you to lose both partners when you get busted, also in the case of pregnancy, a girl may not be able to say who among the partners is responsible, it also exposes them to the dangers of contracting diseases since they are all engaging in sex with more than one person. (Interview 3 with a first year female student of Mass Communication)*

> *Well most students do this (having multiple partners) because it makes their friends respect them and you see (hear) their friends calling them names like "sharp guy" or "smart guy" because they believe that he is handsome and girls cannot resist him so he show it by dating more than one girl, and if it is a girl her friends will say she is "hot" (sexy) or beautiful, in fact sometimes they will say she is an expert in sex that is why the guys cannot leave her. You know they sometimes know that they are sharing the same girl but as long as they get what they want (sex) they will not complain. So these people are being encouraged by the way their friends treat them. (Interview 1 with a first year female student of Mass Communication)*

In a 2007 study by Izugbara and Modo, similar findings were made that students who engage in sexual relationships with multiple partners often perceive the practice as a means of gaining social respect for themselves by boosting their acceptance and ranking among their peers.

Transactional sex among students

Although not probed in the survey, a number of participants in the in-depth interviews reported that transactional sex was practiced by students in the polytechnic. They engage in this activity with individuals (both within and outside the Polytechnic), whom they perceive as having the capacity to meet their needs whether in monetary terms, or awarding marks (in the case of lecturers) or providing assistance of some sort (in the case of fellow students). The practice of transactional sex was however reported to be higher among female students than their male counterparts.

> *Yes transactional sex happens, I can say they are up to 40%, even student and lecturers do it. Students goes to lecturers and sleep (have sex) with them to get marks. It is more common*

among female students. I can't believe why a little girl of about 23 years or so will be visiting a lecturer in a hotel room, for what? Definitely it is for such kind of activities. They have a need; it could be for money or marks. There must be a satisfaction from both ways. (Interview 10 with a first year female student of Mass Communication)

In my hostel if I should take statistics, in each room you are likely to find one person at least that goes out for sex to make money, this I know from the conversations students have in the hostel. There is this girl I usually make (braid) her hair, she said every evening there is a place she sits called "Nevilla" where men will come and meet her, and even if they don't come she will be the person to go and hustle for them. This is how she gets her money to survive in school. She also told me that there are some of our students that she usually see(s) there as well. This is mostly done by the female students. (Interview 6 with a fourth year female student of Mass Communication)

In the campus, some have relationships because like I said, may be as a female student I need somebody to do my assignment for me because I am not capable of doing it, even though I know he is going to take advantage of me for doing the assignment, be it that I am in need, and I don't have the choice of failing, I will succumb and have sex with him. (Interview 11 with a fourth year female student of Architecture)

Coercive sex among respondents

Respondents in survey were asked if they had ever engaged in sex against their will. Table 10 below shows that about 28% of sexually active respondents reported that they had experience this. As could be expected, more females (32.7%) than males (21.3%) had experienced coerced sex.

Table 10: Respondents engagement in coerced sex by gender (N=112)

Ever experienced coerced sex	Gender		Total
	Male	Female	
Yes	21.3	32.7	28.4
No	78.7	67.3	73.6
Total	**100**	**100**	**100**

According to respondents in the in-depth interviews, individuals were made to have sex against their will by their partners' threat of commencing other relationships to satisfy their sexual urge. Although not probed in my survey, anecdotal information from follow up interviews indicated that lecturers would sometimes threaten to fail a student if the student refused sex. However, this needs further investigation in future research.

There are cases where you will have sex with your partner not because you want to but simply because you want to please that person so that he or she will not go and look for it (sex)

outside. My girlfriend used to do that, sometimes if I want us to have sex she will say no, but when I become angry and tell her I will go and get it outside she will now agree, but I didn't use to enjoy it like that because she will just lie down and not do anything, yet I cannot stop asking for it. (Interview 14 with a first year male student of Architecture)

Definitely some lecturers will tell a girl that if she will not have sex with him he will fail her and he can even connive with other lecturers who are his friends to fail her. There was a case of my friend, our lecturer asked her to come and meet him in his office in the night. The girl went with her friend but he did not allow them to enter. The following day she went alone and he gave her a warm welcome, she then denied him the sex, later when the result came out, she failed and not only his test but he connived with his friend in the department and they both failed her. And there was nothing she could do because the following year she had to succumb and that was how she passed the two courses. (Interview 13 with a first year male student of Architecture)

4.3 Awareness and knowledge of contraceptives

To ascertain the level of respondents' awareness of the existence of contraceptive methods, respondents were asked to write down all the methods of contraceptives they knew of. They were not given a list of contraceptive methods from which to select, to prevent skewing the results.

The resulting data, presented in Figure 4, indicates a high level of general awareness of the existence of contraceptive methods, with over 95% of respondents able to mention at least one method. This corresponds with a 2009 finding by Omo-Aghoja *et al* that almost every student in a tertiary institution in Nigeria has heard of and can mention at least one contraceptive method.

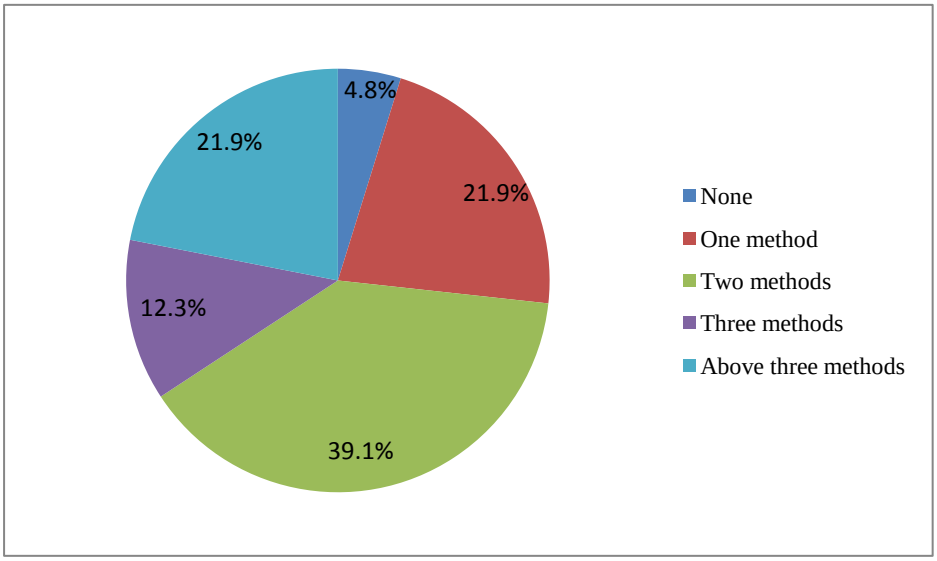

Figure 4: Students awareness of the contraceptive methods (Number=187)

Condoms (91%) and oral contraceptive pills (82%) were the methods mentioned most often. 39% of respondents reported knowing of injectable contraceptives, while 33% and 32% knew of the temperature reading method and implants respectively. 27% of respondents also reported knowing of the withdrawal method of contraception. Interestingly, only 5% of respondents mentioned other forms of contraceptives like herbs and salty (water sometimes used as an emergency contraceptive). Awareness of spermicides as a contraceptive was low, at only 8% (Table 11).

Table 11: Known methods of contraceptives (N=187)

Contraceptive method	Frequency	Percentages
Condoms	170	90.9
Oral pills	153	81.8
Injection	73	39.0
Temperature reading	61	32.6
Implants	60	32.1
Withdrawal	50	26.7
Spermicides	15	8.0
Other contraceptive methods	10	5.3

The level of respondents' awareness of the existence of contraceptive methods, measured by their knowledge of the existence of at least one method, was found to vary slightly in relation to their social characteristics. Age was not a factor here. Noteworthy, however, is that a handful of first year students could not identify any method, while all the fourth year students were able to identify a method of contraceptive (Table 12).

Table 12: Relationship between respondent's social characteristics and their level of awareness of the existence of contraceptive methods (N=178)[17]

Social characteristics	Category	Frequency	
		Respondents aware of contraceptives	Total size of respondents
Age	18-21	93	96
	22-25	85	91
	Total	178	187
Gender	Male	95	98
	Female	83	89
	Total	178	187
Religion	Christianity	116	121
	Islam	61	65
	Others	1	1
	Total	178	187
Permanent residence	Urban	157	163
	Rural	19	22
	Total	176	185
Relationship status	Single no relationship	86	89
	Single in relationship	72	76
	Married	16	18
	Others	3	3
	Total	177	186
Department	Mass Communication	94	97
	Architecture	84	90
	Total	178	187
Level of study	First year	80	89
	Fourth year	97	97
	Total	177	186
Residence in polytechnic	In polytechnic hostel	104	105
	Off campus	74	82
	Total	178	187

Level of contraceptive knowledge

The questionnaire contained a set of multiple-choice questions that tested knowledge of how contraceptives function and the correct ways of using them (See Appendix A). Table 13 sets out the questions and correct answers used to probe more deeply the level of actual knowledge.

[17] The number 178 is the number of respondents who are aware of at least one method of contraceptive.

Table 13: Knowledge questions and their corresponding answers

Questions/Statements	Correct answers
What is the effect of the oral contraceptive pill?	It prevents a woman from getting pregnant during sex
Can certain antibiotics decrease the effectiveness of contraceptive pills?	Yes
A woman could get pregnant while using contraceptive pills during sex.	Yes
How many times should one use a single condom during sex?	Only once
One can effectively substitute condoms with household wraps or a balloon during sex.	False
A woman could get pregnant while using the condom during sex	Yes
A woman could get pregnant while using injectable contraceptives during sex	Yes
A woman could get pregnant while using the withdrawal method during sex	Yes
A woman could get pregnant while using the temperature reading method of contraception during sex	Yes
For how many days per month are women fertile, i.e most prone to falling pregnant if sexually active in the time?	4 – 6 days per month
Which one of the following statements best explains what 'emergency contraception' means?	It is any device or drug that is used or taken immediately or soon **after** a woman has engaged in unprotected sex, to prevent pregnancy.
Emergency contraceptives can also protect a woman from sexually transmitted diseases.	No
Can emergency contraception fail?	Yes

I assigned scores to respondent's responses and scored them out of 13[18] to determine their level of knowledge. As shown in Figure 3 below, the mean score for all respondents was 6.26 with a standard deviation of 2.82. About 4% of respondents scored a minimum of 1 mark and about 2% scored a maximum of 13 marks (Figure 5).

[18] 13 is the total number of questions asked to test respondent's knowledge of contraceptives. A respondent gets 1 mark for answering a knowledge question correctly.

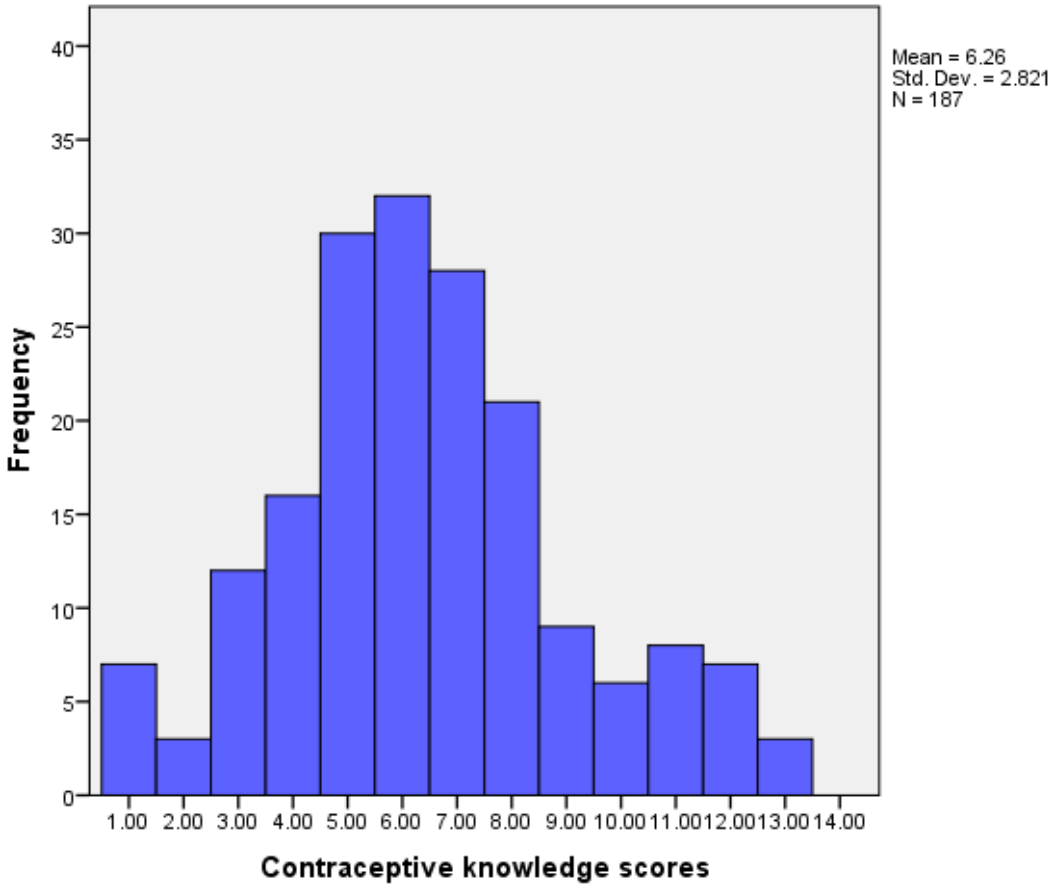

Figure 5: Distribution of respondent's scores on contraceptive knowledge questions (N=187)

A further analysis of the responses to these questions revealed a rather low level of general contraceptive knowledge among respondents at 48% with a standard deviation of about 22%. As shown in Figure 6 below, more than half of the respondents scored below 50%. This finding implies that although respondents are aware of the existence of contraceptive methods they lack detailed knowledge on how these contraceptives function. This is consistent with a 2008 study conducted by Akani *et at*, also among students in a tertiary institution in Nigeria, which reveals the level of contraceptive knowledge among students to be below 50%.

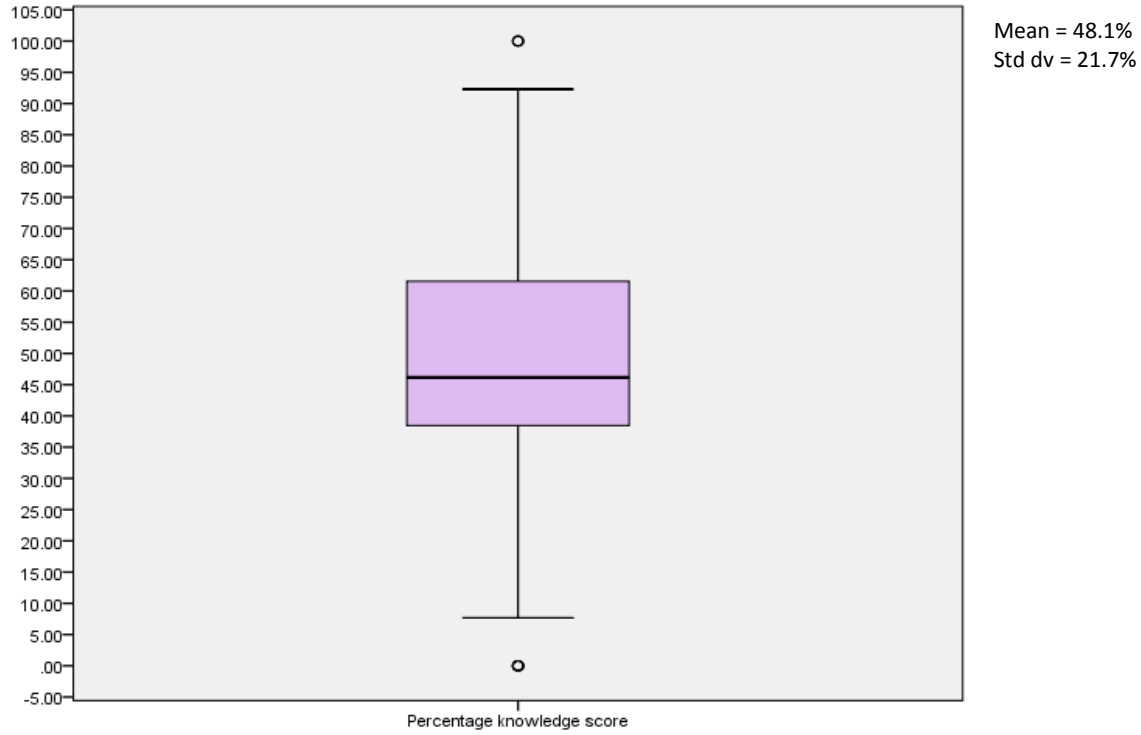

Figure 6: Percentage knowledge score of respondents (N=187)

Table 14 below shows that the majority of respondents were knowledgeable about the condom; they knew that condoms are meant for only a single use and cannot be substituted for by household wraps. The majority knew what the oral contraceptive pills were designed to do, as well as the fact that emergency contraceptives cannot offer 100% protection but can fail sometimes. However, respondents were not deeply informed about other aspects such as, whether or not antibiotics affect the effectiveness of oral contraceptive pills, the number of days in a month that a woman is fertile as well as the fact that pills, condoms, injections, withdrawal, and temperature reading as methods of contraception do not provide users with 100% protection against unwanted pregnancy. The majority were also not fully conversant with the functioning of emergency contraceptives and thought that they could help prevent the contraction of STIs.

Table 14: Distribution of respondents according to their responses of knowledge questions[19] (N=187)

Knowledge Questions	Correct	
	N	%
What is the effect of oral contraceptive pills?	112	59.9
Can certain antibiotics decrease the effectiveness of contraceptive pills?	66	35.3
A woman could get pregnant while using contraceptive pills during sex	62	33.2
How many times should one use a single condom during sex?	146	78.1
One can effectively substitute condoms with household wraps or a balloon during sex.	131	70.1
A woman could get pregnant while using condom during sex	74	39.6
A woman could get pregnant while using injectable contraceptives during sex	53	28.3
A woman could get pregnant while using the withdrawal method during sex	81	43.3
A woman could get pregnant while using the temperature reading method of contraception during sex	52	27.8
For how many days per month are women fertile?	76	40.6
Which one of the following statements best explains what 'emergency contraception' means?	89	47.6
Emergency contraceptives can also protect a woman from sexually transmitted diseases.	88	47.1
Can emergency contraception fail?	137	73.3

Interestingly, respondents' assessment of levels of contraceptive knowledge among students corroborates these findings. Only 30% of the respondents thought that students in the polytechnic have adequate knowledge of contraceptive methods. A slightly higher percentage (36%) reported that students have a fair knowledge of the ways contraceptives function, while respondents who reported that students have only little or no knowledge of contraceptive methods constituted lower percentages (at 13% and 5% respectively) (Figure 7).

[19] The column with "correct" presents the frequencies and percentages of respondents that have the right knowledge about the questions asked.

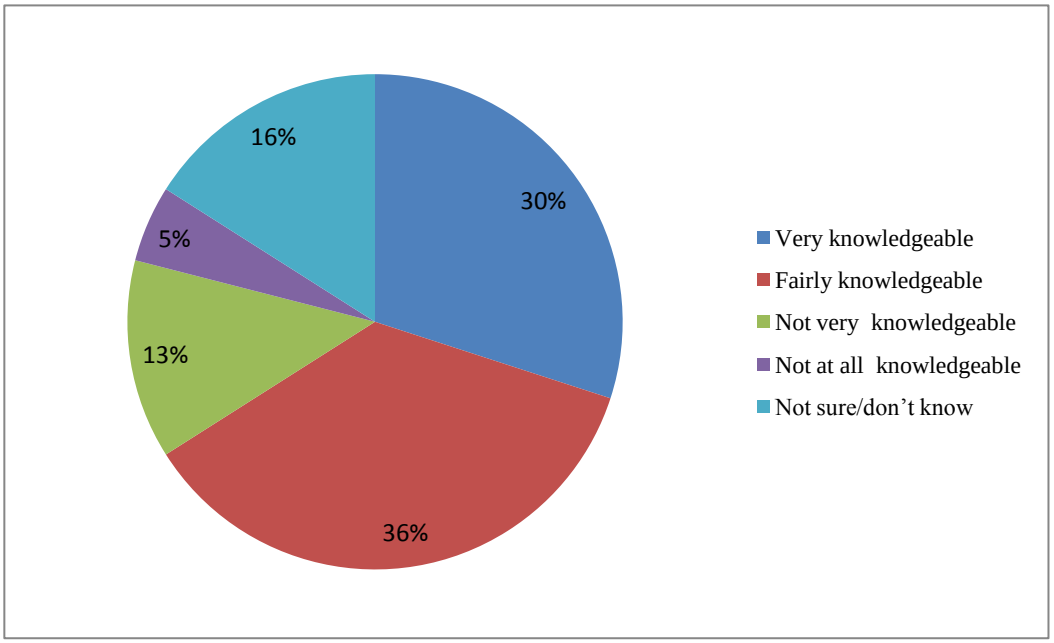

Figure 7: Respondents' perception on students' knowledge of contraception (Number=187)

Respondents' social characteristics were related with their knowledge of contraceptives and the significance of relationships established using a t-test. There was no significant association found between respondents' levels of knowledge and social characteristics such as age (0.886), gender (0.765), department (0.570), level of study (0.560), place of permanent residence (0.673), place of residence at Polytechnic (0.162), and religion (0.367) (Table 15).

Table 15: Relationship between respondents' social characteristics and contraceptive knowledge (t-test, N=187)

Social characteristics	Category	Mean score	Std Dv	T	df	Sig.
Age	18-21 years	6.531	2.959	-.144	**185**	**0.886**
	22-25 years	6.593	2.943	-.144		
Gender	Male	6.500	2.763	-.299	**185**	**0.765**
	Female	6.629	3.146	-.297		
Department	Mass Communication	6.443	2.901	-569	**185**	**0.570**
	Architecture	6.689	3.000	-568		
Level of study	First year	6.697	3.109	0.584	**184**	**0.560**
	Fourth year	6.443	2.809	0.581		
Place of permanent residence	Urban	6.552	2.948	0.422	**183**	**0.673**
	Rural	6.273	2.640	0.459		
Place of residence in polytechnic	In Polytechnic hostel	6.295	2.801	-1.403	**185**	**0.162**
	Off campus	6.902	3.102	-1.386		
Religion	Christianity	6.686	3.013	0.904	**184**	**0.367**
	Islam	6.277	2.803	0.924		

The ANOVA test results presented in Table 16 below indicates a significant association between respondents' relationship status and their level of knowledge (p = 0.04), However, this association

was found to be a weak association (eta squared 0.04). This implies that relationship status accounted for only about 4% variation in contraceptive knowledge.

Table 16: ANOVA test of relationship between respondent's relationship status and contraceptive knowledge (N=187)

ANOVA	Sum of squares	df	Mean squares	f	Sig.
Between groups	64.268	3	21.423	2.757	0.044
Within groups	1414.291	182	7.771	.	
Total	1478.559	187	.	.	

Effect size (eta squared) = 0.04

Further Post Hoc test (Shown in Figure 8 below) reveals that those in sexual relationships are likely to have more knowledge about contraceptives than those who are not in a sexual relationship. The former group had a mean score of 7.1 for singles and 7.5 for married which is higher than the 5.9 mean score of those who are not in a sexual relationship.

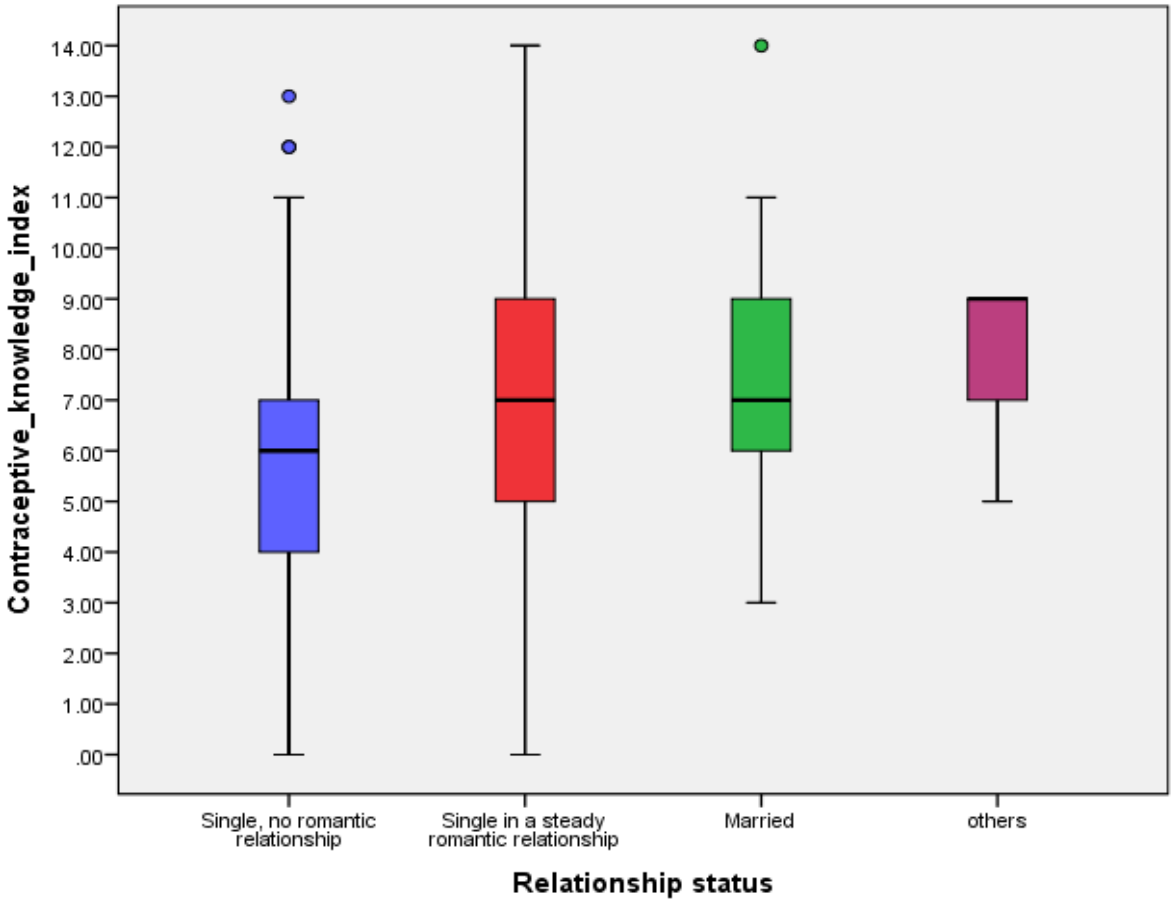

Figure 8: Boxplot showing the mean knowledge scores of respondents by their relationship status

Respondents' interest in knowing more about contraceptives

When asked if they want to know more about contraceptives, a large majority of respondents (85%) responded positively, with only 11% stating they had no interest in learning more about

contraceptives. Although 85% of the total respondents indicated interest in knowing more about contraception (see Table 17 below), a higher percentage, slightly above 97% of respondents, mentioned different aspects of contraceptives which they wanted to know more about[20]. When asked about the specific aspect of contraceptive they want to know more about, 39% of respondents indicated interest in knowing about the existence of various methods of contraceptives, while 19%, 15% and 11% wanted to know more about emergency contraceptives, to have a general knowledge about all aspects of contraceptives and to know more about the fertility period of a woman respectively. Other respondents (below 10% each) wanted to know more about contraceptive efficiency, contraceptive availability, as well as the side effects resulting from contraceptive use. (Table 17)

Table 17: Respondents' interest in knowing more about contraceptives (N=187)

Do you want to know more	Frequency	Percentage
Yes	159	85.0
No	20	10.7
Not sure	5	2.7
Missing cases	3	1.6
Total (N)	**187**	**100**
Area of Interest	**Frequency**	**Percentage**
Existence of contraceptive methods	70	38.5
Emergency contraception	35	19.2
All about contraceptives	28	15.4
Fertility period of a woman	20	11.0
Contraceptive efficiency	16	8.8
Availability of contraceptives	10	5.5
Contraceptive side effects	3	1.6
Total (N)	**182**	**100**

Improving contraceptive knowledge among students

Although this issue was not specifically covered in my survey, participants in the in-depth interviews reported that there have been no programmes organised in the Polytechnic either by the institution or by groups from outside the institution to educate students on the benefits of contraceptive use. Both the students and the health care providers I interviewed see the need for this, not just to improve contraceptive knowledge but also to educate students on safe sex and the need to use contraceptives.

> *There are no programs to enlighten these students but I think it is important to have them. They should go to all hostels to educate them about family planning, STDs, HIV and unwanted*

[20] This variation in figures was as a result of respondents who indicated an aspect of contraceptive they wanted to know about but did not correctly completed the preceding question by not indicating their interest in knowing more.

pregnancy and for the married ones, educate them about family planning to space children. (Key Informant Interview 2 with a female nurse at the polytechnic family planning unit)

I have not seen or heard of any program that has been organised in campus about contraceptives either by the school or groups from outside. I think it is necessary because you hear a lot of things when you go out. So if you are not educated you will be misled. There are several ways of doing this, it could be incorporated into the school curriculum, public lectures and we should have an active counselling information unit. (Interview 9 with a male fourth year student of Architecture)

My survey respondents proposed various ways of improving contraceptive practices among students of Kaduna Polytechnic. Nearly half of those who answered this question (49%) suggested that there should be massive public awareness through organised seminars, workshops, and rallies which should aim to enlighten students more about contraceptives. 42% indicated that sex education should be included in the academic program of the institution, while a minority (slightly under 10%) felt that contraceptive knowledge can best be improved through media campaigns both in print and electronic forms (Table 18).

Table 18: Responses on how to improve contraceptive knowledge (N=148)

Appropriate Intervention	Frequency	Percentages
Need for sex education in academic program	62	41.9
Public awareness through seminars and workshops	72	48.6
Well organised media campaigns	14	9.5
Total	**148**	**100**

4.4 Sources of contraceptive information

Respondents were asked about the sources of contraceptive knowledge among students. From their responses, friends and the media featured prominently as sources of knowledge at 51% and 32% respectively. Only 13% of respondents mentioned health workers as sources of contraceptive knowledge among polytechnic students. Family members were strikingly insignificant as a source of information. This finding is consistent with the findings of Oladokun *et al*, 2007, and Akani *et al*, 2008 (see section 2.2) among students in western Nigeria.

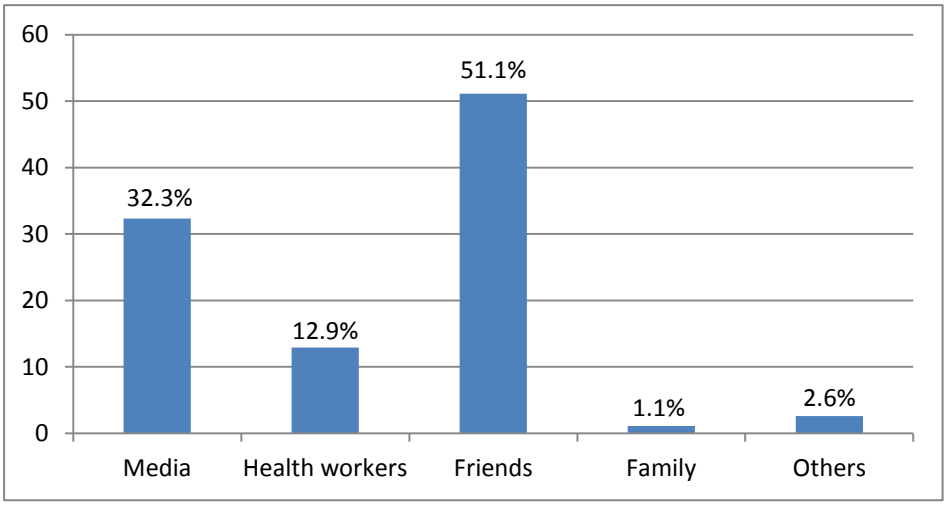

Figure 9: Respondents' primary sources of contraceptive knowledge (Number=187)

Friends and the media were found to be the major source of contraceptive knowledge among various categories of respondents. As indicated in Table 19 below, these sources feature as the most common sources across all respondents irrespective of their age, gender or religious affiliation.

Table 19: Cross-tabulation of Sources of contraceptive knowledge by respondents' age, gender, religion and department (N=186)

Social characteristics	Category	Sources of information (%)					Total % (n)
		Media	Health workers	Friends	Family	Others	
Age	18-21 years	30.5	13.7	50.5	1.1	4.2	100.0 (95)
	22-25 years	34.5	12.1	51.6	1.1	1.1	100.0 (91)
	Total %	**32.3**	**12.9**	**51.1**	**1.1**	**2.7**	**100.0 (186)**
Gender	Male	33.7	13.3	48.0	2.0	3.1	100.0 (98)
	Female	30.7	12.5	54.5	0	2.3	100.0 (88)
	Total %	**32.3**	**12.9**	**1.1**	**1.1**	**2.7**	**100.0 (186)**
Religion	Christianity	33.3	7.5	55.8	0	3.3	100.0 (120)
	Islam	30.8	23.1	41.5	3.1	1.5	100.0 (65)
	Others	0	0	100.0	0	0	100.0 (1)
	Total %	**32.3**	**12.9**	**51.1**	**1.1**	**2.7**	**100.0 (186)**
Department	Mass Comm	37.5	13.5	45.8	1.0	2.1	100.0 (96)
	Architecture	26.7	12.2	56.7	1.1	3.3	100.0 (90)
	Total %	**32.3**	**12.9**	**51.1**	**1.1**	**2.7**	**100.0 (186)**

In my in-depth interviews, some participants identified traditional beliefs against discussion of issues of contraception and reproductive health in parent-child relationships as well as among siblings, thereby making it difficult for family members to educate the younger ones on issues of contraception.

> *Anything concerning sex, pregnancy or contraception from A to Z, is not proper, it is a taboo for a mother or a senior sister or anyone close to you to talk about it with you because they*

belief that it will make you to try doing it (having sex). (Interview 4 with a fourth year male student of Mass Communication)

Well, it is difficult for your parents to teach you about contraceptives our culture forbids that, it is like they are telling you to go and have sex. As a young unmarried person, I don't see the reason why you should discuss this issue with your parents, this is because in the Nigerian culture, it is not proper, but when you are married then you can freely talk about contraception with your parents, (otherwise,) you will be passing a message that you are promiscuous. In the kind of society I grew in, from the Hausa culture, I have never seen anyone in the family discussing it with his or her parents or even elder ones. (Interview 5 with a fourth year male student of Architecture)

This finding is in agreement with the reports of Arowojolu *et al* (2002) that parents often hold negative attitudes towards contraceptive use among young people because traditionally, they believe that exposing young people to issues around sex and contraceptives will encourage promiscuity.

However, this was not always the case. One participant mentioned acquiring contraceptive information from a family member:

I learned about contraceptives from my friends and the internet, we thought our parents are not learned, they don't see the importance of discussing such things with their children, although, my elder sister also tells me about it (contraceptives) sometimes. (Interview 6 with a female fourth year student of Mass Communication)

Furthermore, where health workers were indicated as sources of information in the interviews, this was in their capacity as a friend or relatives of the student:

...I also used to go to Planned Parenthood Federation (PPF); I have a friend there, who is a nurse. She use to tell me many things concerning contraceptives but I first learned about it from a (another) friend who is also a nurse, somebody came for an abortion and she mentioned that she doesn't understand why people will not protect themselves from pregnancy when there are things like pills and injection, then I later learn about condoms. (Interview 8 with a female fourth year student of Mass Communication)

My Mum is a nurse and she told us about it in her capacity of being a mother, I also read from her books. (Interview 9 with a male fourth year student of Architecture)

Sources of contraceptive advice for respondents

In the survey I asked respondents to mention who they usually approach to discuss or seek advice on issues of contraception. This question was informed by the assumption that certain respondents may feel uncomfortable to return to the source where they acquired their information about contraceptives

for a more personal contact, as such may resort to other convenient source to seek for advice or discuss their contraceptive problems.

Again friends turned out to be the most significant (39%) source of contraceptive advice for students. This category exceeded those who seek advice from health workers (doctor 18%, private chemist 4% and polytechnic health workers at slightly above 2%). Just above 6% of respondents reported seeking advice on contraceptives from their partners in relationships. Respondents also reported seeking advice from certain family members; interestingly, among these, a higher proportion (14%) reported seeking contraceptives advice from their mothers compared to other family members. Only 5%, 4%, and 2% of respondents usually seek contraceptive advice from their brothers, fathers and sisters respectively.

As also shown in Table 20 below, gender identities appear to influence such decisions, with female respondents more likely than male respondents to seek advice from their mothers or sisters, while male respondents were more likely to seek advice from their brothers or other relatives. Interestingly, however, male respondents favoured their mothers as sources of advice over their fathers and also, although less markedly, their brothers. At the same time, friends were far more important than family members as sources of contraceptive advice for both male and female respondents.

Table 20: Cross-tabulation of who respondents go to for advice or discuss contraception by respondents' gender (N=187)

Who do you go to for advice	Gender		Total %
	Male %	Female %	
Mother	11.2	16.9	13.9
Father	3.1	4.5	3.7
Sister	1.0	3.4	2.2
Brother	9.2	1.1	5.3
Other relatives	5.1	0	2.7
Partner	7.1	5.6	6.4
Friends	36.7	40.4	38.5
Polytechnic health workers	1.0	3.4	2.2
Private Chemist	4.1	3.4	3.7
Doctor	17.3	18.0	17.7
Religious leader	1.0	0	0.5
Others	3.1	3.4	3.2
Total % (N)	**100.0 (98)**	**100.0 (89)**	**100.0 (187)**

Variation in responses as to who respondents go to for advice is determined by the level of openness and reception which they enjoy from these individuals. This was stated by some participants in my interviews who reported certain restrictions on issues they can discuss with certain individuals, especially parents, and depending on how close both parties are. However, despite levels of openness, some participants would rather not discuss such issues with their parents.

> *Depending on the family you come from, you may be free to discuss some things with your parents. There are things I can discuss with my parents and there are things I cannot discuss*

with them. I don't discuss or seek for advice from my parents because I believe they will be angry because premarital sex is not a good thing. (Interview 3 with a female first year student of Mass communication)

My mother is a free person, if you go to her and explain your situation, she would be able to assist or at least help. But sometimes I just prefer to do things on my own without involving my parents into it. I also have a sister but I can't discuss things like that with her because she is my elder sister, I prefer to discuss with my best friends. (Interview 2 with a female first year student of Mass Communication)

CHAPTER 5: Research findings on contraceptive use, accessibility and influences on respondents understanding of and attitudes towards contraceptive use

This chapter presents results of my findings with regards to respondents' contraceptive use, contraceptive accessibility and the influences on respondents understanding of and attitudes towards contraceptive use.

5.1 Respondents' use of contraceptives

In the survey, respondents' actual use of contraceptives was investigated. Here I present findings in terms of use among sexually active respondents.

Significantly, I found the rate of contraceptive use among sexually active respondents to be low. Of the 112 respondents who reported having being sexually active within the past six months (see Table 8 above), only 38% reported using contraceptives during sex. Nearly half of the respondents who reported having sex more than once a week were not using contraceptives. This was also the case with other sexually active respondents as over half of those who reported having sex at least once a month were not using contraceptives. This result shows that the frequency of respondents' engagement in sex is not likely to influence contraceptive use (p=0.22) (Table 21).

Table 21: Contraceptive use among sexually active respondents (N=112)

Respondents' sexual activeness	Contraceptive use			Total
	Yes	No	My partner is using	
Every or must days	2	1	0	3
More than once a week	5	9	6	20
Approximately once a week,	14	10	2	26
Several times a month	12	22	4	38
Approximately once a month	9	13	3	25
Total	**42**	**55**	**15**	**112**

$x^2=10.62$, $p=0.22$ $df=8$

I attempted to establish a relationship between contraceptive use and social characteristics among sexually active respondents. The result in Table 22 reveals that few variables were significantly associated with the use of contraceptives among respondents (gender=0.04, place of residence in the polytechnic=0.01, and religion=0.02). Gender had a medium association with contraceptive use (0.32) and is likely to increase contraceptive use among males by about 32%. There was a relatively weak association between contraceptive use and place of residence in the polytechnic as well as religion. Place of residents accounted for about 18% increase in contraceptive use among respondents living in private residence. Religion accounted for about 19% increase in contraceptive use among Christians. Also notable is that age, department, level of study, place of permanent residence and relationship status were not significantly associated with the use of contraceptives.

Table 22: Testing the significance of demographic variables to respondents' use of contraceptives (Chi square, N=112)

Variable description	Chi square	df	p value	Lambda	Sig.
Age	4.19	2	0.12	-	-
Gender	6.33	2	0.04	0.11	0.32
Department	0.62	2	0.73	-	-
Level of study	0.08	2	0.96	-	-
Permanent residence	1.58	2	0.46	-	-
Polytechnic residence	9.69	2	0.01	0.15	0.18
Religion	8.52	2	0.02	0.05	0.19
Relationship status	4.28	6	0.64	-	-

Reasons for non-use of contraceptives among sexually active respondents

Sexually active respondents reported not using contraceptives due to its perceived side effects, though not specified, (46%), maximising pleasure during sex (37%) and also because their partners are using contraceptives during sex (14%). Slightly more females indicated their fear of contraceptive side effects as the reason for their non-use, while equal numbers of male and female respondents would not use contraceptive because they perceive it as reducing sexual pleasure.

Table 23: Reasons for non-use of contraceptives among sexually active respondents (N=112)

Reasons for non-use	Gender		Total
	Male	Female	
Fear of contraceptive side effects	15	18	33
Maximising pleasure	13	13	26
My partner is using	2	6	8
Missing cases	2	1	3
Total	**32**	**38**	**70**

Methods of contraception used by respondents

In my study over half of those who reported using contraceptives were males at 55%. When asked to mention specifically the method of contraception they are using the results show that condoms and oral contraceptives pills are the most commonly used contraceptives among respondents, however, condom use was peculiar to male respondents as no female respondent reported using the female condom. Also the oral contraceptive pill was the commonly used contraceptive among the female respondents. Although, traditional contraceptives were not mentioned in the survey, they were reported during my in-depth interviews to be used by certain students in the polytechnic (Table 24).

Table 24: Distribution of respondents by the method of contraception they use (N=42)[21]

What method are you using?	Gender		Total
	Male	Female	
Condom	18	0	18
Oral pills	0	11	11
Injection	0	3	3
Withdrawal	5	1	6
Implants	0	1	1
Temperature reading	0	3	3
Total	**23**	**19**	**42**

These forms of traditional contraceptives reportedly in use included the use of objects worn on the body as well as certain syrups believed to protect the girl from unwanted pregnancies and sometimes the contraction of STIs.

> *My course mate once told me that there was something she (use to) wear around her waist and whenever she wears it, there is no way you can have sex with her and she gets any infection or pregnant. (Interview 1 with a first year female student of Mass Communication)*

> *Like the girl I told you, the one I make her hair, she said she does not do it (sex) like that, since she do it almost every day. There is this liquid thing her Mum gave her that each time she wants to have sex with a man, she should take it, that she will not get pregnant or any infection. And also even if the man has anything like HIV, she will have some kind of feelings and will back off. (Interview 6 with a fourth year female student of Mass Communication)*

As is the case with other forms of contraceptives, the use of emergency contraceptives among sexually active respondents was also found to be very low. Only about 21% of sexually active respondents reported having ever used emergency contraceptives after unprotected sex. About 19% were aware that their partners had used emergency contraceptives while 28% were not sure if their partners had ever used it. However, 40% of sexually active respondents will consider using emergency contraceptives after unprotected sex, while 38% will not consider using it and 18% were not sure if they will want to use emergency contraceptive after an unprotected sex. As to why they will not use emergency contraceptives, ignorance was found to be a major factor as 32% of respondents did not have adequate knowledge about its existence, how it functions as well as the correct timing for administration. About 30% were concerned about the side effect it could have on them and about 5% of sexually active respondents prefer other pre-sex contraceptives (Table 25)

[21] This figure (42) represents the number of respondents who reported using contraceptives

Table 25: Distribution of sexually active respondents by use of emergency contraceptives (N=112)

Questions	Category	Frequency	Percentage
Ever used emergency contraceptive?	Yes	23	20.5
	No	86	76.8
	Missing cases	3	2.7
	Total	**112**	**100**
Has your partner ever used Emergency contraceptives?	Yes	21	18.8
	No	60	53.6
	Not sure/Don't know	31	27.7
	Total	**112**	**100**
Would you consider using emergency contraceptives?	Yes	45	40.2
	No	43	38.4
	Not sure	20	17.9
	Missing cases	4	3.6
	Total	**112**	**100**
Why would you not use emergency contraceptives?	It has side effects	33	29.5
	Don't know much about it	36	32.1
	Prefer other pre-sex contraceptives	5	4.5
	Missing cases	38	33.9
	Total	**112**	**100**

When asked if they are satisfied with the method of contraception they are using a higher percentage of respondents using contraceptives (57%) indicated that they are content with the method of contraceptive they were using, while 43% were not satisfied with their method of contraceptive, either because it does not provide 100% protection for the purpose it is meant to serve (56%) or because of its side effects (44%).

Table 26: Respondents' level of satisfaction with regards to contraceptive being used

Question	Categories	Frequency	Percentage
Are you satisfied with your method?	Yes	24	57.1
	No	18	42.9
	Total (N)	**42**	**100**
Why are you not satisfied	It is not 100% effective	10	55.6
	It has side effects	8	44.4
	Total (N)	**18**	**100**

Partners 'influence on respondents' contraceptive use

The nature of contraceptive use among sexually active respondents was also found to be influenced, in some ways, by their partners. Table 27 shows that, approximately 11% of respondents have been in a sexual relationship where they were forced by their partners to use a method of contraception. About 18% of respondents wanted to use contraception during sex but were prevented by their partners. However, 21% reported secretly using contraceptives without the consent of their sexual partners.

Table 27: Partners' influences on sexually active respondents' contraceptive use (N=112)

Partners influence	Category	Frequency	Percentage
Have you ever been forced to use a method of contraception	Yes	12	10.7
	No	91	81.3
	Missing cases	9	8.0
	Total	**112**	**100**
Have you ever been prevented from using a method of contraception	Yes	20	17.9
	No	92	82.1
	Total	**112**	**100**
Have you ever concealed from your partner that you are using a method of contraception	Yes	23	20.5
	No	89	79.5
	Total	**112**	**100**

Respondents' contraceptive use with regards to their level of awareness and knowledge

The relationship between contraceptive awareness and contraceptive use was investigated. As shown in Table 28, the level of contraceptive awareness is likely not to influence the use of contraceptives among respondents (p=0.15, df=4), which, in terms of my study, is a significant finding.

Table 28: Relationship between respondents' contraceptive awareness and contraceptive use (N=107)

Using contraceptives	Contraceptive awareness			Total
	One method	Two methods	Three and above	
Yes	52.2	29.2	33.3	35.5
No	47.8	52.1	52.8	51.4
My partner is using	0	18.8	13.9	13.1
Total	**100.0 (23)**	**100.0 (48)**	**100.0 (36)**	**100.0 (107)**

x^2=6.67, p=0.15, df=4

Similarly, having actual knowledge about contraceptives was found not to have a significant influence on the respondents' contraceptive use (p=0.39) (Table 29). This implies that respondents could have detailed knowledge about contraceptives but would not necessarily use them

Table 29: Relationship between respondents' contraceptive knowledge and contraceptive use (ANOVA, N=111)

ANOVA	Sum of squares	df	Mean square	F	Sig.
Between groups	6.29	13	0.48	1.07	0.39
Within groups	44.20	98	0.45	-	-
Total	**50.49**	**111**	-	-	-

5.2 Contraceptive accessibility

Respondents' perceptions on the general level of contraceptive availability was investigated as well as sources of contraceptives and how convenient contraceptive services are in terms of proximity, cost and methods available for students in such places. Also probed were the attitudes of health care providers towards students seeking contraceptives both within and outside the polytechnic.

Contraceptive availability

Respondents were divided on how easily available contraceptives were for students in the polytechnic. Figure 10 show that a majority of respondents (56%) reported that contraceptives were either not available or difficult to access, but a significant minority (44%) of respondents were of the view that contraceptives were easily available for students in the Polytechnic.

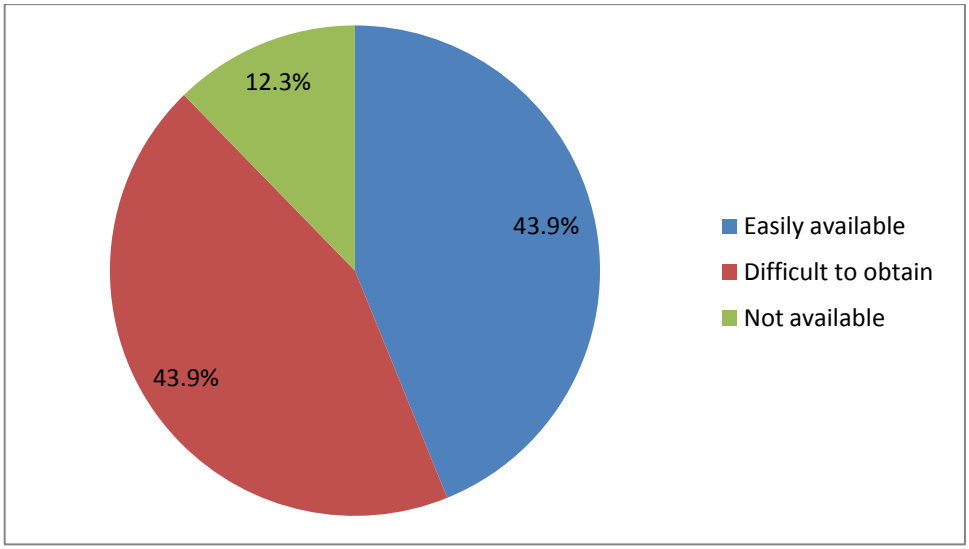

Figure 10: Respondents' perceptions on the availability of contraceptives for students (N=112)

Respondents' perceptions on contraceptive availability were compared with their use of contraceptives. This I did to find out the actual perceptions of respondents who reported using contraceptives. Interestingly, just over two thirds (69%) of sexually active respondents who reported using contraceptives reported that contraceptives are not easily available for students in the polytechnic (Table 30).

Table 30: Cross-tabulation of perceptions on contraceptive availability by contraceptive use among sexually active respondents (N=112)

Contraceptive availability	Are you currently			Total %
	Yes %	No %	No, my partner is using %	
Easily available	31.0	52.7	46.7	43.9
Difficult to obtain	59.5	36.4	46.7	43.9
Not available	9.5	10.9	6.7	12.3
Total % (n)	**100.0 (42)**	**100.0 (55)**	**100.0 (15)**	**100.0 (112)**

The condoms and the oral pills were reported by most participants as the methods most readily available for students. However, this could be, as reported in my interviews, because these methods are cheaper than the others. The withdrawal and the temperatures reading method were also being used. These methods could be preferred by some students because they do not have any financial implication.

The most common methods of contraceptives available is the (oral) pills and condom, but most girls will resist using the pills because they believe it will affect their womb, so they prefer condoms, or you just remove (the penis) before releasing, the withdrawal method. Sometimes they also use the evolution period to know when the girl is free after her period. (Interview 4 with a fourth year male student of Mass Communication)

Nevertheless, key informants suggest a wider variety of contraceptive methods were available in the polytechnic clinic for students.

We have made enough contraceptives available for students; we have the injectable, pills, implants, IUCT, condoms, permanent methods and bilateral tubal ligation and vasectomy. (Key Informant Interview with a female nurse at the family planning unit of the polytechnic clinic)

Generally, there seem to be more than one contraceptive available for students either in the polytechnic clinic or in other private stores or private clinics outside the polytechnic. This finding is in contrast with the report of Ross and Hardee (2012) which argued that condoms are the only contraceptive made available to over half the Nigerian population.

Sources of contraceptives

Pharmacy stores (as indicated in Table 31 below) were reported to be the primary source of contraceptives for students of Kaduna Polytechnic, as a higher proportion of respondents (41%) reported pharmacy stores located outside the Polytechnic as their source of contraceptives. Other sources of contraceptives reported were local clinics outside the Polytechnic (11%), friends (10%), private doctors (5%), boxes at public places (5%), as well as parents (1%). Interestingly, only about 4% of respondents mentioned the school clinic as their source of contraceptives, suggesting either the non availability of contraceptives for students within the polytechnic, or the non-use of available contraceptives at the polytechnic clinic.

Table 31: Sources of contraceptives services for sexually active students (N=112)

Sources of contraceptives for students	Frequency	Percentage
At the Polytechnic clinic	4	3.6
Local Clinics outside the Polytechnic	12	10.7
Friends	11	9.8
Parents	1	0.9
Pharmacy stores	46	41.1
Private doctors	6	5.4
From boxes at public places	5	4.5
Other places	10	8.9
Missing cases	17	15.2
Total	**112**	**100.0**

Private pharmacy stores were also reported by the majority of participants in my in-depth interviews as their primary sources of contraceptives. A first year female student has this to say:

> *Yes contraceptives are easily available, we get then at any pharmacy store you enter and any chemist[22] especially chemist, but they are not available inside campus, like in the school clinic we can't find them. …Yes the school clinic should start offering contraceptives to students because we already pay for it in our medical fees and if we cannot get what we paid for then it is not fair. (Interview 1 with a first year female student of Mass Communication)*

The above findings corroborate the 2008 NDHS report that over half of Nigerian youths obtain their contraceptives from private pharmacy stores.

However, health workers at the polytechnic clinic revealed that contraceptives were readily available for students at the clinic at very low cost and sometimes for free. Condoms are distributed free in hostels but other contraceptives cannot just be given to students without screening their blood and advising them on their choices.

> *Yes we provide contraceptives at affordable rates if not free and there are a lot of methods available for students. (Key Informant Interview with a male pharmacist at the polytechnic clinic)*

> *Contraceptives are available we give them free and we counsel them… It is not advisable to make these contraceptives too available, because before you take one, we must test you. You might have blood pressure, your heart etc. then we make the best choice for you. Some of these students come to get contraceptives but they (generally) prefer to go and get it outside, because of the stigma, they don't want people to know that they are collecting contraceptives and they are not yet married… Some of them (students) use contraceptives because we normally go and distribute condoms in their hostels and they also come for contraceptives in the clinic frequently. They (students) are also aware of the female condom though it came into the market recently, they do come and collect them and try them. (Key Informant Interview with a female nurse at the family planning unit of the polytechnic clinic)*

Convenience with regard to proximity and cost

Participants in interviews reported that contraceptive services are often located outside campus and at relatively long distances which requires them to pay for transport themselves to such place as well as also paying for the services rendered them. Some participants in my in-depth interviews complained about the cost:

[22] Chemist is a general term used in Nigeria to refer to smaller pharmacy stores located in the neighbourhoods. These pharmacy stores often sale drugs in retail prices and are closer to the final consumers.

The chemists (pharmacy stores) are a bit far from campus and you have to go to town to get them. This is not good enough because you will have to get the money to transport yourself and the money to buy it (contraceptives). (Interview 3 with a first year female student of Mass Communication)

Some are expensive while others are not; there was one I bought not too long ago in a chemist. It was expensive. The man gave me two pills at around three thousand naira. (Interview 4 with a fourth year male student of Mass Communication)

Importantly, the nature of contraceptive availability in terms of proximity and cost has been reported to have a direct influence on students' attitude towards contraceptive use in the polytechnic, this was reflected in responses from my interviews;

Definitely it (non availability) does affect students. If a girl and a boy should meet in a quiet place they may be carried away and make love even without contraceptives but if it is available everywhere, they will be using it. … for me sometimes I don't have sex because there is no condom but other times I cannot help it but just do it like that. (Interview 7 with a fourth year male student of Mass Communication)

Yes it happens, In fact it happened to me, while we were reading we then began to indulge in a discussion that triggered us and we were not prepared for it, we had to go in there direct, but if there was contraceptive there for us, we will use it. So it affects. (Interview 13 with a first year male student of Architecture)

The above responses indicate the need for contraceptives to be made more easily available for students.

Attitudes of health providers towards students seeking contraceptives

The attitude of health care providers within and around the polytechnic was investigated to determine if it might be a factor influencing students' access and attitude towards the use of contraceptive service.

As shown in Table 32, the majority (54%) reported that services rendered to them when they go to obtain contraceptives are usually encouraging as the service providers are friendly, well-informed and helpful. Another 11% respondents feel that such services usually discourage them as services providers are unfriendly, not well-informed and unhelpful. About 21% respondents reported feeling awkward and ashamed which made some of them (2%) not want to go back there. 4% respondents feel that the services they get makes them feel okay about going back there to obtain more contraceptives.

Table 32: Nature of contraceptive services for respondents (N=164)

Nature of contraceptive service	Frequency	Percentage
Friendly	49	29.9
Helpful	29	17.7
Well-informed	10	6.1
Unfriendly	6	3.7
Unhelpful	5	3.0
Uninformed	7	4.3
Makes me feel awkward and ashamed	34	20.7
Makes me not want to go back there	3	1.8
Makes me feel okay about going back there	7	4.3
Others	14	8.5
Total	**164**	**100**

Differences in the nature of services rendered in terms of the attitude that contraceptive providers express to students is found to be informed by different reasons as mentioned by participants in my interviews.

> *As far as you sell contraceptives, then you are happy because of the money. These people (health care providers) are hypocrites, because in your presence, they will show you respect and everything but outside there, they talk about you. But some people live an "I don't care" life, they don't care what people say about them, that is not their business, all they feel is they are having fun. (Interview 1 with a first year female student of Mass Communication)*

> *Well a lot of them (health care providers) welcome us because, they want to make money. They sell it to us and collect our money but after collecting your money and giving you contraceptives, they will start talking about you when you leave, they may say these small children are spoiled, look at what they are doing, (and) look at what this small girl is buying. They would say things like that about you and if I get to know I may not go back there again. That is why me I don't buy contraceptives in the same place twice, I will prefer to be changing places to where they don't know me, because once they know you they will not respect you again they will just be pretending because they want to get your money. (Interview 3 with a first year female student of Mass Communication)*

> *I have been to a chemist to buy (oral contraceptive) pills, I met a man there that came to buy condom. The chemist man played well with him but immediately he left, the man (chemist man) started making mockery of him, so I decided to leave too, I couldn't buy my own (contraceptives). (Interview 6 with a fourth year female student of Mass Communication)*

A participant in my interviews also reported experiencing negative and unfriendly attitude from a health care provider when he went to seek for contraceptive.

> *It depends on who you meet, if you meet a young guy he will be friendly but if you meet an older man, he may frown at you and make you uncomfortable. I was denied (contraceptive)*

once, but it was a long time ago, I was still very young and the man is very religious he even threatened to tell my dad. (Interview 12 with a first year male student of Architecture)

A participant in an interview also reported that health care providers in the clinic are capable of expressing hostile attitudes to them if they should go seeking for contraceptives;

Wow those people (Health care providers in Polytechnic clinic) will not even listen to you if you are not married, they will say you are a spoiled child and that you are not supposed to even go into sex not to talk of using contraceptives that is why I don't even go there at all. (Interview 15 with a fourth year female student of Architecture)

However, health care providers in both the polytechnic clinic and pharmacy stores outside the polytechnic repoted during my interviews with them that they are always friendly to the students that come seeking for contraceptives and will never discuss any student's personal life with other people.

When students come to buy contraceptives we bring them close to us and advise them on the need to protect (themselves) against pregnancy and diseases, so if you cannot abstain, you use condom. We are being friendly to them and we don't gossip about these students but we don't know if other customers talk about them. (Key Informant Interview with a male private pharmacist outside the polytechnic)

There is a cordial relationship between health providers and students. In fact there is one initiative he introduced called the patient feedback initiative. He (Medical Director) dedicated some numbers (telephone lines) for anybody that feels treated unfairly or unjust, he is free to write to him. So there is a lot of cordiality and free interaction between them. (Key Informant Interview with a male pharmacist at the polytechnic clinic)

Of course we are good to and respect them (students) especially when they come in group we sit and chat, we low ourselves so that they should open up. Although not every staff is that friendly to them, some will attack them with culture or something like that. (Key informant Interview with a female nurse at the family planning unit of the polytechnic clinic)

Despite claims by health care providers of being friendly to students seeking contraceptives, they believe that culturally and religiously young and unmarried students should not engage in sex and so should not be exposed to contraceptives.

Their parents send them to school not to come and be having sex. After their school, they should get married but some because of adventure, some poverty, some they just want to do it (have sex). (Key Informant Interview with a female nurse at the family planning unit of the polytechnic clinic)

Our socio cultural backgrounds, our religions – both Christianity and Islam really prevented us from any extramarital relationships and we cannot change that. So the socio cultural and

the religious background are the serious reasons whereby an unmarried person will not boldly come to you and ask of contraceptives, because they will be considered as lacking decorum, indecent and dubious. Socio cultural and religion seriously teaches against extramarital affairs so a lot of our youths who want to engage himself in any extramarital affairs will also need to consider himself as a deviant, ashamed and really we have not reach that stage whereby somebody will come freely and will be asking for contraceptives especially the unmarried ones. (Key Informant Interview with a male pharmacist at the polytechnic clinic)

These attitudes suggests that young and unmarried students are likely to experience negative reactions from certain health workers when they go to seek for contraceptives because of the cultural and religious beliefs guiding the attitude of these health care providers. This could deter students from seeking contraceptive services.

Interestingly, participants reveal that when they visit pharmacy stores to buy contraceptives, the providers often sell whatever they ask for without testing their blood to know which contraceptive will suit their body system. However, this depends on the store you visit.

Depending on the shop you go, like in big Pharmacies where there are doctors, they will test your blood first to determine the kind of contraceptive that will fit your blood before giving you, while in smaller chemist they will just give you like that. (Interview 2 with a first year female student of mass Communication)

This practice could have side effects and could cause severe health hazard to the individual user. A participant explains his friend's ordeal;

They don't test your blood; they just ask you, what is the nature of the situation? And then they will just prescribe for you. These can affect the individual, like my friend, he bought one Viagra like that, after he finished having sex, his penis did not relax, for two days, when we took him to the hospital and they perform some kind of things on him, then they said it is a matter of blood, maybe because they did not test his blood to know if it will work well, they just gave him. (Interview 4 with a fourth year male student of Mass Communication)

During an interviews with a private pharmacist located outside the polytechnic he indicated that in the pharmacy store they don't test students' blood but will only give contraceptives with a doctor's prescription;

Because we don't sell contraceptives without the doctor's prescription except condoms, we don't test the student's blood to determine which to give them, because we believe the doctor must have done that already before prescribing the drug. (Key Informant Interviews with a male private pharmacist located outside the polytechnic)

These finding reveal a gap in contraceptive knowledge among some health care providers which could affect students' effective utilization of contraceptive services as argued by Herbert *et al,* (2013).

Improving contraceptive access

Respondents' perceptions were asked with regards to improving contraceptive availability to students in the polytechnic. The majority of respondents (57%) felt that contraceptives should be made more readily available for students, while 43% would rather not support the idea of improving contraceptive availability to students (Figure 11).

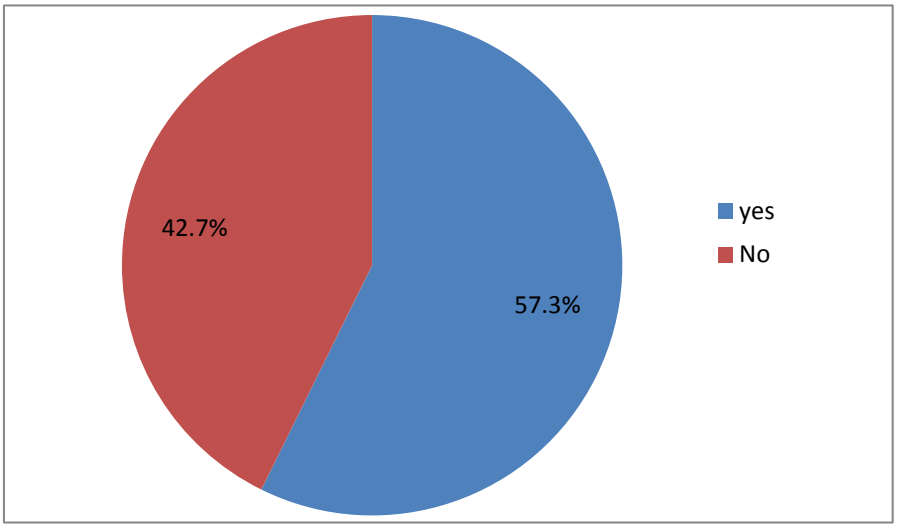

Figure 11: Respondents views on improving contraceptive availability (N=178)

These responses from the survey were explored with respondents in my interviews. Some who felt that contraceptives should be made more accessible to students because of the benefits that students stand to achieve from its use in terms of preventing STIs and avoiding the risk of unwanted pregnancy and unsafe abortions. Other participants felt that improving contraceptive access to students would encourage promiscuity among students which is against religious teachings.

> *Yes, I will say it (contraceptives) should be made available, though I learned it has side effects but since there is nothing you can do to stop students of these days from having sex, I think they should be made readily available for them to prevent them from contracting (STIs) or getting pregnant. (Interview 6 with a fourth year female student of Mass Communication)*

> *I could say yes and no, if it should be made available, then the school is encouraging sexual activities and stopping it will bring modesty to the school. And because of modernization and everything, it should be made available because everyone is matured. Whether the school authority likes it or not students know about sex so there should only be adequate enlightenment and so on. (Interview 7 with a fourth year male student of Mass Communication)*

Personally based on my religious belief and my previous survey that I partook in, is that these things (contraceptives) encourages promiscuity and religiously my religion does not teach you to go into any form of contraceptives. I am a Christian, so when they do that (provide more contraceptives) they encourages students to be promiscuous, to go about their business and they don't care. Even though, you can't stop sex, I still believe contraceptives should not be encouraged. There are ways by which we individuals sin. You can sin by consent, by counsel or by partaking in the sin. Now if you make these materials available to them, religiously you are encouraging them to sin and you are sinning against God by consent and also by counsel. Okay it's like this; this thing is good but is a sin, it is better to just stay out of it. That is why I don't talk about contraceptives with people because if I am sinning by practice, I don't want to make another person to sin and increase my own guilt. (Interview 5 with a fourth year male student of Architecture)

When asked about ways of improving contraceptive access to students in the polytechnic, the majority (52%) of respondents suggested that contraceptives should be distributed freely to students in the polytechnic. 36% of respondents suggested that contraceptives be made more available in the polytechnic clinic where students can have free access to. A few respondents were of the opinion that contraceptives could be made more available to students if the agencies responsible would ensure that quality contraceptives are produced and well distributed to all areas of the country and sold (if necessary) at subsidized prices to final consumers (Table 33).

Table 33: Ways of improving contraceptive access to students (N=161)

Ways of improving access	Frequency	Percentage
Increase availability in the Polytechnic clinic	58	36.0
Free contraceptives	83	51.6
Quality production and distribution	15	9.3
Subsidize prices	5	3.1
Total	**161**	**100**

5.3 Influences on student's understanding of and attitudes towards contraception

As already noted, the majority of respondents (60%) reported being sexually active but only 38% of them use contraceptives (see Table 8 above). Students therefore, practice unprotected sex despite high levels of awareness (95%) among respondents of the existence of contraceptive methods and its importance in terms of preventing unwanted pregnancy and contraction of STIs. In line with this, I examined certain features which I consider relevant (from my review of literature) in influencing students' understanding of and attitudes towards contraception.

Gender relations and contraceptive practices in relationships

In this study, I tried to find out whether gender identity as well as gender power relation influences contraceptive practices in heterosexual relationships. This, I reasoned would provide me with an understanding of how gender inequality in a patriarchal society like Nigeria reflects on issues of contraceptive use among students of Kaduna Polytechnic. I present my findings on decision-making on the use or non-use of contraception in sexual relationships, and on whether male or female students benefit more or are more vulnerable to the side effects of contraceptive use (where applicable).

As presented in Table 34, there was a higher response that decisions around contraception among students in relationships are egalitarian as a higher proportion of respondents (36%) indicated that they both decide on issues of contraceptive together. However, 15% of respondents reported that only the male partner takes such decisions and about 26% respondents revealed that the female partner is responsible for decisions as this.

Table 34: Respondents' perception on decision making regarding contraceptive use (N=187)

Who decides on whether to use contraception or not	Frequency	Percentage
Male partner	28	15
Female partner	48	25.7
Both partners	67	35.8
Not sure	44	23.5
Total	**187**	**100**

Responses given by participants in the interview indicated different gendered practices in terms of decision making on issues of contraception in heterosexual relationships.

> *In my opinion I think no partner should be isolated from taking decision in a relationship, I mean in all aspects of the relationship. Specifically when it comes to protection against pregnancy I feel that the woman should have more power to decide on what she wants, because the man doesn't get pregnant. But when it comes to protection against diseases, I will say they should have equal rights because both of them are exposed to it. But generally, I will say in every relationship the woman should have more say in decision taking about contraception because she is at the receiving end and is more exposed to the risk of pregnancy and STIs. So in terms of risk she has more and in terms of benefits, she benefits more. (Interview 3 with a first year female student of Mass Communication)*

> *The female should have more power to take decision on which contraceptive to use but with the consent of the man. I say so because, it is not every method that is suitable for every woman, and the man cannot know this, he only knows about his condom. So it is only the woman that will know her body system and the contraceptive method that will be suitable for the body type. But like I said the man should also be aware and approve of her choice. (Interview 8 with a fourth year female student of Mass Communication)*

I compared respondents' responses with their gender to enable me understand the variations in responses and whether or not a respondents' gender influences his/her practice in terms of decision on contraceptive use. As indicated in Table 35 below, respondents' gender does influence their response in this regard (p=0.99, df=3).

Table 35: Cross-tabulation between contraceptive decision making and respondents' gender (Chi square, N=184))

Who decides	Gender		Total %
	Male %	Female %	
Male partner	15.5	14.9	15.2
Female partner	25.8	26.4	26.1
Both partners together	36.1	36.8	36.4
Not sure	22.7	21.8	22.3
Total % (n)	**100.0 (97)**	**100.0 (87)**	**100.0 (184)**

x^2=0.037, p=0.99, df=3

Interestingly, a participant in the interviews reported that which partner decides on the use or non use of contraceptives depends on the nature of the relationship and the motive behind it.

> *Most times relationships differ and you can only say who will take decision if you know the kind of relationship they are having. For instance, if the relationship is for the money (transactional) the man or boy who provides the money most times will just make the decision. But if it is just for satisfaction or other things like fun, then the girl will decide. Also if it is a serious relationship that they both love each other, then both of them will decide together. (Interview 4 with a fourth year male student of Mass Communication)*

With regard to vulnerability to contraceptive side effects, some participants in my interviews considered female partners to be more vulnerable than the males.

> *…the woman suffers more from the side effects of using contraceptives she should have an upper hand in the decision process. (Interview 11 with a fourth year female student of Architecture)*

However, the initiation of contraceptive use (especially the condom) during sex is still considered a masculine responsibility as was reported during my interviews.

> *Hmmm, it is the responsibility of the man to bring the condom that will be use during sex. But if you are in a serious relationship and you are having sex with your partner then sometimes he will not think otherwise about you. But if it is not a serious relationship, for instance if a guy or even my friends should see me with a condom in my bag they will begin to call me a prostitute or begin to see me as a bad girl. Because it simply means that I am ready to have sex anytime with anybody that is why I am carrying it with me. (Interview 1 with a first year female student of Mass Communication)*

Wow, if a girl should give me condom before sex, let me see, I will be surprised because a decent girl will not be keeping condoms. Except if that girl is my girlfriend and I am the one that ask her to keep it. If not I will see her as a bad girl. But if she tell me okay you should use condom, then there is no problem with that but for her to give me the condom it means another thing. (Interview 13 with a first year male student of Architecture)

Influence of religious beliefs on students' attitudes towards contraception

As reported in my survey results above (See Table 22) religion accounted for about 19% variation in contraceptive use among Christians and Muslims. Religion was also identified as an issue by participants in my interviews;

My religion Catholicism precisely encourage natural contraception for you only when you are married to be able to take care of your children, because by the time you get married and you keep on giving birth, at the end of the day you will not be able to take care of your children, unlike our Muslim brothers, they just belief it is not right to use contraceptives. (Interview 2 with a first year female student of Mass Communication)

The relative liberality within the Christian religion could be a reason why Christian respondents have a higher rate of contraceptive use than their Muslim counterparts whose teachings are very restrictive. The various ways in which religious teachings influences students' attitude towards contraceptives is contained in their responses during interviews as thus;

Islam forbids contraceptives; there should be no sex except in marriage, so abstinence is what they preach. Just maintain your chastity. I f you have sex then you have sin against God, if you use contraceptive I see it as another sin because you are breaking two laws at the same time; don't have sex and don't use contraceptives. Like in my own case despite the fact that I don't abstain I cannot use contraceptive because I don't want to commit another sin against God. This teaching is divine and I cannot temper with what is divine. (Interview 7 with a fourth year male student of Mass Communication)

For me, my religious teaching influence my attitude towards contraception, one of the person (people) that taught me of this (contraceptive) is a religious person. In the lecture he said it is not advisable because what God has put into somebody it is not supposed to be wasted, as you are wasting it using condom, you are wasting the children that God has put in you, so we should not use it, and because of this I stopped using contraceptives. (Interview 9 with a fourth year male student of Architecture)

Importantly, not all students are affected by these teachings of religion at equal levels. The level of influence as reported by a participant in interviews is dependent on the individuals' commitment to his\her faith.

Yes the two religions I know discourage sex and even the use of contraceptives but it is not everybody that listens and do(es) what they say. Those that are spiritual and committed to their religion will hear and do as the religion teaches but others will not even care about anything they will go to church or mosque but they will not do what the religion ask them to do. They will just do things their way. (Interview 14 with a first year male student of Architecture)

This finding replicates the finding of Odimegwu (2005) which states that students who are committed to their religion tend to have more negative attitudes towards issues of reproductive health such as contraception than those who are only affiliated to the faith but are not committed.

Considering religious influences on the individuals' contraceptive practice, some participants in interviews suggested a change in the teachings of religion with regard to contraceptives, while others were of the opinion that such teachings should be sustained.

These religious beliefs have been there over a long period of time. They have not change. But I believe that since the society is changing the church should also change and encourage youths who cannot abstain to use contraceptives since they (the religious bodies) cannot stop people from having sex. (Interview 10 with a first year female student of Mass Communication)

No, I strongly believe that these teaching of faith should not be changed; yes people say we are in a digital age now, but the digital age doesn't mean that what was wrong should now be right. These things are contained in the Bible and even the Quran, they are divine and what is divine no man should try changing it. I will not advice that they should ever encourage that (contraceptive use). (Interview 6 with a fourth year female student of Mass Communication)

Influence of traditional beliefs on student's attitudes towards contraceptives

Certain traditional believes and practices were reported by participants in my interviews to have varying levels of influence on the individual.

Among my people, the Igala people of Kogi State, I know that traditionally whether you are married or not, the use of contraceptives is not allowed, if you use contraceptives to prevent pregnancy, there is the tendency that you may lose your life. To them, there is no family planning you just keep having sex without stopping pregnancy or diseases. (Interview 4 with a fourth year male student of Mass Communication)

Yes like in parts of Benue State, they don't encourage the use of contraceptives, they believe that if you use 'Alekwu'[23] *will catch up with you. So just be giving birth if you are married. If*

[23] Alekwu is a traditional god of the Idomas in Benue State popularly believed amongst the people to have the power to protect, reward and punish sons and daughters of the land.

the man is aware that the woman is using it (contraception) he will die first, and then if they have children, the children will follow and then the woman. If the woman is not married and she use contraceptives 'Alekwu' will either make her barren or kill her. (Interview 8 with a fourth year female student of Mass Communication)

What I know is that, like the people in southern Kaduna in traditional societies then, people believe that children are gifts from the gods and the more children you have the more people will respect you and the gods of the land will continue to bless you with a rich harvest during the farming season. But for those that are not married, it is an abomination to even have sex talk less of using contraceptives. If you are caught the gods will punish you. Contraceptive is only allowed when the woman cannot give birth again because of her health and this must be certified by the local herbalist and approved by the chief priest who is the mouth piece of the gods. (Interview 11 with fourth year female student of Architecture)

The influence of cultural beliefs and practices was reported by participants to be on the decline. However, they still influence young people's attitudes towards contraceptives especially those from rural backgrounds.

Well now civilization (westernization) has made all these things (traditional practices) to change a lot and people are now using it (contraceptives) without any worry of any punishment because they don't belief in these small-small gods again. (Interview 8 with a fourth year female student of Mass Communication)

Yes I know that these beliefs are not there anymore like they use to be, but they still affect some people, like I have a friend in my hostel, she said her father is a herbalist in their village and he warned her not to use any contraceptive because the gods will make her not to have children when she marry, now if you like, kill her she will not use anything (contraceptive). But apart from her I don't know anybody again. But you may find them if you enter the villages. (Interview 12 with a first year male student of Architecture)

This decline in traditional influences on students' attitudes towards contraception was also reported in other Nigerian studies conducted by Oloruntoba-Oju (2007) and Lawal (2010). Their studies reveal a gradual but steady transition from traditional to modern values among Nigerian students.

Influences of respondents' sexual behaviours on contraceptive practices

Studies on contraceptives practices among Nigerian students have revealed that engagement with multiple partners limits the individual's capacity to use contraceptives (Oladepo and Brieger, 2000; Abdulraheem and Fawole, 2007). However, this was not the case in my findings as there was a significant association between engagement in sexual relationships with multiple partners and the use of contraceptives ($p=0.04$). This suggests that respondents who engage in sexual relationships with

multiple partners are more likely to use contraceptives. As shown in Table 35, of the sexually active respondents who reported having engaged in multiple sexual relationships at a time, majority (57%) reported using contraceptives at the time of the study while About 30% were not using contraceptives. 13% reported not using contraceptives but their partners were using. On the other hand, only 29% of those who were not engaged in multiple sexual relationships used contraceptives, while a majority of 58% were not using. Interestingly, involvement with multiple partners has an association with contraceptive use at p=0.02, df=2. This accounted for about 12% variation in contraceptive use thereby implying that those who engage in multiple sexual relationships are likely to use contraceptives more than those who do not.

Table 36: Engagement with multiple partners and contraceptive use among sexually active respondents (Chi Square, N=110)

Using contraceptives	Involved with multiple partners		Total %
	Yes %	No %	
Yes	56.7	28.8	36.4
No	30.0	57.5	50.0
Partner is using	13.3	13.8	13.6
Total % (n)	**100.0 (30)**	**100.0 (80)**	**100.0 (110)**

x^2=7.98, p=0.02, Lambda sig=0.12

This finding is corroborated by my qualitative interviews. Participants' views and experiences shows that engagement with multiple partners has a positive influence on the individual's use as well as exposure to more methods of contraception.

> *Well for me, it (engaging with multiple sexual partners) rather makes me to use contraceptives more because I believe that just like I have sex with more than one person so also my partners are having sex with others out there, and since it is not everybody that has the power to always use contraceptives I always protect myself against STDs which they may have gotten from the other person. I can never take a chance like that. And even my girls already know me like that. But before when I use to have one girl and we were faithful I can have open (unprotected) sex because I trust my partner and we are faithful to each other. (Interview 7 with a fourth year male student of Mass Communication)*

> *In fact, having multiple sex(ual) partners will even make someone to use contraceptives more, because when you do that (multiple partners) you learn about a lot of contraceptives which is suitable for each partner, but when you are with one partner, you may only be using one contraceptive and sometimes you may even get tired of using it and you may say since you trust your partner let me just do it like that after all if I get pregnant we may marry or even abort it. But if the people (partners) are more than one and I get pregnant, I may not even know who is responsible for the pregnancy and so it will be a thing of shame. (Interview 15 with a fourth year female student of Architecture)*

Although being in multiple sexual relationships is likely to increase an individual's capacity of using contraceptives for protection against unwanted pregnancy and STIs, a participant in interviews reported that it could as well limit the capacity to use contraceptives.

> *People who engage with multiple partners always have higher risk of getting pregnant or diseases (STIs) since they are going out with different people and (it) is not everybody that likes using contraceptive in such cases these people may refuse that you should not use any contraceptive and you cannot convince them, so you will have no choice and if you refuse, some of them can even force you to do it like that (without protection) against your will. But if you are with one partner, any how you will have a way of convincing that person to use contraceptive and even if you don't use there will be no problems since you are faithful to each other. (Interview 3 with a first year female student of Mass Communication)*

Transactional sex among Kaduna Polytechnic students was reported during my interviews to limit the individual's capacity to use or negotiate the use of contraceptives. Some participants in interviews mentioned the following:

> *Most people who engage in transactional sex are aware of the dangers of unprotected sex and will normally want to protect themselves but if their partner should say no to them, because they are in need of material things, they will go ahead and do it(sex) without using condom. (Interview 10 with a first year female student of Mass Communication)*

> *Students who usually do this (transactional sex) whose partners does not want to use contraceptives will always consider it, like how high is the price or reward, and know if they will do it or not. If the reward is high and can take care of their needs, they go ahead provided the man is looking healthy, but if the reward is not too much some of them will not do it (unprotected sex) but some will even say it is better they get the small one than to lose everything so they will still do it without condom. (Interview 4 with a fourth year male student of Mass Communication)*

Students who engage in sexual relationships with partners of older ages were also reported by participants in interviews to have limited options when it comes to negotiating contraceptive use in such relationships. A participant has this to say;

> *Yes students, especially female students go into sexual relationships with men outside the polytechnic, men who are even old enough to be their fathers, but because these men are rich and some of them (the girls) belief that since these men are married or are more exposed to women they will know how to take care of a woman more than boys of their age. So when they go out with these men, the men control them in everything, if they say let us have sex without condom they will accept because they cannot question his authority because it is like arguing*

with your father or your mother. The guys also do this but not like the girls. (Interview 2 with a first year female student of Mass Communication)

Therefore, wide age difference between partners in sexual relationships is likely to affect the capacity to use or negotiate the use of contraceptives during sex.

Chapter 6: Discussion of findings, recommendations and conclusion

In this chapter, I reflect further on my findings in relation to my literature review and research questions. I also present my conclusions and make various recommendations

6.1 Students' contraceptive knowledge and practices

I have organised this section in response to my research questions, as outlined in section 1.2 above:

- What is the level of awareness and knowledge among students in Federal Polytechnic Kaduna about the different methods of contraception (both modern and traditional), and what is their primary source of contraceptive information?
- What is the extent of sexual activity among students in the polytechnic?
- What is the extent and nature of contraceptive use among sexually active students?
- How accessible are contraceptives for sexually active students, here considering in particular availability, cost and the attitudes of polytechnic health workers and other relevant staff towards students seeking access to contraception.
- Do social characteristics such as age, gender, and cultural beliefs and practices (which were identified as important in the general literature) influence students' understanding of and attitudes towards contraceptive use in Federal Polytechnic Kaduna?

Levels of knowledge and sources of information

My study confirmed other Nigerian studies, such as Abiodun and Balogun (2009), Adeyinka *et al,* (2009); Omo-Aghoja *et al,* (2009); Adeokun *et al,* (2009); Tayo *et al,* (2011), which show high levels of contraceptive awareness among Nigerian students regardless of their involvement in sexual activities. In my study, some 95% of respondents were aware of at least one method of contraception. While male students were mostly aware of the condoms and oral contraceptive pills, awareness among female students extended to other forms of contraceptives. This variation in level of awareness among the two sexes could be, because male students are mostly exposed to the use of the condom and lack interest in knowing about other forms of contraceptives which they expect their female partners to know about, since she is expected to use them. On the other hand, female students are more aware of existing methods of contraceptives because more contraceptive methods have been developed for women, Also, since not all methods conform to every body system (Adebayo, 2013), there is always the need to explore more available methods to ensure the use of a more efficient and reliable method. This also could be because females are often faced with the consequences of pregnancy; hence the need to know more about existing contraceptives that could help to protect them against such.

In my findings I confirmed my preliminary assumption that respondents' level of study could influence their exposure to issues of reproductive health, including contraception. All respondents in their fourth year were able to mention at least one method of contraception while a handful of respondents in their first year were unable to mention any contraceptives. Although level of study influenced students' awareness, age was found not to.[24] Being that contraceptive information was mostly acquired from friends, and friends play a larger role in influencing the personality of the individual student in the tertiary institution than when in secondary school. Most of first time students become less dependent on their parents and more dependent on their friends who advices them in all aspects of life. In line with the position of Chiemeke *et al* (date) fourth year students by virtue of their years of stay in the polytechnic are likely to have been more exposed to issues of contraception through their association with different groups of friends, an experience which a first year student may lack.

Despite this high level of contraceptive awareness, the level of actual contraceptive knowledge was low at 48% (see Figure 6 above). However, knowledge of how the condom should be used and the effects of the oral contraceptive pill was found to be high. The relatively high knowledge of condoms and oral pills over other contraceptive methods could be associated with the easy access students have to these methods over the others. Ross and Hardee (2012) have argued that an increase in contraceptive access often leads to an increase in the knowledge of users with regards to how such contraceptives function. Sexual intimacy in relationships was also found to influence the level of contraceptive knowledge among students. Although a weak association, there was a significant difference which indicates that respondents who were in sexual relationships knew more about contraceptives than those who were single and in no intimate sexual relationship (see Figure 8 above). As reported in Table 9 above, although students who are not in any intimate sexual relationship can be sexually active, the level of sexual activity and contraceptive use (discussed further below) was higher among those in intimate sexual relationships, therefore, the chances that they will know better about the contraceptive they use.

Given that knowledge is embedded in specific social contexts, students have varying levels of contraceptive knowledge which could be determined by the validity of the source through which they acquire such knowledge. Although, studies by Okunlola *et al*, (2006); Adeokun *et al*, (2009) and Tayo *et al*, (2011) in other parts of Nigeria suggests the media as the major source of contraceptive information for Nigerian youths, in my study friends were found to be the major source of contraceptive information for students at the polytechnic, followed by the media. This could account for the high contraceptive awareness and low levels of actual contraceptive knowledge. Friends who

[24] Age and level of study are not associated among my study group, as students' age is not evenly distributed according to their level of study.

provide information to students on contraceptives, as argued by Esiet *et al*, (2009), are likely not to know much about contraceptives as they also rely on information they get from other friends which could be false or incomplete. This exposes students to the risk of unwanted pregnancy and contraction of STIs either due to incorrect or non-use of contraceptives resulting from negative attitudes formed by faulty knowledge gotten from inexperienced friends.

Communication between parents and their children, health workers and students on issues of reproductive health including contraceptives was found to be low at just 1% and 13% respectively (see Figure 9). Societal expectations demands that parents by virtue of their experience in life and health workers because of their training should provide adequate and efficient information to students; however, these sets of individuals have failed in their duty to do so, either due to religious or traditional beliefs or other personal reasons. Although studies by Berber, (1997) and Upchurch, Aneshensel, Sucoff, and Levy-storms, (1999) reveals that intimate and open relationships between parents and their children, with increasing support and moderate restrictions, often leads to safe sexual practices. The level of openness in parent-child relationships regarding issues of contraception in my study was found, in my interviews to be low, as not many students feel free to discuss or seek for advice about contraception with their parents.

Traditionally, discussions around issues of sex and contraception are not encouraged between the older members of society who are married and the young unmarried youths. As was also found in an earlier study by Arowojolu *et al*, (2002), it is believed that exposing youths to issues of contraception is likely to promote sexual promiscuity among them, therefore, Friedman cited in Sugh (2011), reveals that traditional socialization of youths considers information about reproductive health as dirty and should not be discussed openly with young people. In line with traditional norms as these, religious beliefs also frowns at youths being exposed to issues of sex and contraception before marriage. Parents and health workers who are committed to such religion may not see the necessity to educate students who are sexually active on issues as this. As was stated by a participant in my interviews, discussing contraceptives as well as encouraging its use (especially among the unmarried) is a sin against God and should be avoided. These, sometimes make it difficult for young students to get the accurate information they require which is expected to develop in them positive attitudes towards contraceptives and consequently encourage contraceptive use.

Also significant, the level of contraceptive awareness and knowledge was found in my study not to influence contraceptive use. This implies that having detailed knowledge of contraceptive methods does not necessarily translate into contraceptive use, as some may not use contraceptives due to their knowledge of its side effects (see Table 23 above). However, students are aware of its importance and are willing to learn more about contraceptives so as to be responsible for their own wellbeing. Hence, this points to the need for the relevant authorities to initiate and implement programs that will help to educate youths especially students on issues of reproductive health including contraception. To this

effect, as suggested by respondents, sex education should be introduced into the school curriculum at different stages. There should also be media campaigns as well as seminars and workshops to enlighten the public on issues of contraceptives.

Also, given that the polytechnic environment is one that offers students high level of social freedom and encourages high social interactions, . the Institution has a responsibility to educate its students about life in their new environment through orientation programmes that will seek to counsel students in terms of both their academics as and health issues in and around the polytechnic (Omede, 2011; Idogho, 2011). However, the importance of such programmes have either been downplayed or completely ignored by the Institution, thereby leaving this role to peers who have been in the polytechnic for some time (Chiemeke *et al*, 2009; Idogho, 2011). Consequently, the individual student who is new and probably not well prepared to face challenges from his/her new environment may lack the proper knowledge needed to function effectively and make positive and informed choices in terms of academics as well as social and health-related issues.

Thamlikitkul (2006) argued that knowledge about health issues in itself is not enough to improve peoples' choices towards health practices. He argued further that this knowledge should rather suit the existing diverse social and political context. This emphasizes the importance of the role of health care providers, in the polytechnic, who have been trained to educate people on such issues of reproductive health as it applies to each society.

Sexual activity and contraceptive use

Confirming other Nigerian studies among students in tertiary institution (Salako *et al*, 2006; Izugbara and Modo, 2007; Abdulraheem and Fawole, 2009), my study revealed a relatively high prevalence rate of sexual activity among students, with a low level of contraceptive use. Of the 60% sexually active respondents (see Table 8) only 38% were using contraceptives (see Table 21). In my study, years of study at the polytechnic and the individual's relationship status are likely to influence the level of sexual activity. Also, the condom was found to be the most commonly used contraceptive. Traditional contraceptives as beads and concoctions, believed to have fetish powers as reported by Bablola (2009), were also reported to be used by some students in the polytechnic to protect themselves against pregnancy and the contraction of STIs.

The polytechnic environment, like other higher education institutions in Nigeria, offers students a high degree of social interaction and social freedom which often encourages the establishment of sexual relationships. Activities such as welcoming parties for new students, and other social events encourage free interaction between students, thereby increasing the likelihood of sexual. This finding corroborates other findings about sexual activity in Nigerian higher education institutions (Ejembi and Otu, 2004; Odimegwu, 2005; and Nwokocha, 2007). Given the non-availability of contraceptives such as condom in public places, as was reported in my study, this could lead to unprotected sex

thereby, increasing the tendency of contracting STIs as well as unwanted pregnancy and the risk associated with it.

As stated in my conceptual framework, I see sexual relationships as formed and shaped by the social meanings we attach to them. In my study, students were found to attach different meanings to sexual relationships: while some see sex in relationships as a means of expressing true love and affection towards their partners, others see it as a means for acquiring financial or other material gains. These meanings were found to influence the social practices which exist in such relationships and as Connell (1987) argued, these social practices are what forms and sustain relationships. Social practices in sexual relationships among students of Kaduna polytechnic were found to include engaging in multiple sexual relationships at a time, transactional sex, engaging with partners of significantly higher ages and sometimes coerced sex.

Engaging in multiple sexual relationships at a given time was found to be practiced more by male students (see figure 3 above). As reported in my interviews, although society frowns at such practice and consider students in multiple sexual relationships as promiscuous, students that practice it will rather understand it as a means of having fun, gaining social respects from their peers or for economic purposes. Male students who engage in multiple sexual relationships were reportedly referred to by their peers as being smart and intelligent, while female students were seen as being beautiful or "experts" in sex. However students also engage in multiple sexual relationships with partners of a higher economic status than themselves, due to the perceived financial or material gains accruing from such relationships. This corroborates the finding of Izugbara and Modo, (2007), which reveals social acceptance among peers as well as economic gains as part of the reasons why students of higher institution in Nigeria engage in multiple sexual relationships.

Students engaging in multiple sexual relationships are more likely to be more sexually active. Interestingly, this practice was reported in my interviews to encourage the use of contraceptives among such students. Trust for one's partner was reported in my interviews to encourage unprotected sex; people in multiple sexual relationships are likely not to have sufficient trust for their partners compared to those in single sexual relationships. Students in multiple sexual relationships are also more likely to perceive their partners as also being unfaithful and this perception is likely to influence the individual towards practicing safe sex, by using contraceptives to protect themselves from pregnancy and especially STIs which a partner is likely to have contracted from other sexual partners. Although, having multiple partners in some way could also expose an individual to unprotected sex if one of the partners will not want to use any form of contraceptive during sex. Such could lead to coerced sex especially, when the woman insists on 'no sex without protection'. This later finding is in line with the finding of Adeyinka *et al*, (2009), which reported that engaging in multiple sexual relationships could limit the individual's capacity to use contraceptives.

Students in the polytechnic were also found in my study to engage in transactional sex with individuals both within and outside the polytechnic whom they perceived as having the capacity of meeting their needs. Of importance is that anecdotal evidences in my interviews revealed transactional sex to be higher among female students than their male counterparts (see Section 4.2). As was also reported in a 2007 study conducted by Nwokocha, most students who engage in transactional sex do so either due to poverty or the quest to achieve material gains, including higher marks, which will enable them step up to a higher status than their friends or belong to the same status group as people who are regarded as being rich and influential among the students.

Unlike the situation with multiple sexual partners, transactional sex among students of the polytechnic was found to affect or limit their capacity to negotiate or use contraceptives. This is because they need to please their partners to achieve the desired reward –the end justifies the means. As stated in my interviews and supported by the study of Fawole *et al* (2011), the higher the material gain the more sexual risk such individuals are willing to take.

There are instances where students are coerced into sex against their will by the use of threats from partners, including threatening to go to another sexual partner or, in the case of lecturers, threatening to fail such students.[25] Students who fall victim to this may lack the capacity to negotiate the use of contraceptives during sex if such partners decides not to use them, thereby being exposed to the risk of contracting STIs and unwanted pregnancy.

Interestingly, age difference in heterosexual relationships was found to affect the individual's capacity to use contraceptives during sex in such relationships. Female students were more likely than male students to engage with partners outside the polytechnic who as described by a participant in my interviews could be "as old as their fathers". While some believe that such relationships exist in the form of transactional relationships, others are of the view that it is influenced by genuine love as well as the belief that partners of older ages (especially male partners) have the capacity of caring and staying committed to relationships. Whatever the reason for being in such relationships, the partner who is older will often have more power when it comes to decision making in the relationship including contraceptive use during sex, thereby making it difficult for the younger partner to have a say. This could be due to the respect they have for the older partner because of his/her age or due to what he/she has to offer in the relationship (material gains or care and commitment).

Contraceptive access and contraceptive use

The National Population policy (NPP) and National Reproductive Health Policy (NRHP) was adopted by the Nigerian government in 2001 to ensure (among other goals) that all Nigerians (male and

[25] This is an anecdotal report which is worth investigating further, given that from my findings I cannot authoritatively say anything about its prevalence.

female, young and old) have access to the contraceptives of their choice at the right place, at all times and at the cheapest possible cost. These policies were meant to improve contraceptive use among the various categories of the Nigerian population. Despite this, the problem of contraceptive access among students still remains.

Findings from my survey and interviews with students at the polytechnic show the relative non-availability of contraceptives in the polytechnic for students who require it (see Section 5.2). Contraceptives were reported to be mostly available only outside the polytechnic in private pharmacy stores, which was reported to be the primary source of contraceptive for students at the polytechnic, and located at relatively long distances from the polytechnic. At these stores, students pay for contraceptives at varying prices depending on the method they want as well as the location and size of the pharmacy store; pharmacy stores which are bigger in size and located within the town and close to the polytechnic tend to charge higher prices for their products than those which are smaller in size or located farther away from the polytechnic.

Although, contraceptives may be available in the polytechnic clinic, as reported by the clinic staff, poor communication system between the health workers and students could be a reason why students feel contraceptives are not available. Also from the responses by the health workers I interviewed, it appears that health providers do believe that contraceptives should not be provided to the young and unmarried who are expected to abstain from sex and contraceptives until they are married. This increases the possibility of clinic staff expressing scornful attitudes (which was reported by students) towards young and unmarried students who are seeking for contraceptives at the clinic.

My study also confirms the findings of a 2013 study by Levy *et al,* which suggest the possibility of young Nigerian adults to experience social restrictions to acquiring and using contraceptives through the expression of negative attitudes by health providers towards young unmarried youths seeking for contraceptives. In my interviews with students, there was the expression of fear that they are likely to experience negative, scornful or even hostile attitudes from health care providers in the clinic when they go to seek for contraceptives. This fear among students was confirmed during my interview with health workers in the polytechnic clinic where they indicated that although some of them (health workers) are nice to unmarried students seeking for contraceptives there are others that are usually harsh and hostile to these students.

Interestingly, health workers who reported being nice and helpful to these students also believe that young and unmarried students should not be exposed to contraceptives as it will encourage premarital sex which is against traditional and religious norms. Beliefs as these fail to recognise students as sexually active beings whose sexual needs ought to be met by the society. As a result of this non-recognition of students' sexual needs, they are often exposed to the dangers of risky sexual activities

being that they cannot take precautionary measures even when they want to, due to these social restrictions - as argued by Reyna and Farley, (2006).

On the contrary, health care providers who operate private pharmacy stores (the primary source of contraceptives for the students) outside the polytechnic were found to have positive and friendly attitudes to students seeking for contraceptives irrespective of whether students are married or not. Though, students feel that the friendly attitude these pharmacists express towards them may not be genuine, rather because of the financial benefits they stand to achieve from their clients' patronage. However, this may not always be the case as certain pharmacist may still be unfriendly to such students despite their aim of making financial gains, either due to significant age difference between the provider and the student or due to strongly held religious or traditional beliefs that proscribes premarital sex.

In addition, most pharmacists selling contraceptives to students do not usually test their blood to determine which method will suit their body system; they rather just sell or administer whichever method the student asked for. This could either be due to inadequate knowledge of contraceptive methods on the part of the providers (as stated by Herbert *et al*, 2013) or due to negligence. This practice could have severe health hazards on the user and could lead to the formation of negative attitudes towards contraceptives which will in turn lead to the non-use of contraceptives. Therefore, it is necessary for relevant authorities to ensure that pharmacists are properly trained and their activities supervised to ensure that they render proper and efficient services to their customers.

The nature of contraceptive availability for students of Kaduna Polytechnic was found to inform their choice and practice of contraception - some students would rather have unprotected sex at than lose the opportunity due to delays caused by having to go far distances to obtain contraceptives. Also, having to pay for contraceptives (even at low prices) was found to discourage certain students from using it during sex.

My study confirms the findings of Ross and Hardee (2012) that no single method of contraception has been found to satisfy all needs as each method has its shortcomings. In my study the condom and oral pills were found to be the most accessible contraceptives, this is a problem for those students who are either allergic to latex and/or are reactive to the oral pills and are unable to readily access alternatives. Providing variety of contraceptive methods at equal levels to students in the polytechnic will encourage contraceptive use by providing them with more choices to make for an appropriate and convenient method.

Students were found to have varying opinions on improving contraceptive access for students. While certain students see providing more contraceptives as a way of reducing the risks associated with unprotected sex, others see it as a way of encouraging premarital sex which is against moral and religious norms. These views of students as reported by Osakinle *et al*, (2013), could be informed by

societal influences either in terms of exposure to social life, individual experiences and recognition of the benefits of safe sex among youths or traditional and/or religious beliefs that perceive contraceptives as encouraging promiscuity and a sin before God.

Influences on students contraceptive practices

Drawing from the recognition that the Health Belief Model does not fully explain the gap between contraceptive awareness and use, as argued by Dejoy (1996), I recognise the study of Reyna and Farley (2006) which reported the need for the examination of social factors that tend to influence the individual's course of action in relation to health behaviours. In line with Reyna and Farley, I explore possible influences (age, gender relations and cultural beliefs and practices) on students' contraceptive practices without probing these influences in depth. However, my study was able to identify important issues, such as gender relations as well as religious and traditional beliefs and practices. This warrants further research.

Gender relations and contraceptive practices in sexual relationships

Adaramaja *et al*, (2010) and Gibbs (2012) have argued that gender identities and roles influence decision making regarding reproductive health issues. A 2006 study by Duze and Mohammed reveals male dominance with regards to decision making on issues of contraception in Nigeria. Gender norms encouraging male dominance on reproductive health issues, was also reported by Adamu in 2008 to be widely shared among different ethnic groups in Nigeria, thereby perceiving the male partner as superior in such relationships and the female as a subservient partner who is expected to be submissive to the decisions and authority of her male partner.

Interestingly, male dominance does not significantly influence contraceptive use among students of Kaduna polytechnic. Rather, my findings (see Section 5.3) suggest more egalitarian practices among the students, where both male and female partners in sexual relationships take decisions on contraceptive issues. In general women are seen as being responsible for their bodies and should be able to take control of it by deciding whether to use contraceptives during sex or not. However, there is still evidence of the authority of patriarchy as certain respondents still believe that the man should be the decider of whatever happens in a relationship including decisions on the use and non-use of contraceptives during sex.

My study also suggests that the motives behind embarking on sexual relationships are important for determining gendered power relations around the use of contraception. The most materially influential partner in transactional relationships was found to mostly take decisions on whether or not to use contraceptives during sex in such relationships. Since he/she provides the benefits, he/she also determines what happens in the relationship. Sexual relationships which are just meant for fun but also for emotional intimacy give the female partner an edge in decision-making around contraception.

Further, in serious intimate and committed relationships both partners often take decisions on the use of contraceptives together. However, except in well established relationships, the initiation of condom use during sex is still seen as a masculine responsibility. Corroborating the findings of Smith in 2000, girls who initiate condom use during sex are often considered by students to be promiscuous.

My findings thus corroborate the studies Duze and Mohammed (2006) and Adamu (2008) which suggest that there has been a gradual change in the attitude of Nigerian youths from a widely held masculine gender norm to a more egalitarian one which now considers the rights of the woman in heterosexual relationships. This change in attitude could be as a result of campaigns geared towards addressing the reproductive health needs of young Nigerians of both sexes as well as an increase in the educational attainment of men who now believe in the rights of women and the increase in the awareness of women as regards their rights on issues of reproductive health (Olisemeka and Salim, 2011).

Religious beliefs and students contraceptive practices

Nigerian studies by Odimegwu, (2005) and Avong, (2012), reveals the significant role religion plays in influencing the attitudes of young Nigerians on issues of morality, sexual behaviours and contraception. Similarly, in my study, religious beliefs and practices were found to have a strong influence on the individuals' attitude towards the use of contraceptives. Contraceptive use was found to be low among respondents of both religions (Christianity and Islam). However, Christian students were found to use contraceptives more than their Muslim counterparts. This variation in rates of contraceptive use among Christians and Muslims students is largely as a result of religious teachings as stated by Avong (2012); variations in theological doctrines of religious organisations have led to differentials in beliefs and practices towards contraception.

Duze and Mohammed in their study published in 2006, suggested that Islam discourages the use of contraceptives even within marriage but rather teaches its followers to open every sexual act to procreation as no human have the capacity to decide the number of children he/she should have. It is therefore a sin against God to use contraceptives. This teaching influences Muslim students, especially those who are very committed, and could limit their capacity of using contraceptives even in marriage. The Christian religion on the other hand discourages the use of contraception among the unmarried but approves of the natural methods among married couples thereby suggesting the need to control the number of children a couple should have in marriage. Though, the extent of religious influence on the individual student was found to be dependent on the individual's commitment to the religion to which he/she is affiliated to. Religious influence was also observed in the responses and perceptions of certain students and health care providers in the polytechnic towards issues of contraceptive availability as discussed above.

Some students are of the opinion that religious teachings against sex and contraceptives are archaic and should be changed to embrace modernity in the existing social context by recognizing young people as sexually active beings and rather encourage the practice of safe sex through contraceptive use than discouraging it. On the other hand other students' belief that religious teachings are sacred and should not be tempered with in anyway, as such they suggest that religious teachings as this, came from God and should not be altered by man to suit his "sinful desires" but rather be sustained and practiced by all mankind. Therefore, as stated by Odimegwu in 2005, students who are only affiliated, but not committed, to a particular religion tend to have more positive attitude towards contraceptives and will likely use them during sex while students who are committed to their religion tend to have negative attitudes towards contraceptives and will not use them even when they cannot abstain from sex; as was reported by a participant in my interviews.

Traditional beliefs and students' contraceptive practices

In my study, traditional beliefs such as those practiced by the Igala ethnic group of Kogi State, Idomas of Benue State as well as certain ethnic groups in Kaduna State and other parts of Nigeria were found to strictly prohibit the use of contraceptives both within and outside marriage. These traditions will rather prefer abstinence; otherwise, all sexual activity should be open to procreation. These practices were held in high esteem and sanctions meted to individual defaulters either by the deity or by other pressure groups shouldered with the responsibility of executing such sanctions in the community.

These traditions have been passed on from older generations to younger once and were found to still be in practice in these parts of Nigeria (although not as strict and widespread as it was in previous generations). While some traditions like those in the southern parts of Kaduna State lay more emphasis on the prohibition of sex among young unmarried youths, others like those in Benue and Kogi, lays more emphasis on the prohibition of contraceptive use. These later traditions seem to be a bit liberal on issues of sex, thereby increasing the tendency of youths actually engaging in sex but avoiding the use of contraceptives for which the sanctions apply. These practices were found in my study to have a negative influence on students' attitudes towards contraceptives, especially students from rural areas where such norms are still being practiced. These beliefs are being sustained in such students by the fear of infertility which is a sanction that could be meted out by the deity on the individual for using a contraceptive to protect against pregnancy and/or STIs.

While some students reported not been influenced by these traditional believes and practices, it was found in my study to still influence the contraceptive choices of few students in the polytechnic (especially students of rural origins). As was argued by Lawal (2010), there has been a decline in cultural influences on students' attitudes towards contraceptives, he reported a transition from traditional to modern values among Nigerian students , while some students go along with this

cultural transition, others continue to be influenced by the traditional cultural values and norms that govern their existence.

6.2 Recommendations with regards to findings

Various interventions are required for contraceptive use to be improved, thereby decreasing the risk associated with unwanted pregnancy and the spread of STIs among students in Kaduna polytechnic and by extension students of tertiary institutions in other parts of Nigeria and especially the northern region. The following recommendations are made in line with the findings of my study.

Firstly, due to the low level of contraceptive knowledge, there is a need to improve contraceptive knowledge among students. Accurate and detailed information should be passed to students with the aim of correcting the misperceptions they have about contraceptive methods and creating more positive attitudes in them towards contraception. Intervention programs should be put in place to ensure that students as well as the general public get adequate and correct information on contraceptives. This could be achieved, as suggested by students, if sex education were introduced as part of the institution's academic programme. Public campaigns should also be organised by the institution through the media (both electronic and print media), seminars and workshops organised for students with regards to educating them about contraception.

Also, religious and cultural beliefs, which were found to influence students' contraceptive practices by prohibiting contraceptive use, need to be changed to begin seeing youths as sexually active beings and so embrace the inevitability of sexual practices among them. These teachings should be more concerned about promoting safe sexual behaviours among sexually active youths while still encouraging abstinence among the young and those who have not yet made their sexual debut. Cultural beliefs that discourage discussions of sex and contraception among youths should be changed to rather encourage a cordial relationship between adults and youths, parents and children. These relationships should be established on mutual trust and should seek to educate youths and children on issues of reproductive health so as to give them accurate information and develop in them positive attitudes which will eventually help them in making sound decisions in future with regards to contraception and thereby enable them to prevent the devastating dangers of unprotected sex.

Secondly, to ensure the success of these interventions, there is also the need to educate health workers, both within and outside the polytechnic environment, to ensure not only that they have correct information about contraception, but also to change their widely negative perceptions of students who seek contraceptives from them. Health workers should be encouraged (if possible under supervision from relevant authorities) to disseminate such information to students who come to seek for contraceptives from them, and should be given the responsibility of anchoring programmes both in the media and during seminars and workshops with regards to contraception.

Thirdly, given the home as the primary agent of socialization, there is the need for parents to educate their children on issues of reproductive health and contraception. To achieve this, parents need to be encouraged through a general public education programme organised by relevant authorities, using the media, community leaders as well as religious leaders to educate parents on the need for such.

Fourthly, intervention programmes should seek to discuss the dangers of risky sexual behaviours[26] among students and the need for the individual student to prioritise safety above material gains especially in transactional sexual relationships. Unequal gender power relations must also be discouraged; rather, the egalitarian view found among many students about gender and contraception in sexual relationships should be encouraged and propagated at all levels to ensure that a partner should have the capacity to carter for his/her reproductive health needs without being compelled or restricted by the other partner.

Lastly, other factors discouraging students from using contraceptives also need to be addressed. Of great importance is that, contraceptives should be made easily accessible to students at low cost, if not free, and at convenient places where students can access them with ease. I recommend that condoms should be placed in secure boxes in public places such as toilets and other convenient corners where students can access them without the fear of being seen by others. Other methods should also be made available in the polytechnic clinic and its availability be effectively communicated to all students irrespective of their marital status and/or age. Health care providers must also be encouraged to be friendly to students seeking for contraceptives and educate them on the correct ways of using them to prevent against unwanted pregnancies and STIs.

Recommendations for further study

Due to the exploratory nature of my study, I make the following recommendations with regards to further studies. Firstly, my study was conducted within a single research site in northern Nigeria. As such, findings from my research may not be fully applicable to other settings outside my study area, owing to differences in cultures and varying social environments. Students' vulnerability to unprotected sex could be understood more if similar studies were extended to cover other tertiary institutions, especially in northern Nigeria.

Secondly, with regards to my methodology, although, focus groups were initially part of my research design, but could not be conducted for reasons discussed earlier. I recommend that further studies should include focus group discussions so as to be able to determine the effects of group dynamism in responses to questions asked during interviews. Also, further studies could try working with a larger sample of respondents so as to be more accurate in making generalizations based on the findings of the study.

[26] Any sexual act that exposes the individual to the risk of unwanted pregnancy or contraction of STIs

Thirdly, in my study I tried to find out what social characteristics of students, influences their contraceptive practices. I recommend that further studies should try to explain fully the extent, nature and processes of such influence on students' attitudes towards contraceptives by probing in depth the influences of gender and cultural beliefs on students' contraceptive practices. To achieve this, I recommend a more extensive in-depth qualitative study that can probe meanings and nature of influences.

Lastly, I tried to understand the levels of knowledge students have about contraceptives and if this knowledge influences their attitudes towards contraceptives. In further studies, this could be extended to also cover student's knowledge and perceptions on unwanted pregnancy and STIs and how these perceptions influence their attitudes towards contraception.

6.4 Conclusion

My research attempted to explore contraceptive knowledge and practices among students of Kaduna Polytechnic with reference to the extent of sexual activities, contraceptive use, as well as contraceptive accessibility and influences of social factors on students' contraceptive practices.

Despite students' high awareness of the existence of contraceptive methods and continuous engagement in sexual activity, the level of actual contraceptive knowledge as well as the rate of contraceptive use among students was found to be low. Friends and the media were found to be the major sources of contraceptive information for students; this makes it likely that incorrect or incomplete information is conveyed to students, which could lead to them developing negative attitudes towards contraceptive use or being exposed to the dangers of contraceptive accidents.

Patterns of students' sexual behaviours were found to influence the students' attitude towards the use or non-use of contraceptives. While having multiple sexual partners was found to encourage students to use contraceptives, other forms of sexual activity, such as transactional sex and engaging in sexual relationships with partners of older ages, tends to limit the students' capacity to use contraceptives.

Contraceptive use, including emergency contraception, was low among sexually active students. However, the condom and oral pills were found to be the most commonly used methods of contraception among students. . Contraceptives were not easily available for students in the polytechnic. Negative and unfriendly attitudes of health care providers towards students seeking for contraceptives was also found to limit contraceptive use among students in the polytechnic, thereby exposing them to the dangers of unprotected sex. Traditional and religious beliefs and practices were also found to influence the individuals' attitude towards contraception, while there was evidence to suggest that gender attitudes are shifting and women's rights to negotiate contraceptive use in sexual relationships is gaining recognition, although unequal power relations still are significant, especially when the woman is significantly younger and economically more vulnerable than the man.

Finally, students at the polytechnic were eager to talk about their concerns and showed a willingness to find out more which is encouraging and should be worked with by the polytechnic authorities.

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Appendix A

Questionnaire

University of Stellenbosch

Department of Sociology and Social Anthropology

An Exploratory Study on Contraceptive Practices among Students in Kaduna Polytechnic, Nigeria

Questionnaire number: _____

Date: _____

INSTRUCTIONS: Please tick only the box or boxes beside the options provided that best represent your position or views for each questions, or write out your answers in the gaps where no options are provided for questions. (DO NOT use the coding column). Please answer as truthfully as you can. Your identity will not be known or revealed through this questionnaire.

SECTION ONE		
1. Age at last birthday	……. years	
2. Gender	☐ Male ☐ Female	1 2
3. Faculty / Department		
4. Level of study	☐ ND 1 (first year) ☐ HND 2 (fourth year)	1 2
5. Place of permanent residence	☐ Urban ☐ Rural	1 2
6. Place of residence in the Polytechnic	☐ In Polytechnic hostel ☐ Off campus	1 2
7. Religion	☐ Christianity ☐ Islam ☐ Indigenous ☐ Other, (specify) …….. ☐ Is 'Not applicable	1 2 3 4 5
8. Current relationship status (Single includes never married and also previously but no longer married)	☐ Single, no romantic and /or intimate relationship ☐ Single in a steady romantic and/or intimate relationship ☐ Married ☐ Other, (specify)……..	1 2 3 4

SECTION TWO		
1. Please list all the forms of contraceptives that you have heard of or know of.		
2. In your view, how knowledgeable are students about contraception in Kaduna Polytechnic.	☐ Very knowledgeable ☐ Fairly knowledgeable ☐ Not very knowledgeable ☐ Not at all knowledgeable ☐ Not sure/don't know	1 2 3 4 5
3. Which is/are the source(s) through which Kad Poly students acquire their knowledge about contraception?	☐ Media ☐ Health workers ☐ Friends ☐ Family ☐ Other, (specify)……	1 2 3 4 5
4. What is the effect of oral contraceptive pill?	☐ It makes a woman to miss her period ☐ It prevents a woman from getting pregnant during sex ☐ It prevents sexually transmitted diseases ☐ All of the above ☐ None of the above ☐ Not sure/don't know	1 2 3 4 5 6
5. Can certain antibiotics decrease the effectiveness of contraceptive pills?	☐ Yes ☐ No ☐ Not sure/don't know	1 2 3
6. A woman could get pregnant while using contraceptive pills during sex.	☐ Yes ☐ No ☐ Not sure/don't know	1 2 3
7. How many times should one use a single condom during sex?	☐ Only once ☐ More than once, if it is washed properly ☐ Not sure/don't know	1 2 3
8. One can effectively substitute condoms with household wraps or a balloon during sex.	☐ True ☐ False ☐ Not sure/don't know	1 2 3
9. A woman could get pregnant while using condom during sex.	☐ Yes ☐ No ☐ Not sure/don't know	1 2 3
10. A woman could get pregnant while using injectable contraceptives during sex.	☐ Yes ☐ No ☐ Not sure/don't know	1 2 3

11. A woman could get pregnant while using the withdrawal method during sex?	☐ Yes ☐ No ☐ Not sure/don't know	1 2 3
12. A woman could get pregnant while using the temperature reading method of contraception during sex?	☐ Yes ☐ No ☐ Not sure/don't know	1 2 3
13. For how many days per month are women fertile, ie. most prone to falling pregnant if sexually active in the time?	☐ 1 – 2 days per month ☐ 4 – 6 days per month ☐ Any day of the month ☐ Not sure/don't know	1 2 3 4
14. Which one of the following statements best explains what 'emergency contraception' means?	☐ It is contraception that is given to a woman **only** in an emergency situation, such as rape, to prevent pregnancy. ☐ It is taken by a woman to terminate an unwanted pregnancy. ☐ It is any device or drug that is used or taken immediately or soon **after** a woman has engaged in unprotected sex, to prevent pregnancy. ☐ It is a contraceptive pill which must be taken by a woman immediately **before** having otherwise unprotected sex, to prevent pregnancy.	1 2 3 4
15. Emergency contraceptives can also protect a woman from sexually transmitted diseases.	☐ Yes ☐ No ☐ Not sure/don't know	1 2 3
16. Can emergency contraception fail?	☐ Yes ☐ No ☐ Not sure/don't know	1 2 3
17. Would you like to know more about contraception?	☐ Yes ☐ No ☐ Not sure/don't know	1 2 3
18. If you answer 'Yes' to question 18, What aspect of contraception would you most like to know about?		

SECTION THREE		
1. Have you ever had sexual intercourse?	☐ Yes ☐ No	1 2
2. If yes, at what age did you first have sexual intercourse?	…… years	

3. How frequently have you had sexual intercourse in the past six months?	☐ Every or most days ☐ More than once a week ☐ Approximately once a week ☐ Several times a month ☐ Approximately once a month ☐ A few times ☐ Once ☐ Not sexually active in the past 6 months	1 2 3 4 5 6 7 8
4. Have you ever been involved in sexual relationships with more than one person at the same time?	☐ Yes ☐ No	1 2
5. Have you ever had sexual intercourse against your will?	☐ Yes ☐ No	1 2
6. Are you currently using any contraception?	☐ Yes ☐ No ☐ I am not but my partner is using it	1 2 3
7. If you answer **'I am not but my partner is'** to question 6, What contraceptive method is your partner using?	☐ Condom ☐ Oral pills ☐ Injection ☐ Withdrawal ☐ Diaphragm ☐ Implants ☐ Abstinence ☐ Temperature reading ☐ Other specify …… ☐ Not sure/don't know	1 2 3 4 5 6 7 8 9 10
8. If you answer **YES** in question 6, what contraception are you using?	☐ Condom ☐ Oral pills ☐ Injection ☐ Withdrawal ☐ Diaphragm ☐ Implants ☐ Abstinence ☐ Temperature reading ☐ Other (specify) ……	1 2 3 4 5 6 7 8 9
9. Are you satisfied with your choice of method with regard to contraception?	☐ Yes ☐ No ☐ Do not use contraception	1 2 3
10. If you answer '**No**' to question 9, please explain why you are not satisfied.		
11. If you are sexually active and not using contraception, what are your reason(s)?		
12. Have you ever used emergency contraception?	☐ Yes ☐ No	1 2

13. Has your partner ever used emergency contraception?	☐ Yes ☐ No ☐ Not sure/don't know	1 2 3
14. Would you consider using emergency contraception after engaging in unprotected sex?	☐ Yes ☐ No ☐ Not sure	1 2 3
15. If you answer 'No' or 'Not sure' to question 14 above what are your reason(s)?		
16. Have you ever been involved in a sexual relationship where you were forced by your partner to use a method of contraception?	☐ Yes ☐ No	1 2
17. Have you ever been involved in a sexual relationship where you were prevented by your partner from using contraception?	☐ Yes ☐ No	1 2
18. Have you ever been involved in a relationship where you concealed from your partner that you are using a method of contraception?	☐ Yes ☐ No	1 2
19. In your experience, who decides on whether to use contraception or not?	☐ Male Partner ☐ Female partner ☐ Both partners together ☐ Not sure	1 2 3 4
20. Who do you go to for advice and/or to discuss issues around contraception?	☐ Mother ☐ Father ☐ Sister ☐ Brother ☐ Other relatives (specify) ……. ☐ Partner ☐ Friend(s) ☐ University health worker ☐ Private Chemist ☐ Doctor ☐ Religious leader ☐ Other (specify)	1 2 3 4 5 6 7 8 9 10 11 12
21. How available are contraception methods to students?	☐ Easily available ☐ Difficult to obtain ☐ Not available	1 2 3
22. If you are using contraceptives, where do you obtain them?	☐ At the Polytechnic clinic ☐ Local clinics outside the Polytechnic ☐ Friends ☐ Parents ☐ Pharmacy stores ☐ Private doctors ☐ From boxes at public places ☐ Other (specify) ……	1 2 3 4 5 6 7 8

23. How would you describe the service at the place where you obtain contraceptives?	☐ Friendly ☐ Helpful ☐ Well-informed ☐ Unfriendly ☐ Unhelpful ☐ Uninformed ☐ Makes me feel awkward/ashamed ☐ Makes me not want to go back there ☐ Makes me feel Okay about going back there ☐ Other, (specify) ……...	1 2 3 4 5 6 7 8 9 10
24. What intervention do you think should be put in place to increase students' knowledge of contraception?		
25. Do you think students' access to contraception methods could or should be improved?	☐ Yes ☐ No	1 2
26. If you answer 'Yes' to question 25, what suggestions do you have about how access should be improved?		
27. Is there anything else you would like to comment on, in relation to contraception?		

28. As part of my research I will also be conducting individual interviews and group discussions with students who are willing to participate in my study in this way. I would therefore like to know if you would be willing to participate in either the interview or the group discussion, should I request it. Please note that participation in follow-up interviews and/or discussions will be on the basis of informed consent at the time and students who volunteer now will still be able to withdraw should they change their mind. Depending on the response, I may also not be in position to include everyone who volunteers in this additional phase of my research.

If you would be willing to participate in this way, please tick the appropriate box below and provide your mobile number so that I can contact you to make follow-up arrangements. Steps will be taken to ensure that your details, including your phone number, are stored in a secure place and kept confidential.

Willing to participate in follow-up research activity:

Individual Interview ☐ Group discussion ☐

Mobile phone number(s) _____, _____

Thank you for your time and cooperation.

Appendix B

Individual Interview Guide

The following are the types of issues I will explore in interviews with male and female students

Student survey number:

Date of interview:

Informed consent:

1. How would you describe sexual relationships among students of Kaduna polytechnic?

   (How would you compare this with sexual relationships among young people who are not at the university? How can you compare it with young people in your village/community? Where did you learn about sex? Where did you learn about contraception? Is contraception something you could ever discuss with either or both of your parents or with other family members? If not, why not? Do your friends influence your decision regarding the use or non-use of contraception? in what ways?)

2. How readily available are contraceptives to Kaduna polytechnic students?

   (Where do you get contraceptives? How convenient are such places of access? What is the distance from campus? At what cost do you obtain contraceptives? What methods are available? Through what ways can contraceptives be made more available to students?)

3. How would you describe contraceptive usage among Kaduna polytechnic students in terms of gender relations?

   (Who decides on when and which contraceptive method to use? and why is it so? Who benefits more from contraceptive use? And who is more vulnerable to contraceptive side effects (where applicable)? Do you think male and female partners should have equal rights in decision making on contraception? Why? Do you know of many unwanted pregnancies as a result of not using contraceptives or contraceptive failure? What happens?)

4. Are there cultural practices or beliefs that affect an individuals' perception on contraception?

   (In terms of religious teachings, cultural norms and values, what are these beliefs and practices? What do you think of them? Are they right or wrong? Are they changing over time?)

5. How would you describe the attitude of health care providers within and around the polytechnic towards students who seek for contraceptives?

   (Do health care providers respect you? Are they usually friendly to you? Do they test your blood before suggesting which method to use? Do they refuse giving you contraceptives?)

6. Do you know of any student who is sexually active and aware of the existence of contraceptives but not wanting to use them? If so, what can you suggest is their reason(s) for not using contraception?

7. Do you know of any program organised for students either by the polytechnic or other groups outside the Polytechnic on contraceptive practices?
(If yes how often? If no, do you think such programs are necessary?)

8. Do you think measures are needed to improve contraceptive use among Kaduna polytechnic students? What might they be?

Appendix C

Key Informant Interview Guide

(With Health providers and other key informants within and around the Polytechnic)

Key informant's position:

Date:

Informed consent:

1. How would you describe the level of sexual activity among Kaduna polytechnic students?
   (Are there difference between male and female? in what ways?)

2. How would you describe the level of awareness of contraception methods among Kaduna polytechnic students?
   (Would you say they are well informed or not and why? Is this knowledge for all methods or just a few? Sources of information and how awareness can be improved)

3. In your opinion, to what extent do Kaduna polytechnic students use contraceptives?
   (How frequent? Which method(s) is/are commonly used and why? are there any differences in methods use among male and female students)

4. Is there any form of cultural practices or beliefs that influences the use of contraception among Kad Poly students?
   (Religious teachings, cultural norms and values, what are these beliefs and practices? What do you think of them? Are they right or wrong? Are they changing over time?)

5. How available are contraceptives and other sexual health services to Kaduna polytechnic students?
   (Do you provide contraceptives to students? Where? At what cost? What methods are available for students? Through what ways can contraceptives be made more available to students? What other sexual health services do you provide for students?)

6. Do students visit your clinic/pharmacy to acquire contraceptives?
   (If yes, what method do they often use? Are they been spoken about or scorned at or laughed at by other patients/customers? and why?)

7. How responsive are other health care givers to students that seek for contraception?
   (Do they respect the students? Are often friendly to students? Do they test the students' blood before suggesting which method to use? Do they refuse giving contraceptives to students? and Why?)

8. Should students be encouraged to use contraception or not? (Why?)

9. Has there been any program organised for students either by the polytechnic or other groups outside the polytechnic on contraceptive practices?
   (If yes how often? If no, do you think such programs are necessary?)

10. In your opinion, how can contraceptive usage be encouraged / discouraged among Kaduna polytechnic students?

Appendix D

Informed Consent Form

Research information and informed consent Form

Dear Sir/Ma,

You are requested to participate in a research study conducted by Hilary Yacham Zaggi, a Masters degree student at the Department of Sociology and Social Anthropology, University of Stellenbosch, South Africa. It is an exploratory research on '**Contraceptive Practices among Undergraduates in Kaduna State University, Nigeria**. If you agree to participate, you will be asked to answer questions relating to your experience and knowledge about contraceptive practices among KASU students and social factors influencing students' contraceptive practices.
Participation in this research is voluntary and no payment will be made for participation. If you agree to be in this study, you may choose not to answer certain of the questions and are also free to withdraw at any time without negative consequences of any kind.

Your identity will not be revealed through the study and thesis; your name or student/staff number are not required for the study. This is to ensure that no responses can be traced to any respondent. Pseudonyms will be used while reporting findings to avoid mentioning actual names of respondents. With your permission, interviews and focus group discussions will be audio-taped. Any information that is obtained through this study that could be identified with you personally will be treated as confidential and will be disclosed only with your permission.

At the end of the questionnaire, you will be asked to volunteer for follow-up interviews, if you volunteer, your contact number will be requested and you will be selected on the bases of your responses to questions in the questionnaire. Due to this, volunteering to participate in follow-up interviews will not guarantee participants absolute anonymity. However, their identities will only be known by me and will be treated as confidential.

You are unlikely to gain directly from participating in this project. However there is a small risk that participation may result in some degree of anxiety around the topic of contraception and the risk of unwanted pregnancy. You may obtain more information and assistance by contacting the University Health Clinic, which will readily provide you with such information.

If you have any questions or concerns about the research, please feel free to ask me or contact my supervisor, Prof. Cherryl Walker in the Department of Sociology and Social Anthropology, University of Stellenbosch, South Africa, cjwalker@sun.ac.za or +27 (0) 21 808 2420. If you have questions regarding your rights as a research subject, you could contact Ms Malene Fouche (mfouche@sun.ac.za; +27 (0) 21 808 4622) at the Division for Research Development, University of Stellenbosch.

I hereby consent voluntarily to participate in this study.

VERBAL CONSENT GIVEN (tick):

OR

SIGNED CONSENT:

_____ _____

Signature of participant **Date**

Appendix E

Institutional Permission

KADUNA POLYTECHNIC

(Established as Kaduna Technical Institute in 1956)

OFFICE OF THE REGISTRAR

Rector: Dr. M.B. Ibrahim
B.Sc, MS.C, ph.d (ABU) MNSB. MBSN. MNES

Registrar: Alh. Zayyana I. Kukasheka
B.Sc, MPA, (ABU) MNIM, NIPR

E-mail: zayyanaik@yahoo.com

ADDRESS:
Central Administration,
Polytechnic Road,
Tudun Wada. P.M.B. 2021,
Kaduna, Nigeria.

KPT/CA/S/REG/DUM.7/VOL.XVIII/356 20th August, 2013

Mr. Zaggi, Hilary Yacham,
Department of Sociology,
University of Stellenbosch,
Private Bag x1,
Matieland, 7602,
Stellenbosch,
South Africa.

RE: REQUEST FOR INSTITUTIONAL PERMISSION TO CONDUCT RESEARCH

Your letter dated 6th August, 2013 on the above subject matter refers.

I am directed to convey approval on your request for clearance to conduct a research among the students of Kaduna Polytechnic.

By copy of this letter, the Dean Student Affairs is being notified of the approval.

Wishing you successful conduct of the research, please.

Aminu Saidu
for: Registrar

Appendix F

Ethics Clearance

UNIVERSITEIT·STELLENBOSCH·UNIVERSITY
jou kennisvennoot · your knowledge partner

Approved with Stipulations
New Application

31-Jul-2013
Zaggi,, Yacham HY

Proposal #: HS946/2013

Title: **Social Factors Involved in Contraceptive Practices among Undergraduates in Kaduna State University, Kaduna. Nigeria: An Exploratory study.**

Dear Mr Yacham Zaggi,,

Your **New Application** received on **01-Jul-2013**, was reviewed by the Research Ethics Committee: Human Research (Humanities) via Committee Review procedures on **25-Jul-2013**.

Please note the following information about your approved research proposal:

Proposal Approval Period: **25-Jul-2013 -24-Jul-2014**

Present Committee Members:
Fouche, Magdalena MG
Hansen, Leonard LD
Oberholzer, Susara SJM
Nel, Michelle M
Van Rooi, Wildo WA
Leonard, Basil BC
De Villiers, Mare MRH
Theron, Carl CC
Somhlaba, Ncebazakhe NZ
Viviers, Suzette S
Beukes, Winston WA
Horn, Lynette LM
Nell, Theodore TA
De Villiers-Botha, Tanya T
Newmark, Rona R

The following stipulations are relevant to the approval of your project and must be adhered to:
1. Research Proposal and REC Application
1.1 Section 7.4 of the REC application reframes the research as Medium risk only.
1.2 The admission of a male or female interviewer is not well planned and needs to be planned and formulated more clearly to prevent discomfort for participants.
1.3 The applicant should indicate how the questionnaire was developed and piloted. This should be substantiated with relevant literature.

2. Questionnaire:
The questionnaire asks participants if they would be prepared to be interviewed or participate in a focus group and to provide a cell phone number. This means the questionnaire is no longer anonymous. Also the proposal states that answers in the questionnaire will lead to purposeful selection for interviews. This should be explained in the Informed Consent Forms

3. Informed Consent Forms
The ICF is a short version in a letter format. This is acceptable so long as all the elements present in the standard template or included. Hence a sentence or two on risk and benefit should also be included.

4.General
This is a well written and complete application.

Please provide a letter of response to all the points raised IN ADDITION to HIGHLIGHTING or using the TRACK CHANGES function to indicate ALL the corrections/amendments of ALL DOCUMENTS clearly in order to allow rapid scrutiny and appraisal.

Please take note of the general Investigator Responsibilities attached to this letter. You may commence with your research after complying fully with these guidelines.

Please remember to use your **proposal number** (**HS946/2013**) on any documents or correspondence with the REC concerning your research proposal.

Please note that the REC has the prerogative and authority to ask further questions, seek additional information, require further modifications, or monitor the conduct of your research and the consent process.

Also note that a progress report should be submitted to the Committee before the approval period has expired if a continuation is required. The Committee will then consider the continuation of the project for a further year (if necessary).

This committee abides by the ethical norms and principles for research, established by the Declaration of Helsinki and the Guidelines for Ethical Research: Principles Structures and Processes 2004 (Department of Health). Annually a number of projects may be selected randomly for an external audit.

National Health Research Ethics Committee (NHREC) registration number REC-050411-032.

We wish you the best as you conduct your research.

If you have any questions or need further help, please contact the REC office at 0218839027.

Included Documents:
Informed consent
Research proposal
REC application
Ethical clearance letter
Questionnaire

Sincerely,

Susara Oberholzer
REC Coordinator
Research Ethics Committee: Human Research (Humanities)